

# ★ MILITARY ★ PSYCHOLOGY

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**Clinical and Operational Applications**



EDITED BY  
CARRIE H. KENNEDY  
ERIC A. ZILLMER

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CARRIE H. KENNEDY  
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*To my grandfather,*  
*Aviation Metalsmith 2nd Class (U.S. Navy)*  
*Marion C. Marshall, Jr.*  
*1925–2004*

—C. H. K.

*To my father,*  
*Lieutenant Colonel (U.S. Army)*  
*David Zillmer*  
*USMA Class of 1944*

—E. A. Z.

# About the Editors

**Carrie H. Kennedy, PhD**, is a Lieutenant Commander in the Medical Service Corps of the U.S. Navy and has served at the Naval Medical Center Portsmouth, the National Naval Medical Center, and the United States Naval Hospital in Okinawa, Japan. She is currently receiving specialty training in neuropsychology at the University of Virginia. Dr. Kennedy serves on the Conflict of Interest Committee for the National Academy of Neuropsychology and is the Navy Psychology Ethics Consultant for the Clinical Committee of the American Psychological Association's Division 19, Society for Military Psychology. Her most recent publication investigates the efficacy of establishing a gambling treatment program in a military environment. Dr. Kennedy's other research interests include assessment of memory malingerers in various populations, multicultural issues encountered by military psychologists, and ethics of operational psychology. She was named 2003 Medical Service Corps Officer of the Year in Okinawa, Japan, and her highest military award is the Navy and Marine Corps Commendation Medal.

**Eric A. Zillmer, PsyD**, is the Carl R. Pacifico Professor of Neuropsychology and Director of Athletics at Drexel University in Philadelphia. He is a Fellow of the College of Physicians of Philadelphia, the American Psychological Association, the Society for Personality Assessment, and the National Academy of Neuropsychology, for which he also served as president. Dr. Zillmer has written extensively in the area of sports psychology, neuropsychology, and psychological assessment, having published more than 100 journal articles, book chapters, and books, and is a frequent contributor to the local and national media on topics ranging from sports psychology to the psychology of terrorists. His textbook *Principles of Neuropsychology* is used internationally, and he is the coauthor of the d2 Test of Attention and the Tower of London test. Dr. Zillmer currently serves on the editorial boards of the *Journal of Personality Assessment*, the *Journal of Forensic Neuropsychology*, and the *Archives of Clinical Neuropsychology*.

# Contributors

**Major (Ret) J. D. Ball, PhD**, United States Air Force Reserve, Professor and Codirector, The Neuropsychology Center; Vice-Chair, Department of Psychiatry and Behavioral Sciences, Eastern Virginia Medical School, Norfolk, Virginia

**Colonel L. Morgan Banks, PhD**, United States Army, Command Psychologist, United States Army Special Operations Command, Fort Bragg, North Carolina

**Major (Ret) Michael A. Borders, PsyD**, United States Army, President, Growth Process Integration, Inc., Stafford, Virginia

**Lieutenant Colonel Frank C. Budd, PhD**, United States Air Force, Director, Organizational Consulting Office, Kirtland Air Force Base, New Mexico

**Mary E. Campise, LICSW**, United States Marine Corps, Prevention and Intervention Section Head, Personal and Family Readiness Division, United States Marine Corps Headquarters, Quantico, Virginia

**Lieutenant Colonel Rick L. Campise, PhD**, United States Air Force, Chief, Air Force Deployment Behavioral Health, Air Force Medical Operations Agency, Office of the Surgeon General, Falls Church, Virginia

**Commander Anthony P. Doran, PsyD**, United States Navy, Psychologist, Behavioral Health Program, Exceptional Family Member Program, Navy Personnel Command, Millington, Tennessee

**Louis M. French, PsyD**, Neuropsychologist, Defense and Veterans Brain Injury Center, Walter Reed Army Medical Center, Washington, DC

**Colonel Schuyler K. Geller, MD, MPH**, United States Air Force, 56th Medical Group Commander, Luke Air Force Base, Phoenix, Arizona

**Michael G. Gelles, PsyD**, United States Navy (1986–1993), Chief Psychologist, United States Naval Criminal Investigative Service, Washington, DC

**Major Revonda Grayson, PhD**, United States Air Force, Neuropsychology Fellow, University of Virginia, Charlottesville, Virginia

**Lieutenant Colonel Sally Harvey, PhD**, United States Army, Command Psychologist, Intelligence and Security Command, Fort Meade, Maryland

**Laurel L. Hourani, PhD, MPH**, Senior Research Epidemiologist, Research Triangle Institute, Raleigh, North Carolina

**Lieutenant Commander Gary Hoyt, PsyD**, United States Navy, Operational Psychologist, 1st Marine Division, Operational Stress Control and Readiness Program, Camp Pendleton, California

**Commander David E. Jones, PhD**, United States Navy, Head, Substance Abuse Rehabilitation Program, United States Naval Hospital, Okinawa, Japan

**Lieutenant Commander Carrie H. Kennedy, PhD**, United States Navy, Neuropsychology Fellow, University of Virginia, Charlottesville, Virginia

**Commander Kevin R. Kennedy, PhD**, United States Navy, Head, Behavioral Health, Navy Personnel Command, Millington, Tennessee

**Major Jeffrey A. McNeil, PhD**, United States Army, Psychologist, United States Army Special Operations Command, Fort Bragg, North Carolina

**Charles A. Morgan III, MD**, Psychiatrist, Associate Professor of Psychiatry, Yale University School of Medicine; Director, Stress and Resilience Laboratory, Clinical Neurosciences Division, National Center for PTSD, New Haven, Connecticut

**Lieutenant Colonel Mark S. Oordt, PhD**, United States Air Force, Life Skills Support Flight Commander, 31st Medical Group, Aviano Air Base, Italy

**Russell E. Palarea, PhD**, Staff Psychologist, United States Naval Criminal Investigative Service, Washington, DC

**Thomas H. Peake, PhD**, Professor of Psychology, Florida Institute of Technology, Melbourne, Florida; Adjunct Professor, Louis de la Parte Florida Mental Health Institute, University of South Florida, Tampa, Florida

**Colonel (Ret) Alan L. Peterson, PhD**, United States Air Force, Professor of Psychiatry, University of Texas Health Science Center at San Antonio, San Antonio, Texas

**Colonel James J. Picano, PhD**, United States Army Reserve, Director of Psychology Training, Department of Veterans Affairs, Northern California Health Care System, Martinez, California

**Commander John A. Ralph, PhD**, United States Navy, Psychologist, Marine Barracks, Washington, DC

**Colonel (Ret) Robert R. Roland, PsyD**, United States Army, Senior Research Fellow, Army Physical Fitness Research Institute, United States Army War College, Carlisle, Pennsylvania

**Major Kirk L. Rowe, PhD**, United States Air Force, Clinical Neuropsychologist, Psychology Residency Training Director, Wright-Patterson Air Force Base, Fairborn, Ohio

**Laurie M. Ryan, PhD**, Senior Neuropsychologist, Assistant Director for Research, Defense and Veterans Brain Injury Center, Walter Reed Army Medical Center, Washington, DC; Assistant Professor of Neurology, Uniformed Services University of the Health Sciences, Bethesda, Maryland

**Commander (Ret) Marc Sageman, MD, PhD**, United States Navy Reserve, Psychiatrist, Sageman Consulting, LLC, Rockville, Maryland

**Captain Morgan T. Sammons, PhD**, United States Navy, Director, Clinical Support, United States Navy Bureau of Medicine and Surgery; Specialty Leader, United States Navy Clinical Psychology, Washington, DC

**Colonel Thomas J. Williams, PhD**, United States Army, Director, Army Physical Fitness Research Institute, United States Army War College, Carlisle, Pennsylvania

**Lieutenant Colonel Thomas M. Zazeckis, PhD**, United States Air Force, Aerospace Neuropsychologist, Behavioral Analysis Service, Lackland Air Force Base, San Antonio, Texas

**Eric A. Zillmer, PsyD**, Carl R. Pacifco Professor of Neuropsychology, Drexel University, Philadelphia, Pennsylvania

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# Preface

Over the last few decades the nature of military engagement has changed significantly. This change is related to the military and political, as well as psychological, complexities observed during the transformation in the geo-political climate and the role of the U.S. military after the Cold War and the Persian Gulf War. In addition, events such as recent terrorist attacks, threats of chemical and biological warfare, and multiple natural disasters have brought a new perspective to the role of the military in everyday life (e.g., the National Guard's involvement in Homeland Security efforts), in law enforcement (e.g., the assistance of the military in the search for the Washington, DC, sniper), in peace-keeping efforts (e.g., in Bosnia and Kosovo), in humanitarian efforts (e.g., after Hurricane Katrina), and in the war on terrorism (in Afghanistan and Iraq). As a result, there has been a demand for the development of an increasingly mobile and modern military. Along with this paradigm shift, the landscape of the field of military psychology has changed as well.

Military psychology is defined as the science and application of human behavior as it relates to the military. The current text integrates the professional and scientific literature with the practical aspects of the field in order to provide a comprehensive understanding of the psychological needs of the military and its personnel. This book was written specifically to bring together two major areas of the field: clinical applications and operational psychology. In Part I, Clinical Practice in the Military, the clinical aspects of military psychology are presented, with a focus on assessment, diagnosis, and health interventions. This area of military psychology may be viewed

as more traditional, in terms of content and scope, but it has also undergone a marked refinement over the last 15 years.

Part II, Operational Psychology, is related to the operational side of military psychology and addresses special procedures and populations. Much of the information and thinking in this part has been developed recently, in order to cope with the novel demands that are now placed on a modern military.

*Military Psychology* introduces health practitioners and students to psychological information relevant to the armed forces, the law enforcement setting, and the intelligence and national security communities. To facilitate a dynamic understanding of the field, the text emphasizes an integration of applications and theory, process, case examples, and research. When approached from this perspective, the military mental health practitioner is seen as a problem solver and a psychologist, as well as a fully operational military service member. In this sense, this book challenges the reader to examine the field of military psychology as a framework for behavior.

## Acknowledgments

The writing of a text is always a formidable challenge. This is particularly true for editing a text in a field as dynamic as military psychology, which assembles many different areas of scientific and clinical knowledge. The contributors to this volume include active-duty and reservist psychologists and physicians, as well as professionals from other government agencies and academic settings. This diverse group of people present their expertise in the following chapters, often working under adverse circumstances within the field or on assignment overseas. We thank all of them for their cooperation, assistance, and support. Without them, this book could not have been written. We also want to acknowledge the many individuals who listened to us, offered suggestions, and provided encouragement along the way.

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Appreciation goes as well to Nichole Argo of the Massachusetts Institute of Technology. Our discussions with her about suicide bombers and terrorists have been enlightening and have provided a springboard for many of the issues discussed in the chapter on the psychology of terrorists.

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## CHAPTER 1



# A History of Military Psychology

CARRIE H. KENNEDY  
JEFFREY A. MCNEIL

The history of military psychology is particularly rich and interesting. Although military history reaches back thousands of years, the history of formal military psychology is only a recent development, not even a century old. The development of psychology in the United States has had a similar growth trajectory as that of American military psychology, and it is easy to conclude that their history and growth are undeniably linked. However, the growth of military psychology has occurred in spurts, each related to the demands, psychological as well as military, of different conflicts.

Whereas formal psychology has been only recently introduced to the U.S. military, organizational, clinical, and operational psychological concepts are inextricably intertwined with the historical development of war. For example, the screening of individuals for military service and specialties has been a focus since the 1800s and has resulted in the development of multiple aptitude and intelligence tests. Clinically, the gamut of mental disorders has been documented since the Civil War, and our understanding and ability to treat these disorders has been a major focus of military mental health professionals. Operationally, early formal U.S. psychological operations (PSYOPS) were conducted during the American Revolutionary War by the colonials, with the desired impact on the British.

Despite the fact that the history of formalized military psychology is relatively short, its impact pervades the practice of psychology in the

United States. Military psychology has evolved from very limited participation to an indispensable asset in combat readiness and policy development. This chapter briefly describes the development of the profession of military psychology and various roles of the military psychologist through the years. The following chapters also provide some history of specific issues, to which the reader is directed.

## **EARLY HISTORY OF MILITARY PSYCHOLOGY: THE REVOLUTIONARY WAR**

During the Revolutionary War almost no attention was paid to the emotional toll of battle. In fact, adverse reactions to combat were often deemed a defect of character or cowardice. However, the war did see one of the first successful PSYOP campaigns: The colonials distributed leaflets where they would be seen by British troops, encouraging their desertion. The leaflets advertised “seven dollars a month, fresh provisions and in plenty, health, freedom, ease, affluence and a good farm” at Prospect Hill, but at Bunker Hill one would receive “three pence a day, rotten salt pork, the scurvy, and slavery, beggary, and want” (Walters, 1968, p. 23). The British retaliated with a propaganda campaign of cartoons, which depicted the Colonials as “a mob of cowardly, undisciplined, whiskey drinking, and mostly unkempt renegades” (Johnson, 1997, p. 9). Since then, psychological operations in the U.S. military have evolved to highly organized endeavors that have been credited for significantly influencing the outcome of war and conflict since World War II (Joint Chiefs of Staff, 2003).

## **THE U.S. CIVIL WAR**

During the Civil War, military medicine was in its infancy, although military physicians were responsible for the medical screening of recruits. If a physician missed an illness or failed to detect a malingered malady, he was fined (Lande, 1997), apparently because soldiers received a bonus for enlisting and occasionally would then reveal a physical illness or mental health condition to avoid service. It was during the Civil War that the first steps were taken to address the effects that combat and war had on soldiers. The concept of nostalgia was first described, and military doctors reported treating other such psychological concepts as phantom pain in amputees (Shorter, 1997), acute and chronic mania, alcoholism, suicidal behavior, and sunstroke (Lande, 1997). Following the war, soldiers who presented themselves for mental health care were often diagnosed with chronic mania. Unfortunately, formal programs to address the veterans’

problems were scant. These patients were mostly cared for at home—although at times housed in the local jail because of the lack of other appropriate means to keep them and others safe—and many were treated in insane asylums (Dean, 1997). The United States Government Hospital for the Insane (USGHI; also known as St. Elizabeth's Hospital) was created for military patients in the mid-1800s and eventually provided care for all government patients, including those who attempted to assassinate Andrew Jackson and Ronald Reagan (McGuire, 1990).

The Civil War saw the first documentation of substance problems related to military service: abuse and addiction to alcohol, chloral hydrate, cocaine, morphine, and opium, as well as substance withdrawal (Dean, 1997; Watanabe, Harig, Rock, & Kosches, 1994). Anecdotally, it appears that many of the chronic addiction problems in Civil War veterans were related to medical treatment for pain (Dean, 1997).

## WORLD WAR I

World War I (WWI) marked the official birth of military psychology. Specifically, in April 1917, Robert Yerkes, then the head of the American Psychological Association (APA), convened a group of psychologists, including James McKeen Cattell, G. Stanley Hall, Edward L. Thorndike, and John B. Watson. Their charter was to determine how psychology could help the war effort. The committee recommended that “psychologists volunteer for and be assigned to the work in which their service will be of the greatest use to the nation” (Yerkes, 1917). Committees were developed, ranging from the Committee on the Selection of Men for Tasks Requiring Special Skills to the Committee on Problems of Motivation in Connection with Military Service. On August 17, 1917, Yerkes was commissioned a Major in the Army (Uhlener, 1967; Zeidner & Drucker, 1988), and by January 1918, 132 officers were commissioned for work in the Division of Psychology, Office of the Surgeon General (Zeidner & Drucker, 1988). Their work signified the first concerted efforts to screen military recruits and included such notable statisticians as E. L. Thorndike, Louis Thurstone, and Arthur Otis (Driskell & Olmstead, 1989).

The Army alpha (for those who were literate in English) and beta (for those who were not literate, who were literate in another language, and/or who failed alpha) intelligence tests were developed and administered to 1,750,000 men during the war (Kevles, 1968). The Army alpha evolved into the Wechsler-Bellevue Scale, the precursor to the Wechsler Adult Intelligence Scale, which is the most frequently used intelligence test today (Boake, 2002). Intelligence testing during WWI marked the first means of testing hundreds of individuals simultaneously and led Lewis Terman

(1918) to emphasize the need for standardized administration of psychological tests. Intellectual testing was not the only focus during WWI. The Woodworth Personality Data Sheet, which became the model for subsequent personality assessments, was introduced at that time (Page, 1996), and Yerkes developed procedures to assess and select individuals to become officers and undertake special assignments (Zeidner & Drucker, 1988).

The success of psychological testing in WWI was the impetus for the earliest recognition of psychology as a respected field. The success of group testing had significant implications for organizations like grade schools, universities, and licensing boards. These tests also kindled the interest of private industry in search of help from psychologists with such problems as employee absenteeism, employee turnover, and ways to increase industrial efficiency (Zeidner & Drucker, 1988).

WWI also marked the creation of the specialty of neurosurgery and the means to save the lives of American soldiers with head injuries. With these advances arose the field of cognitive rehabilitation, advocated heavily by Shepherd I. Franz, a psychologist at USGHI, whose efforts to create a rehabilitation research institute were unfortunately unsuccessful. However, Franz published manuals and books on cognitive assessment and “re-education” (Boake, 1989). Most military hospitals did provide rudimentary rehabilitation during WWI but were closed after the war because of lack of need.

Aviation psychology was born during WWI, and its major focus was on the psychological screening of pilots in order to select those most likely to successfully complete training and avoid aviation accidents (Driskell & Olmstead, 1989). Early work showed that the best candidates possessed high levels of intelligence, emotional stability (i.e., low levels of excitability), perception of tilt, and mental alertness (Koonce, 1984).

In addition to widespread intellectual testing and psychological screening, war neuroses were identified (Young, 1999). The first appropriate intervention for combat stress (i.e., shell-shock) was recognized, and the earliest cognitive restructuring techniques were documented well ahead of the development of formal cognitive theory (Howorth, 2000). Forward psychiatry was implemented, using the concept of PIE (proximity, immediacy, and expectation of recovery), and resulted in 40–80% of shell-shock cases returning to combat duty (Jones & Wessely, 2003). These early intervention principles remain the foundation of combat stress intervention today and the practice of combat stress units and platoons in all branches of service (see Chapter 10, this volume).

WWI also marked one of the first organized uses of chemical warfare, mustard gas (Harris, 2005). This gave rise to observations of “gas hysteria” and the recognition of a psychological response to threats of this nature.

Lessons learned in WWI continue to guide mental health professionals in addressing the response to fears of and current terrorist threats to employ chemical and biological warfare (see Chapter 14, this volume).

This was a time of major growth for the field of psychology, the successes of which continue to have a profound impact on psychology practice today. G. Stanley Hall (1919) foretold the future when he commented on the work of psychologists in WWI, noting that “only when the history of American psychology is recorded in large terms will we realize the full significance of the work.”

## WORLD WAR II

Between 1944 and 1946, the APA underwent significant reorganization when it merged with the American Association for Applied Psychology (AAAP). When this occurred, the five sections of AAAP became charter divisions in the new APA, to include Division 19, the Division of Military Psychology (Society for Military Psychology, 2005). In addition to stronger organizational foundations, World War II (WWII) saw an influx of esteemed German and Jewish psychologists to America, which served to significantly strengthen the field of psychology in the United States.

Psychologists were in high demand during WWII and worked in all branches of the military, as well as in such departments as the National Research Council, Psychological Warfare Services, Veterans Administration, and Department of Commerce (Gilgen, 1982). Work continued in psychometric testing, but a great diversification of developments and expansion in psychology occurred both during and immediately after the war. Boring (1945) published a comprehensive text on the application of psychology to the military, addressing such topics as adjustment to combat, personnel selection, morale, sexuality, and psychological warfare. He outlined seven fields of the “psychological business of the Army and Navy” (observation, performance, selection, training, personal adjustment, social relations, and opinion and propaganda; p. 3). A book was also published for military members about the application of psychological principles to enhance performance during the war (National Research Council, 1943). The Office of Strategic Services (OSS, now the Central Intelligence Agency) was developed, along with the first psychological selection program for individuals seeking positions as OSS operatives in espionage, counterespionage, and propaganda (Banks, 1995; OSS Assessment Staff, 1948; see Chapter 17, this volume). Individuals who helped to shape the field of psychology were once again employed by the military, including B. F. Skinner, who trained pigeons to guide missiles to targets prior to the existence of

electronic guidance systems (Gilgen, 1982). However, Skinner did not deploy his trained pigeons because, as the bombings were essentially suicide missions for the birds, there was a moral objection (Roscoe, 1997).

Screening for military service was improved, and in 1940 the Army General Classification Test (AGCT) was developed by psychologists and introduced to measure the aptitude of recruits; it was also a means to select men for specialist courses (Zeidner & Drucker, 1988) and to become officers (Harrell, 1992). The AGCT was taken by over 12 million men for classification purposes and was valued over the intellectual testing format because of its minimization of verbal ability and the influence of formal education, its emphasis on spatial and quantitative reasoning, and its efficiency in administration (Harrell, 1992). After WWII, uniform aptitude testing in the military was mandated by the Selective Service Act of 1948, and the Armed Forces Qualification Test (AFQT) was born in 1950. Although every service branch utilized the AFQT, they also continued to use their own screening procedures and instruments until 1968 (Defense Manpower Data Center, 1999).

Much of the improvement of classification and screening procedures was attributed to the military psychologist's opportunity to test large groups of individuals from various geographical and cultural backgrounds. This observation and subsequent recognition that tests must be interpreted differently, depending on an individual's background, were clearly documented during WWII, marking some of the first succinct reasoning for culturally fair psychological tests. An additional impact was the construction of abbreviated testing techniques, which could easily be applied in the civilian sector (Hunt & Stevenson, 1946). WWII also saw increased testing of personality, and in 1943 the Army began using experimentally a newly published test, the Minnesota Multiphasic Personality Inventory (MMPI), as a screening and selection instrument (Page, 1996; Uhlaner, 1967).

The increased emphasis on screening turned out to be a problem for those experiencing what was then identified as combat fatigue or combat exhaustion (combat stress). Because the thinking of the time was that screening would exclude those prone to the development of these problems, WWII did not utilize the lessons learned in WWI about combat stress reactions. Subsequently, little forward mental health (i.e., mental health providers in the field) was practiced, in favor of reliance on psychological screening to avoid negative psychological reactions to the war. The unfortunate result was that 40% of early discharges were attributed to combat fatigue (Neill, 1993), but it solidified the recognition by the military of the need for battlefield interventions and preparation for the psychological toll of combat (U.S. Department of the Army, 1948).

WWII saw the publication of multiple articles on malingering in order to avoid military service or discipline, then also referred to as gold-

bricking, faking, or malingery. The attitude toward malingeringers at this time is summed up by Hulett (1941), who noted that “it is indeed devastating to recognize as we must, that all men are not possessed of manhood, and that the yellow streak down the backs of some of our fellows is invisible to the unaided human eye” (p. 138). Common methods of malingering were purported to be the induction of symptoms with such substances as alcohol, epinephrine, sugar, and cathartics; claims of pain or other sensory problems (e.g., blindness); claims of motor dysfunction; feigning of insanity; self-mutilation; exaggeration of real symptoms; or refusing to get treatment for a curable condition (Campbell, 1943). Campbell noted that malingeringers had psychopathic personalities and had no place in the military, with the exception of “work battalions and [being] forced to serve under strict and uncompromising discipline” (p. 354); they were the “leading pension and compensation seekers” (p. 352). Bowers (1943) noted four types of individuals with suspicious symptoms: hysteria, inadequate personality, malingering, and mixed types. Ludwig (1944) advocated for the widespread use of sodium amytal for the differentiation between malingeringers and bona fide patients.

During WWII, the top five mental health diagnostic categories were neurosis, personality disorder, alcoholism, epilepsy, and insanity (Stearns & Schwab, 1943). Notably, the inadequacy for military use of the existing mental health diagnostic system (Standard Nomenclature of Diseases and Operations) during WWII was a significant impetus for the development of the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 1952).

WWII marked the reemergence of head injury rehabilitation on a large scale, with many of the leading psychologists later gaining prominence in the field of neuropsychology (Boake, 1989). Unfortunately, once again many of the rehabilitation centers were closed after the war, and the field did not emerge again until the late 1960s and early 1970s due to the increased number of survivors of motor vehicle accidents (Boake, 1989).

Aviation psychology continued to evolve during WWII with the development of the Army Air Force Aviation Psychology Program in 1941, the focus of which was to assist with the selection of aviation personnel (Driskell & Olmstead, 1989). In addition to the selection for such positions as pilots, navigators, and bombardiers, research was also conducted on the service member–equipment relationship, particularly with the new equipment that was developed at that time (Koonce, 1984). In 1947 the Air Force became a separate branch of the military, and industrial psychological research flourished in the new service (Hendrix, 2003). Following WWII, the field of aviation psychology grew dramatically, affecting practices of civilian airlines and creating new roles for aviation psychologists. These psychologists are now involved in a wide range of activities, from

research and identification of individuals involved in terrorist activities to aircraft accident investigations (Koonce, 1984).

WWII was the first and only time to see the use of nuclear weapons. Survivors developed both acute and chronic psychological reactions, including withdrawal, severe fear reactions, guilt, psychosomatic symptoms, and posttraumatic stress disorder (PTSD; Salter, 2001). But going beyond the effect that the bombings had on the people of Japan, the images from Hiroshima and Nagasaki in 1945 continue to instill fear into societies threatened with such use today. Concerns mount about the capacity of terrorists to obtain and use these weapons (Knudson, 2001). In a similar vein, WWII was known for Japanese suicide bombers, or kamikaze pilots. Kamikaze attacks accounted for a large proportion of the sailors who were wounded in action, second only to attacks that involved multiple weapons (Blood, 1992). Suicide bombers have arisen as a heightened concern today, and some of the lessons learned in WWII are applicable to current terrorist bombers (see Chapter 12, this volume).

Military clinical psychology began in WWII, with the first military psychologists assigned to hospitals (McGuire, 1990; Uhlaner, 1967). Following the war, the growth of clinical psychology in the military continued. As there were too few physicians and psychiatrists to meet the emotional needs of veterans, psychologists provided both group and individual therapy in Veterans Administration (VA) facilities (Cranston, 1986). In 1946 the first psychology internship programs were established, enrolling 200 psychology interns within the VA system. These efforts resulted in increased acceptance of psychologists, not just as researchers and experts in assessment, but also as mental health providers (Phares & Trull, 1997). As after WWI, psychologists were demobilized following WWII; however, in 1947 they obtained permanent active-duty status (McGuire, 1990; Uhlaner, 1967). Two years later, the first military clinical psychology internship programs were established in the Army, one of which was at the Walter Reed General Hospital in Washington, DC.

## THE KOREAN WAR

The Korean War saw psychologists in new positions—in service overseas, in combat zones, and on hospital ships (McGuire, 1990). The war also saw significant torture, as well as the execution, of U.S. prisoners of war and gave rise to the concept of brainwashing (Ursano & Rundell, 1995). The U.S. troops were exposed to forced marches, severe malnutrition, inhuman treatment, and continuous propaganda and “reeducation” on communism (Ritchie, 2002). The Korean experience prompted the military to make sig-

nificant changes in survival schools, whose evolution and psychology's role therein are covered in depth in Chapter 11 (this volume), as is information about prisoners of war during WWII, Korea, and Vietnam.

Unfortunately, at first the principle of treating combat stress near the front line to enable military members to return to duty was not possible because of the abrupt start of the war and the lack of prepared support units (McGuire, 1990). This resulted in a rate of 250 per 1,000 troops to be declared psychological casualties. Later in the war, combat stress principles learned in previous wars were established, and fully 80% (Ritchie, 2003) to 90% (Jones, 1995) of such cases returned to duty. Psychology's role in testing did not diminish during the Korean War, and the Army and Air Force published a technical manual outlining the roles of the military psychologist and proper interpretation of psychological tests (U.S. Departments of the Army and the Air Force, 1951) with such distinguished contributors as David Wechsler and Paul Meehl (Uhlener, 1967). Instruments created to select individuals for specific jobs and officer programs continued to be developed.

The Korean War was the first war in which a Bronze Star was awarded to an operational psychologist. Richard H. Blum, the first Army combat psychologist, who served in the 212th Psychiatric Battalion, earned the award for his role in the development of combat stress procedures (Stambor, 2005). Unfortunately, because of administrative issues, he was not awarded this medal until 2005.

Following the Korean War, the Army began to devote significant resources to the study of motivation, leadership, morale, and psychological warfare (Uhlener, 1967), and the concept of human systems related to military functioning increased in popularity (Zeidner & Drucker, 1988). The Air Force and Navy also created research centers concerned with what was then called human engineering. The goal toward increasing the performance of military personnel, given different equipment, various physical states (e.g., fatigue), and various environments, gave rise to increased research in human factors engineering (Roscoe, 1997; Uhlener, 1967).

## THE VIETNAM WAR

After the Korean War, the Air Force implemented the Airman Qualifying Examination (AQE) in 1958 for administration to high school students. The Army and Navy shortly developed their own group ability tests, and ultimately in 1968 the Armed Services Vocational Aptitude Battery (ASVAB) was implemented to make a truly uniform aptitude tool (Defense Manpower Data Center, 1999). The ASVAB has proven to be an inval-

able screening and aptitude tool for military recruits, and it has been regularly used by military neuropsychologists over the years for assessment of head-injured service members, as its composite score is a reliable indicator of premorbid intellectual functioning (Kennedy, Kupke, & Smith, 2000; Welsh, Kucinkas, & Curran, 1990).

As in Korea, psychologists served in combat zones during Vietnam. Although forward mental health was practiced in Vietnam, low levels of traditional combat stress were seen. As in no other conflict before or since, however, there was an extraordinary amount of substance abuse (see Chapter 8, this volume). Also, a higher proportion of character disorders was diagnosed during the war, possibly related to the characteristics of individuals who could not avoid the draft. In other words, those with more resources remained in school or obtained exemptions to avoid military service (McGuire, 1990). In addition, the spirit of the times in the United States was highly tolerant of drug use, and this probably affected those serving in Vietnam as well. Because of the large numbers of troops who were abusing substances and who had to be medically evacuated from the theater, mandatory drug testing was implemented, as were increased opportunities for alcohol and drug rehabilitation.

Vietnam was a significantly complex war, which involved the use of weapons technologies not seen before and which could manifest significant destruction, even on the level of the individual soldier (Zeidner & Drucker, 1988). American military members faced a well-trained force and were confronted with jungle warfare, as well as horrific experiences when taken prisoner. Military rotation policies at the time dictated specific tour lengths for individuals as opposed to rotations of entire units, resulting in poor unit cohesion because of the constant arrivals and departures of personnel (Zeidner & Drucker, 1988). The attitude on the homefront about the utility of the war in Vietnam was largely unsupportive of the troops. The psychological impact of all of the above is hypothesized to have resulted in high rates of posttraumatic stress disorder (PTSD), with many surviving veterans still suffering from those symptoms today (see Chapter 10, this volume).

Following Vietnam, the military recognized the need for a formal response to noncombat critical incidents, such as the deaths of service members from training accidents or suicide. In 1978 the psychiatry department of Portsmouth Naval Hospital organized a Special Psychiatric Rapid Intervention Team (SPRINT) consisting of psychologists, psychiatrists, chaplains, nurses, and corpsmen (McCaughey, 1987). Responding to such critical incidents as training accidents, suicides, natural disasters, and bombings, SPRINT has been an integral part of disaster response in the military since this time. For more information about such responses, see Chapter 16 (this volume).

## OPERATIONS DESERT SHIELD AND DESERT STORM

Military personnel in Operations Desert Shield and Desert Storm were exposed to multiple combat stressors. They faced greater numbers of the enemy, possible use of chemical and biological weapons, desert exposure, sandstorms, lethal animal life, little opportunity for bathing, and a culture that did not accept American values (Martin, Sparacino, & Belenky, 1996). Although there was great capacity for significant stress casualties, the limited number of wounded and killed American troops and the availability of forward mental health support resulted in relatively few combat stress casualties; however, rates of PTSD have increased over time in these veterans (see Chapter 10, this volume). In addition to forward mental health support on the ground during the Persian Gulf War, it was the first time that a psychologist was placed on a Navy aircraft carrier, resulting in no medical evacuations for mental health reasons from the USS *John F. Kennedy* (Wood, Koffman, & Arita, 2003).

Despite good mental health support, unique to the Persian Gulf War was Gulf War syndrome or Gulf War illness, an ambiguous conglomeration of physical and psychological symptoms. Years of research have not been able to characterize these presenting problems as a specific syndrome with specific symptoms (Bieliauskas & Turner, 2000; Everitt, Ismail, David, & Wessely, 2002). Gulf War syndrome was hypothesized to originate from vaccinations, exposure to toxic substances (e.g., smoke from burning oil wells), and psychological trauma. Years of studying Gulf War veterans has largely led to the conclusion that—although risk factors for the syndrome were inoculations and exposures to noxious chemicals and psychological trauma—the persistence of the syndrome is the result of previous psychological distress and individual veterans' attribution of their symptoms (i.e., the belief that they were exposed to toxic agents, Hotopf, David, Hull, Nikalaou, Unwin, & Wessely, 2004; Stuart, Ursano, Fullerton, Norwood, & Murray, 2003). Despite the lack of a clear definition for Gulf War syndrome, veterans who have unexplained symptoms that began during or after the war are given financial and health benefits (Campion, 1996), and research into this issue continues.

## PEACEKEEPING OPERATIONS (OPERATIONS OTHER THAN WAR)

Peacekeeping missions have their own unique characteristics and impact on military personnel. Stress control units have been regularly utilized for those deployed for peacekeeping operations since Operation Restore Hope in Somalia in 1992 (Bacon & Staudenmeier, 2003), given that peacekeep-

ing forces often face an unfriendly populace, come under fire, live in unhygienic conditions, and are separated from their families (Hall, Cipriano, & Bicknell, 1997). In addition, peacekeeping missions put more strain on individuals who may be vulnerable, have a preexisting mental health condition, abuse alcohol, or are experiencing relationship problems. These have been deemed risk factors for suicide in peacekeepers specifically (Wong et al., 2001).

Operation Uphold Democracy in Haiti saw significant stress for U.S. troops, including three suicides in the first 30 days of the mission (D. P. Hall, 1996). This reinforced the need for the availability of mental health providers to provide prevention and early intervention to military personnel supporting peacekeeping missions (Hall, Cipriano, & Bicknell, 1997). With operational stress support, 94% of soldiers presenting with psychological symptoms during Operation Uphold Democracy were returned to full duty without the need for medical evacuation (D. P. Hall, 1996).

Operation Joint Endeavor in Bosnia saw an unprecedented number of military mental health professionals on hand for suicide prevention, stress management, critical incident debriefings, and clinical care in country (Pincus & Benedek, 1998). Mental health providers made advances during this mission in learning to increase awareness of available services and destigmatizing help-seeking behavior by using a comprehensive outreach program (Bacon & Staudenmeier, 2003).

## RECENT DEVELOPMENTS

Military psychologists continue to make history. More modern advances include the inception of prescription privileges for psychologists starting in 1994, when the first trial psychopharmacology fellows graduated from training (Sammons, Levant, & Paige, 2003), to 2005, when the psychopharmacology fellowship was established at the Tripler Army Medical Center in Hawaii. The military's success in training psychologists as prescribers has served as a model for other psychologists (Dittman, 2003). To date two states (New Mexico and Louisiana) and one U.S. territory (Guam) have enacted laws granting prescribing privileges to appropriately trained psychologists.

Psychologists also continue to expand their operational roles, including support for conventional and special operations. As early as October 2001, psychologists were deployed to main and forward-staging bases supporting Operation Enduring Freedom (OEF). In addition, psychologists have served at forward fire bases, providing support to soldiers and Marines and consultation for commanders in both OEF and Operation

Iraqi Freedom (OIF). Psychologists continue to provide integral support in repatriation operations, selection and assessment for special operations, and human factors research.

Psychologists have been permanent ship's company on aircraft carriers since 1998, and the Psychology at Sea program has met with outstanding results (Wood, Koffman, & Arita, 2003). Practice aboard these ships is at times referred to as working "on top of a nuclear reactor and under an airport." Each carrier is assigned one psychologist, who serves not only the carrier but also the battle group that accompanies it, comprising approximately 12,000 people. As the sole mental health provider, with assistance from a neuropsychiatric technician and one or two substance abuse counselors, psychologists have had to move away from traditional forms of therapy. The focus is on prevention, interventions that involve the individual's chain of command, and truly creative means of addressing the needs of such a large and unique population.

## SUMMARY

The history of military psychology, although brief, is extensive and ongoing. Not only has the field of psychology had an extraordinary impact on the military, the developments that have grown out of the various wars and needs of the military have directly affected the practice of psychology nationwide. Military mental health providers continue to make history today in their support of the war efforts in Iraq and in improving services for active-duty members and their families everywhere. The following chapters focus on these efforts and subsequent developments and the military psychologist's increasing roles in both clinical and operational psychology. Lessons learned today will certainly be the next chapter in the history of not only military psychology but also psychology as we know it in the United States.

## REFERENCES

American Psychiatric Association. (1952). *Diagnostic and statistical manual of mental disorders*. Washington, DC: Author.

Bacon, B. L., & Staudenmeier, J. J. (2003). A historical overview of combat stress control units of the U.S. Army. *Military Medicine*, 168, 689-693.

Banks, L. M. (1995). *The Office of Strategic Services Psychological Selection Program*. Unpublished master's thesis, U.S. Army Command and General Staff College.

Bieliauskas, L. A., & Turner, R. S. (2000). What Persian Gulf War syndrome? *The Clinical Neuropsychologist*, 14, 341–343.

Blood, C. G. (1992). Analyses of battle casualties by weapon type aboard U.S. Navy warships. *Military Medicine*, 157, 124–130.

Boake, C. (1989). A history of cognitive rehabilitation of head-injured patients, 1915–1980. *Journal of Head Trauma Rehabilitation*, 4, 1–8.

Boake, C. (2002). From the Binet–Simon to the Wechsler–Bellevue: Tracing the history of intelligence testing. *Journal of Clinical and Experimental Neuropsychology*, 24, 383–405.

Boring, E. G. (1945). *Psychology for the armed forces*. Washington, DC: National Research Council.

Bowers, W. F. (1943). Hysteria and malingering on the surgical service. *The Military Surgeon*, 92, 506–511.

Campbell, M. M. (1943). Malingery in relation to psychopathy in military psychiatry. *Northwest Medicine*, 42, 349–354.

Campion, E. (1996). Disease and suspicion after the Persian Gulf War. *New England Journal of Medicine*, 335, 1525–1527.

Cranston, A. (1986). Psychology in the veterans administration: A storied history, a vital future. *American Psychologist*, 41, 990–995.

Dean, E. T. (1997). *Shook over hell: Post-traumatic stress, Vietnam, and the Civil War*. Cambridge, MA: Harvard University Press.

Defense Manpower Data Center. (1999). *Technical manual for the ASVAB 18/19 career exploration program* (rev. ed.). North Chicago: HQ USMEPCOM.

Dittman, M. (2003). Psychology's first prescribers. *Monitor on Psychology*, 34, 36.

Driskell, J. E., & Olmstead, B. (1989). Psychology and the military: Research applications and trends. *American Psychologist*, 44, 43–54.

Everitt, B., Ismail, K., David, A. S., & Wessely, S. (2002). Searching for a Gulf War syndrome using cluster analysis. *Psychological Medicine*, 32, 1371–1378.

Gilgen, A. R. (1982). *American psychology since World War II*. Westport, CT: Greenwood Press.

Hall, D. P. (1996). Stress, suicide, and military service during Operation Uphold Democracy. *Military Medicine*, 161, 159–162.

Hall, D. P., Cipriano, E. D., & Bicknell, G. (1997). Preventive mental health interventions in peacekeeping missions to Somalia and Haiti. *Military Medicine*, 162, 41–43.

Hall, G. S. (1919). Some relations between the war and psychology. *American Journal of Psychology*, 30, 211–223.

Harrell, T. W. (1992). Some history of the Army General Classification Test. *Journal of Applied Psychology*, 77, 875–878.

Harris, J. C. (2005). Gassed. *Archives of General Psychiatry*, 62, 15–17.

Hendrix, W. H. (2003). Psychological fly-by: A brief history of industrial psychology in the US Air Force. *American Psychological Society Observer*, 16. Retrieved September 14, 2005, from [www.psychologicalscience.org/observer/getArticle.cfm?id=1451](http://www.psychologicalscience.org/observer/getArticle.cfm?id=1451).

Hotopf, M., David, A., Hull, L., Nikalaou, V., Unwin, C., & Wessely, S. (2004).

Risk factors for continued illness among Gulf War veterans: A cohort study. *Psychological Medicine*, 34, 747–754.

Howorth, P. (2000). The treatment of shell-shock: Cognitive theory before its time. *Psychiatric Bulletin*, 24, 225–227.

Hulett, A. G. (1941). Malingering—A study. *The Military Surgeon*, 89, 129–139.

Hunt, W. A., & Stevenson, I. (1946). Psychological testing in military clinical psychology: I. Intelligence testing. *Psychological Review*, 53, 25–35.

Johnson, R. D. (1997). *Seeds of victory: Psychological warfare and propaganda*. Atglen, PA: Schiffer Publishing.

Joint Chiefs of Staff. (2003). *Doctrine for joint psychological operations*. Washington, DC: Author.

Jones, E., & Wessely, S. (2003). “Forward psychiatry” in the military: Its origins and effectiveness. *Journal of Traumatic Stress*, 16, 411–419.

Jones, F. D. (1995). Psychiatric lessons of war. In R. Zattchuk & R. F. Bellamy (Eds.), *Textbook of military medicine: War psychiatry* (pp. 1–33). Washington, DC: Office of the Surgeon General, U.S. Department of the Army.

Kennedy, C. H., Kupke, T., & Smith, R. (2000). A neuropsychological investigation of the Armed Service Vocational Aptitude Battery (ASVAB). *Archives of Clinical Neuropsychology*, 15, 696–697.

Kevles, D. J. (1968). Testing the Army's intelligence: Psychologists and the military in World War I. *Journal of American History*, 55, 565–581.

Knudson, G. B. (2001). Nuclear, biological, and chemical training in the U.S. Army reserves: Mitigating psychological consequences of weapons of mass destruction. *Military Medicine*, 166, 63–65.

Koone, J. M. (1984). A brief history of aviation psychology. *Human Factors*, 26, 499–508.

Lande, R. G. (1997). The history of forensic psychiatry in the U.S. military. In R. G. Lande & D. T. Armitage (Eds.), *Principles and practice of military forensic psychiatry* (pp. 3–27). Springfield, IL: Charles C Thomas.

Ludwig, A. O. (1944). Clinical features and diagnosis of malingering in military personnel: Use of barbiturate narcosis as an aid in detection. *War Medicine*, 5, 378–382.

Martin, J. A., Sparacino, L. R., & Belenky, G. (1996). *The Gulf War and mental health*. Westport, CT: Praeger.

McCaughay, B. G. (1987). U.S. Navy Special Psychiatric Rapid Intervention Team (SPRINT). *Military Medicine*, 152, 133–135.

McGuire, F. L. (1990). *Psychology aweigh! A history of clinical psychology in the United States Navy, 1900–1988*. Washington, DC: American Psychological Association.

National Research Council. (1943). *Psychology for the fighting man*. Washington, DC: Penguin.

Neill, J. R. (1993). How psychiatric symptoms varied in World War I and II. *Military Medicine*, 158, 149–151.

OSS Assessment Staff. (1948). *Assessment of men*. New York: Rinehart & Co.

Page, G. D. (1996). Clinical psychology in the military: Developments and issues. *Clinical Psychology Review*, 16, 383–396.

Phares, E. J., & Trull, T. J. (1997). *Clinical psychology: Concepts, methods, and profession* (5th ed.). Pacific Grove, CA: Brooks/Cole.

Pincus, S. H., & Benedek, D. M. (1998). Operational stress control in the former Yugoslavia: A joint endeavor. *Military Medicine*, 163, 358–362.

Ritchie, E. C. (2002). Psychiatry in the Korean War: Perils, PIES, and prisoners of war. *Military Medicine*, 167, 898–903.

Ritchie, E. C. (2003). Psychiatric evaluation and treatment central to medicine in the US Military. *Psychiatric Annals*, 33, 710–715.

Roscoe, S. N. (1997). The adolescence of engineering psychology. *Human Factors History Monograph Series*, 1. Retrieved September 14, 2005, from [www.hfes.org/PublicationMaintenance/FeaturedDocuments/27/adolescencehtml.html](http://www.hfes.org/PublicationMaintenance/FeaturedDocuments/27/adolescencehtml.html).

Salter, C. A. (2001). Psychological effects of nuclear and radiological warfare. *Military Medicine*, 166, 17–18.

Sammons, M. T., Levant, R. F., & Paige, R. U. (2003). *Prescriptive authority for psychologists: A history and guide*. Washington, DC: American Psychological Association.

Shorter, E. (1997). *A History of Psychiatry*. New York: Wiley.

Society for Military Psychology. (2005). *History of Division 19*. Retrieved January 13, 2005, from <http://www.apa.org/divisions/div19/div19history.html>.

Stambor, Z. (2005). First combat psychologist honored—53 years after his service. *Monitor on Psychology*, 36, 88.

Stearns, A. W., & Schwab, R. S. (1943). Five hundred neuro-psychiatric casualties at a naval hospital. *Journal of the Maine Medical Association*, 34, 81–89.

Stuart, J. A., Ursano, R. J., Fullerton, C. S., Norwood, A. E., & Murray, K. (2003). Belief in exposure to terrorist agents: Reported exposure to nerve or mustard gas by Gulf War veterans. *Journal of Nervous and Mental Disease*, 191, 431–436.

Terman, L. M. (1918). The use of intelligence tests in the Army. *Psychological Bulletin*, 15, 177–187.

Uhlener, J. E. (1967, September). *Chronology of military psychology in the Army*. Paper presented at the meeting of the 1967 Annual Convention of the American Psychological Association, Washington, DC.

Ursano, R. J., & Rundell, J. R. (1995). The prisoner of war. In R. Zajtchuk & R. F. Bellamy (Eds.), *Textbook of military medicine: War psychiatry* (pp. 431–455). Washington, DC: Office of the Surgeon General, U.S. Department of the Army.

U.S. Department of the Army. (1948). *Military leadership psychology and personnel management* (an extract from the *Senior ROTC Manual*, Vol. II). Washington, DC: Author.

U.S. Departments of the Army and the Air Force. (1951). *Military clinical psychology, technical manual, TM 8-242, Air Force manual*, 160–45. Washington, DC: Author.

Walters, H. C. (1968). *Military psychology: Its use in modern war and indirect conflict*. Dubuque, IA: Wm. C. Brown.

Watanabe, H. K., Harig, P. T., Rock, N. L., & Kosches, R. J. (1994). Alcohol and drug abuse and dependence. In R. Zajtchuk & R. F. Bellamy (Eds.), *Textbook*

of military medicine: Military psychiatry: Preparing in peace for war (pp. 61–90). Washington, DC: Office of the Surgeon General, U.S. Department of the Army.

Welsh, J. R., Kucinkas, S. K., & Curran, L. T. (1990). *Armed Services Vocational Battery (ASVAB): Integrative review of reliability studies*. Brooks Air Force Base, TX: Air Force Systems Command.

Wong, A., Escobar, M., Lesage, A., Loyer, M., Vanier, C., & Sakinofsky, I. (2001). Are UN peacekeepers at risk for suicide? *Suicide and Life-Threatening Behavior*, 31, 103–112.

Wood, D. P., Koffman, R. L., & Arita, A. A. (2003). Psychiatric medevacs during a 6-month aircraft carrier battle group deployment to the Persian Gulf: A Navy force health protection preliminary report. *Military Medicine*, 168, 43–47.

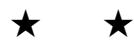
Yerkes, R. M. (1917). Psychology and national service. *Journal of Applied Psychology*, 1, 301–304.

Young, A. (1999). W. H. R. Rivers and the war neuroses. *Journal of the History of the Behavioral Sciences*, 35, 359–378.

Zeidner, J., & Drucker, A. J. (1988). *Behavioral science in the Army: A corporate history of the Army Research Institute*. United States Army Research Institute for the Behavioral and Social Sciences.

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PART I



Clinical Practice in the Military

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## CHAPTER 2

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# Introduction to Clinical Military Psychology

FRANK C. BUDD  
CARRIE H. KENNEDY

On any given day, U.S. clinical military psychologists are employed worldwide, on inpatient mental health units, in primary care and outpatient clinics, on ships, in classrooms, in combat stress units in combat zones, and as responders to major disasters. Military psychologists evaluate and treat recruits; service members of all ranks and their children, spouses, and other dependents; retired personnel; civilians from host countries and those encountered on humanitarian missions or during wartime; and enemy combatants. This wide range of experiences and populations makes clinical military psychology an exciting field that affords practitioners the opportunity to adapt traditional mental health services for specialized use within the armed forces. Indeed, each military psychologist must be prepared to do any job, in any location, with any potential patient, making clinical military psychology one of the most challenging and diverse professions in the field of mental health.

To accomplish the above, the military psychologist must have a firm foundation in the theoretical and scientific applications of clinical psychology. Each of the approximate 400 military psychologists currently on active duty is expected to perform a wide variety of jobs competently, treat the gamut of psychological disorders, make determinations about the fitness and suitability of any service member to continue military duty, hold

leadership positions, and serve commanding officers as consultants. Because of the dual role of the clinical military psychologist of not only providing evaluation and treatment to individuals but also making clinical decisions within the military context, the mental health practitioner is a problem solver, an expert, and a military officer.

As presented in Chapter 1 (this volume), military psychologists have led the way for the development of much of what we know about psychology practice in and out of the military today. In the exploration of the activities of military psychologists after the terrorist attacks of September 11, 2001, this is just as true now as ever before (Budd, 2004). Psychologists in all branches of the military are at the forefront in research on deployment of community prevention resources, are integral members of primary care medical teams and members of community disaster preparedness teams (Clay, 2001; Institute of Medicine, 2003), and have been pioneers in securing prescription privileges for psychologists (Sammons, Levant, & Paige, 2003). In addition, many military psychologists are essential personnel to deployed units like the Navy hospital ships and aircraft carriers, Marine expeditionary strike groups and combat stress platoons (note that the Marines utilize Navy medical personnel, including psychologists), Army combat stress control units, and Air Force combat stress units.

This chapter introduces clinical psychological applications relevant to the armed forces and provides an overview of specific practical aspects of the field. The intent is to provide an introductory discussion and facilitate an understanding of clinical military psychology. There are specific and unique characteristics of practicing clinical psychology in a military environment that differ from traditional roles. These include distinctive differences in internship and fellowship training, officer versus provider roles, the influence of rank on the therapeutic relationship, distinctive limits of confidentiality, the unavoidable ethical dilemma of multiple relationships, and unique multicultural training needs. This chapter also serves to introduce the remainder of this section of the book (which focuses on the bulk of the clinical work performed by military psychologists) including fitness-for-duty evaluations, brief psychotherapy, clinical health psychology, neuropsychology, suicide risk assessments, and substance abuse and gambling intervention and treatment.

## EDUCATION AND TRAINING: MILITARY INTERNSHIPS AND FELLOWSHIPS

Although an increasing number of licensed psychologists are entering the military as direct accessions, most psychologists continue to take advantage of the military's psychology training. The first option is the highly

competitive Uniformed Services University of Health Sciences (USUHS), which produces three military PhDs for the Army, Navy, and Air Force each year.

The most popular training option for military psychologists, however, is entrance into the service through specialized predoctoral clinical psychology internship training programs. Each service offers such programs, which are separately accredited by the American Psychological Association (APA). Internship lasts a standard 12 months and provides intense academic and clinical experiences. Training sites include historic and prestigious medical centers (e.g., Walter Reed Army Medical Center, Wilford Hall Medical Center, and National Naval Medical Center). In-depth clinical experiences allow for different rotations during the internship year, typically lasting 3 months each. Depending on the service and the particular internship site, multiple opportunities are available, including outpatient mental health, inpatient mental health, psychological and/or neuropsychological assessment, child psychology, substance abuse services, clinical health psychology, aviation psychology, and forensic psychology. At each rotation the psychology intern receives intense, personal supervision with opportunities to share learning with peers. The focus on multiple areas of training is directly related to the requirement for the military psychologist to be able to enter any job at the end of the internship.

Psychologists in the military also have tremendous opportunities for personal and professional growth through postdoctoral training programs. Advanced training is offered in child psychology, neuropsychology (see Chapter 6, this volume), behavioral medicine and clinical health psychology (see Chapter 5, this volume), psychopharmacology (see Chapter 18, this volume), aviation psychology, and forensic psychology. Military psychologists often have the opportunity to create postdoctoral–fellowship training experiences and attend some of the nations' most prominent institutions of higher learning (e.g., University of Virginia and Harvard University). Keeping pace with the global war on terrorism, the Navy established an operational fellowship that began in the summer of 2005 in conjunction with Naval Criminal Investigative Services (Chamberlain, 2005; CAPT G. Goldberg, personal communication, March 1, 2005). For more information about operational psychologists and requisite core skills, see Chapter 9 (this volume).

## MILITARY OFFICER VERSUS MENTAL HEALTH PROVIDER

The military mental health provider is not exclusively a clinician. In fact, one of the earliest lessons taught when entering military service is that one is an officer first and a provider second. This becomes evident in the con-

text of clinical decision making in the military environment and the emphasis on leadership positions and operational responsibilities.

Clinical practice in the military is different than in a civilian clinic or hospital. When an individual presents with various Axis I or II diagnoses, fitness and suitability for continued service must be determined. The clinical decision is made within the context of the specific military rate (job demands) that the active-duty member holds, as well as the impact this diagnosis will have on the member's unit. The patient's goals for treatment (e.g. maintaining employment) may not always be feasible. In the case of Axis I disorders, such as bipolar disorder or severe major depression, the active-duty member will be detached from his or her command and placed on limited duty until a medical board (i.e., temporary limited duty or medical retirement) can be completed. For more details about decisions of fitness and suitability for duty, see Chapter 3 (this volume).

Leadership positions are highly emphasized in clinical military psychology, and any psychologist who fails to show competence in this realm is not likely to be promoted to the next rank. In fact, immediately following the internship year, it is standard practice for the graduating intern to move not only to a more independent clinical position but also to assume leadership responsibility. It is common for a junior lieutenant (Navy) or captain (Army and Air Force) to be assigned as a division officer of a mental health department or even as a department head of an addiction treatment facility in a remote or overseas location. As clinical skills develop, so do leadership skills, including managing personnel and budgets and performing administrative roles pertaining to an entire command (legal investigations, committees on accreditation of healthcare organizations, disciplinary and award boards, etc.).

## RANK AS A VARIABLE IN THE PATIENT–THERAPIST RELATIONSHIP

According to Safran and Muran, “the most robust predictor of outcome in psychotherapy is the quality of the therapeutic alliance” (1998, p. 7), which is “evident across a wide range of treatment modalities” (Safran & Muran, 2003, p. 1; see also Ackerman & Hilsenroth, 2003; Hersoug, Hoglend, Monsen, & Havik, 2001; Luborsky, Dugue, McLellan, Woody, & Seligman, 1997). In a profession in which there is already a power differential between doctor and patient, how then does the rank difference between a junior- or middle-grade officer as therapist, and a junior- or middle-grade enlisted member as patient affect the establishment of the therapeutic alliance and its outcome? Lange and Bradley (2001) and Raybin and Flickinger (1972) addressed the issue of the effect of rank in an inpatient

mental health unit. Lange and Bradley suggest that within the context of the inpatient community meeting, a “democratic process” should be utilized to negate rank factors. Raybin and Flickinger found that it was the most junior personnel who had the greatest rank consciousness, which gradually diminished as the staff emphasized the therapeutic community approach and deemphasized the issue of rank.

But although these particular articles address the issue of rank on the therapeutic community among inpatients and the patient-staff relationship, they do not deal with the therapist-client alliance itself. The only study addressing the effect of rank on the therapeutic alliance and process of therapy focused on the therapist, an Air Force captain, and patients of higher rank (Marshall, 1970). Challenges included the sophisticated defenses of the senior-ranking patients and the fear of negative impact on their career, combined with the anxiety of the junior therapist, who may have had difficulty in challenging or probing to the degree necessary because of the military culture in which junior officers do not confront senior officers.

What, then, are the effects of military rank on the patient-therapist alliance? One must assume that rank is a critical variable in the establishment of an effective therapeutic relationship since it is such a visible and frequent artifact in the military mental health system. Within various services and specialties, service members will interact with various senior enlisted and officer ranks. For example, in the context of alcohol or drug abuse screenings, the provider is typically a senior enlisted member and the patient a junior enlisted member. In this field, there is a high probability that a junior enlisted member who has been referred for a screening has encountered disciplinary difficulty and has probably been counseled (“chewed out” or “read the riot act”) by his own senior enlisted personnel. Therefore, the initial establishment of rapport is essential, as is establishing the understanding that the relationship with the counselor will be dramatically different (MSgt. R. E. Mitchell, personal communication, January 18, 2005) than with individuals in the chain of command. In this context the provider must establish oneself as a problem solver motivated to assist the service member in accomplishing patient-identified goals. It is hypothesized that the impact of rank between enlisted providers (e.g., substance abuse counselors and psychiatric technicians) and officer providers (e.g., psychologists and psychiatrists) is also significantly different. With the exception of substance-related obstacles noted above, the similarity in experiences of the enlisted personnel should enhance the establishment of the therapeutic alliance. In clinics in which enlisted psychiatric technicians conduct part of the evaluation and/or perform group interventions, there is some anecdotal evidence of increased comfort level and subsequent acceptance in younger active-duty members. On the other hand, some patients may feel comforted by an officer’s rank and perceive that person as an expert and authority

who has power to help them. Additional research is necessary in this area to delineate specific factors that may act on the therapeutic relationship in military psychology.

The most common therapeutic relationship in the military is between an officer as the therapist and an enlisted member as the patient. It is important to keep in mind that not all traditional patient care is conducted in the comfort of a psychologist's office. Thus, before addressing the establishment of the alliance, the context of any evaluation must be explored. What one might have the capability and resources for in a military medical treatment facility, for instance (e.g., multiple therapy sessions and psychological testing), will not be possible or perhaps even appropriate in a deployed location. In whatever location a military psychologist is practicing, a thorough explanation of the evaluation process, the limits of confidentiality, and the implications of the evaluation are integral pieces of the initial establishment of trust, as is showing sincere interest in the junior enlisted member as a person and not only as a service member who has specific duties to perform. Many younger enlisted members have very little contact with officers, and it is essential that the experience with the psychologist be a fair and positive one. In remote or isolated commands, such as on a ship or in a foreign country, there will often be only one mental health provider, and the word will pass quickly if this person is to be trusted or avoided.

Psychologists in the military must find the optimal method of interacting with any specific patient and situation. In the military context, there will be some active-duty patients who may feel most comfortable if the military psychologist accepts and works within that structure and formality, for example, permitting the use of "Yes, Sir or (Ma'am)" or "No, Sir (or Ma'am)" after the formalities of introductions are passed. In some cases, patients have been known to sit at attention during an evaluation or session, despite assurances they could adopt a more relaxed posture.

It appears clear that military patients see the rank of the therapist as a key variable. It is the responsibility of the therapist to decide how formal or informal to structure the therapeutic relationship, but the comfort level and belief set of the active-duty patient must be considered a priority when making this determination.

## CONFIDENTIALITY IN THE MILITARY SETTING

The issues of privacy and confidentiality are also a unique challenge in the military. Military psychologists must be well informed of current American Psychological Association (APA) ethical principles (APA, 2002)

and be able to apply them in the context of military instructions and orders, state and federal law, and other mandates that affect privacy and confidentiality—for example, the Health Insurance Portability and Accountability Act Privacy Rule (U.S. Department of Health and Human Services, 2002). The boundaries for confidentiality are based on complex ethical principles that most often weigh the rights and interests of the individual against the rights and interests of a group. In the military, the complexities surrounding confidentiality in civilian practice are further stratified by concepts such as “mission impact” and “need to know,” which provide important counterbalancing variables in the day-to-day work of the military psychologist.

This limited confidentiality has always been a public relations hurdle, increasing the anxiety of potential clients and propagating the rumors surrounding the stigma of seeking mental healthcare. In fact, the results of the Survey of Health Related Behaviors (Bray et al., 2003) revealed that although approximately 19% of all service members perceived a need for counseling, 12.5% actually received it and only 6% obtained it from a military practitioner. Those who received mental healthcare were less likely (50.4%) than those who did not receive services (66.9%) to believe that counseling would damage a military career. Thus, the stereotype that seeing a psychologist in the military may damage one’s career persists (Bray et al., 2003).

Despite differences between military and civilian confidentiality rules, the reality is that the majority of patients seen in a military outpatient facility have great privacy. Although commanders have a right to know where their service members are (i.e., that they are at a medical appointment), the majority of presenting issues, such as marital conflict, job dissatisfaction, depression, and anxiety, allow for confidential communications between the patient and the psychotherapist. There are, however, certain restrictions that exceed the mandatory reporting of civilian providers, that is, threats to harm oneself or others and knowledge of child abuse. Mandatory reporting in the military also includes spousal abuse, any criminal or illegal behavior (e.g., illegal drug use), homosexual behavior, and the determination that a specific service member is not fit for duty.

When the patient is seen as part of a formal evaluation process mandated by the member’s commander or commanding officer (i.e., command-directed), the patient must be informed that a written report will be given to the commander. The content of the report, however, is limited to the specific impact on the duty or mission; that is, there is no need to provide information about childhood abuse or other highly sensitive personal information to a commanding officer in almost all cases. Similar to any legal evaluation, the service member also has the right to consult with an attor-

ney prior to a command-directed mental health evaluation. See Chapter 3 (this volume) for guidance in conducting these types of evaluations. In addition, military members have limited privileges when undergoing a sanity board or mental capacity inquiry, pursuant to the Rules of Courts Martial 706 or Military Rules of Evidence 302 (Joint Service Committee on Military Justice, 2005).

## HOMOSEXUAL BEHAVIOR

The issue of homosexuality deserves special mention, as the topic is a controversial one in the military and affects confidentiality. Although homosexuality itself is not considered unlawful in the military and is not grounds to warrant separation from active duty, actual homosexual behavior is. *Policy Concerning Homosexuality in the Armed Forces* (2004) (United States Code, Title 10, Section 654) notes the fundamental differences between military and civilian life. Issues related to unit cohesion, the need for high morale, and living conditions that may offer no privacy are the main justifications for the view that individuals engaging in homosexual behavior compromise the military's mission. This text is not a forum in which to discuss the ethics or utility of this policy but rather the military psychologist's role when evaluating or treating homosexual individuals, whose sexuality is not known to their commanders.

As homosexuality itself is not considered criminal and therefore not an issue of mandatory reporting for medical personnel, military psychologists routinely treat active-duty homosexuals. As part of the initial explanation of confidentiality, the psychologist informs all prospective patients of its limits, specifically including disclosure of acts of homosexual behavior. This generally precludes the military psychologist from having to break confidentiality and allows for not only treatment but also retention in the military. Anecdotal evidence suggests that homosexual personnel who seek treatment are generally motivated to stay in the military, at least to the extent of completing a current contract. As a general rule, military psychologists go out of their way to keep this confidence and to help active-duty patients in managing homosexuality in the context of their military service.

Claiming that one is homosexual when one is not is at times used as a means to be released from active duty. Psychologists need to be aware of this ploy, particularly when there appears to be an extraordinary desire to leave the military. In these cases, the military psychologist's role is to simply report as the patient desires. The command will then investigate the individual's claims and determine whether or not to proceed with an administrative separation.

## THE DILEMMA OF MULTIPLE RELATIONSHIPS

Multiple relationships are commonplace in many military settings, given the large number of small, remote, or embedded military commands, as well as the limited number of mental health providers. It is not uncommon to routinely encounter patients at the base exchange, in social situations, at command functions, and in other extremely awkward but unavoidable instances. One military psychologist in a very remote setting once had to navigate a physician patient who had to be her (the psychologist's) provider for a specific issue. Resolving these issues in military environments by using the APA (2002) ethical guidelines is often impossible.

As these issues so commonly arise, several military psychologists have published guidelines for addressing them. Staahl and King (2000) propose a decision-making model to determine whether or not a particular provider may ethically engage in a doctor–patient relationship with a specific service member. Their model is applicable in settings in which alternate care is likely to be available but falls short of advising psychologists who have no referral options.

Johnson, Ralph, and Johnson (2005) provide guidance for embedded environments, in this case aircraft carriers. In this environment, frequent out-of-office contact with patients occurs, and these military psychologists do not have a choice about whether or not to begin or to terminate a therapeutic relationship. To address these issues, the authors recommend that the psychologist keep in mind the military mission, the issue of the preexistence of multiple relationships (e.g., a commissioned officer), the assuredness of frequent personal contact with clients, and the notion that the psychologist is almost guaranteed to be in a position in which evaluation and/or care must be provided to a colleague, supervisor, or even friend.

To minimize potential negative impact, Johnson et al. (2005) recommend assuming a neutral posture in the embedded community, viewing every service member at the command as a future patient, providing detailed informed consent immediately to all patients, adhering strictly to need-to-know policies, avoiding significant self-disclosure, utilizing any alternative resource possible (e.g., chaplains and substance abuse counselors), establishing a consulting relationship with an experienced peer or mentor prior to deployment, and routinely documenting uncomfortable or problematic dual relationships.

## MULTICULTURAL UNDERSTANDING AND COMPETENCE

Cultural diversity and multicultural sensitivity are essential to a well-functioning U.S. military. The most successful military psychologists have

an excellent understanding about the community and culture in which they live and work. It is common practice for a military psychologist to treat active-duty individuals who not only come from varying backgrounds in the United States (e.g., American Indian, African American, and Pacific Islander) but also are from and/or are citizens of other countries (e.g., Mexico, Nigeria, Columbia, and the Philippines, to name a few). In addition, military spouses and other related civilians come from a wide variety of countries in which the military is based (e.g., Japan, Korea, and Saudi Arabia) or currently operates (e.g., Iraqis at Guantanamo Bay). Thus a strong background in multicultural understanding is important, as is a good understanding and appreciation of one's own personal beliefs. But given the diversity of individuals seen on a regular basis by military psychologists, it is impossible to become specifically trained to evaluate and treat individuals from all possible ethnic and religious backgrounds. If there is little time to prepare, as can be the case when deployed, the bulk of the necessary information will often come from the clients themselves, educating the psychologist in the context of the therapeutic relationship.

Although it is impossible to accurately document the best way for a military psychologist to approach each individual patient, there is a broad literature on multicultural understanding with which military psychologists must be familiar. An excellent overview of working with a wide variety of Americans of different cultural backgrounds is provided by Locke (1998). Sue and Sue's (2003) classic work explores in depth more general issues related to multicultural competence.

General multicultural skills that appear necessary for every military psychologist are solid therapy skills (Constantine, 2002), motivation to explore and acknowledge personal biases and beliefs (Stuart, 2004), respect for other cultures, cultural knowledge and willingness to discuss cultural issues (Pope-Davis et al., 2002), knowledge of the dynamics of cross-cultural communication (Salzman, 2000), and an ability to evaluate and recognize the type of relationship wanted by the patient (Pope-Davis et al., 2002). Knowledge of mental health practices in specific cultures; flexibility in provision of treatment; and knowledge of local mental health laws, particularly when providing care in foreign countries to foreign nationals, will also be key.

## PRIMARY CLINICAL ROLES FOR MILITARY PSYCHOLOGISTS

In addition to the basic knowledge that each effective military psychologist must possess, there are more specific requisite skills for the military mental health provider. These are presented in more detail in the remainder of the clinical section of this book and are outlined here.

## Conducting Fitness-for-Duty Evaluations

One of the most common requirements of a military psychologist is to conduct a fitness-for-duty evaluation. In fact, each time an active-duty service member is seen by a military psychologist, a fitness-for-duty determination is made. In Chapter 3 (this volume), the authors provide a detailed description of the determination of fitness and suitability for duty. Outlined are specific issues that trigger specialty evaluations, including command-directed mental health evaluations of active-duty members and the process for conducting them.

## Brief Psychotherapy

The nature of the military environment often severely limits the possibility for long-term therapy. Chapter 4 (this volume) provides insight into the therapeutic alliance and the process of brief psychotherapy in the military. This chapter reviews the history of brief therapy, highlights the stages and important components of such interventions, and concludes with a case example.

## Clinical Health Psychology and Behavioral Medicine

In the next two chapters, advanced clinical skills are introduced, which require appropriate postdoctoral training. The first advanced clinical area pertains to the unique contributions of behavioral medicine, which are discussed in Chapter 5 (this volume). This chapter provides a review of the development of the field and specific details of its application to the military. Also reviewed are the broad applications of this skill from such areas as population health through disease management. Finally, the chapter will provide a review of individual and group evidence-based interventions for common medical conditions treated in both behavioral medicine and health psychology settings.

## Neuropsychology

In Chapter 6 (this volume), the training, clinical practice, and research base of this unique field is thoroughly presented. A synthesis of all the branches of the military is provided for these key issues. The authors describe the types of referrals accepted, the job descriptions of the military neuropsychologist, the intricacies of aerospace neuropsychology and combat-related neurological injuries, and operational applications of neuropsychology.

## Suicide Risk Assessment and Prevention

The high visibility of suicide prevention is addressed in Chapter 7 (this volume). Being able to conduct a thorough suicide risk assessment and to address the issue of suicide prevention are key requisite skills for military psychologists, particularly in light of the ready access to lethal weapons. Chapter 7 (this volume) includes a thorough analysis of the epidemiological issues of age, risk and protective factors, differences among the individual services, and the differentiation of gestures, attempts, and completions. Of particular interest to the military psychologist is the wealth of resources for both the clinical practitioner and the community educator. This chapter also provides critical insights into the case management of suicidal individuals, including case identification and referral; gathering critical assessment data; and perhaps most important, establishing a comprehensive and individualized treatment plan.

## Substance Abuse Services and Gambling Treatment

Military psychologists confront addiction on a regular basis and direct many of the substance abuse rehabilitation options in all branches of the military. Chapter 8 (this volume) addresses a wide range of issues with this population, including prevention, early intervention, and treatment options for substance abuse, as well as the treatment of pathological gambling. Included in this section are case examples and sample substance abuse and gambling evaluations. Treatment of addictions crosses many boundaries. It is not uncommon for military members to have dual diagnoses. Consequently, psychologists working with chemical and nonchemical addictions need to know how to establish truly biopsychosocial treatment plans in the context of a rapidly changing work environment. Thus the psychologist working in this field must be an adept facilitator in networking with other colleagues (e.g., internal medicine, family advocacy, primary care, and the flight surgeons office) and nonmedical agencies (area defense counsel, legal office, and unit commander).

## CONCLUSIONS

The authors in the following chapters review state-of-the-art research and practice to inform military psychologists involved in clinical work. Psychologists from the different branches of service are operating in conjunction with one another more than ever before. Indeed, with approximately 500 medical facilities around the globe, “our combat health support system has gradually evolved into a much more effective joint force” (Wilson, 2003,

p. 197). With hundreds of psychologists in the Air Force, Army, and Navy, there are tremendous opportunities for professional growth and multiple-level effects, as well as new opportunities to work in closer collaboration with each other.

Military psychologists have a great deal of responsibility. Their daily decisions affect individuals, families, and the effectiveness of entire military units. Solid core clinical and leadership skills are absolutely essential to the psychologists' ability to perform their military duties. The unique skills required of the military psychologist combine a mastery of traditional clinical psychology and an understanding of the functions and needs of the modern military. Although there are many challenges, a career in the armed forces is a very exciting and rewarding option for clinical psychologists.

## REFERENCES

Ackerman, S., & Hilsenroth, M. (2003). A review of therapist characteristics and techniques positively impacting the therapeutic alliance. *Clinical Psychology Review*, 23, 1-33.

American Psychological Association (APA). (2002). *Ethical principles of psychologists and code of conduct*. Washington, DC: Author.

Bray, R. M., Hourani, L. L., Rae, K. L., Dever, J. A., Brown, J. M., Vincus, A. A., et al. (2003). *2002 Department of Defense survey of health related behaviors among military personnel*. Report prepared for the Assistant Secretary of Defense (Health Affairs). Washington, DC: U.S. Department of Defense.

Budd, F. (2004, April). *Psychology in the military during the war on terrorism*. Paper presented at the annual conference of the South Carolina Psychological Association, Myrtle Beach, SC.

Chamberlin, J. (2005). A chance to serve: Psychology's military division places a premium on training the next generation of military psychologists. *Monitor on Psychology*, 36, 86.

Clay, R. (2001). Military psychologists respond to attacks. *Monitor on Psychology*, 32, 45.

Constantine, M. G. (2002). Predictors of satisfaction with counseling: Racial and ethnic minority clients' attitudes toward counseling and ratings of their counselors' general and multicultural counseling competence. *Journal of Counseling Psychology*, 49, 255-263.

Hersoug, A., Hoglend, P., Monsen, J., & Havik, O. (2001). Quality of working alliance in psychotherapy: Therapist variables and patient/therapist similarity as predictors. *Journal of Psychotherapy Practice and Research*, 10, 205-216.

Institute of Medicine (2003). *Preparing for the psychological consequences of terrorism: A public health strategy*. Washington, DC: National Academies Press.

Johnson, B., Ralph, J., & Johnson, S. (2005). Managing multiple roles in embedded environments: The case of aircraft carrier psychology. *Professional Psychology: Research and Practice*, 36, 73-81.

Joint Service Committee on Military Justice. (2005). *Manual for courts-martial*. Washington, DC: U.S. Government Printing Office.

Lange, C., & Bradley, J. (2001). Community meetings on a military inpatient psychiatric unit: A question of balance. *Military Medicine*, 166, 48–52.

Locke, D. C. (1998). *Increasing multicultural understanding: A comprehensive model* (2nd ed.). Thousand Oaks, CA: Sage.

Luborsky, L., Diguer, L., McLellan, T. A., Woody, G., & Seligman, D. A. (1997). The psychotherapist matters: Comparison of outcomes across 22 therapists and 7 patient samples. *Clinical Psychology: Science and Practice*, 4, 53–65.

Marshall, J. (1970). Treatment problems of a military psychiatrist with patients of higher rank. *Comprehensive Psychiatry*, 11, 190–195.

*Policy concerning homosexuality in the armed forces.* (10 U.S.C., Sec. 654). (2004).

Pope-Davis, D. B., Toporek, R. L., Ortega-Villalobos, L., Ligiero, D. P., Brittan-Powell, C. S., Liu, W. M., et al. (2002). Client perspectives of multicultural counseling competence: A qualitative examination. *The Counseling Psychologist*, 30, 355–393.

Raybin, J., & Flickinger, W. (1972). Rank and the military therapeutic community. *Comprehensive Psychiatry*, 13, 335–346.

Safran, J., & Muran, J. (2003). *Negotiating the therapeutic alliance: A relational treatment guide*. New York: Guilford Press.

Salzman, M. (2000). Promoting multicultural competence: A cross-cultural mentorship project. *Journal of Multicultural Counseling and Development*, 28, 119–124.

Sammons, M. T., Levant, R. F., & Paige, R. U. (2003). *Prescriptive authority for psychologists*. Washington, DC: American Psychological Association.

Staal, M., & King, R. (2000). Managing a multiple relationship environment: The ethics of military psychology. *Professional Psychology: Research and Practice*, 31, 698–705.

Stuart, R. B. (2004). Twelve practical suggestions for achieving multicultural competence. *Professional Psychology: Research and Practice*, 35, 3–9.

Sue, D. W., & Sue, D. (2003). *Counseling the culturally diverse: Theory and practice* (4th ed.). New York: Wiley.

U.S. Department of Health and Human Services. (2002). Standards for privacy of individually identifiable health information. *Federal Register*, 67, 53182–53273.

Wilson, J. R. (2003). Military medicine. *The Year in Defense*, 16, 196–204.

## CHAPTER 3



# Military Fitness-for-Duty Evaluations

FRANK C. BUDD  
SALLY HARVEY

**F**itness-for-duty evaluations make up a broad field because of the wide variety of duties, expectations, responsibilities, work environments, and skills needed by the many different types of jobs performed in the military. The most common fitness-for-duty evaluation will answer the following question: Are particular service members able to safely and effectively perform their jobs from a mental health or neuropsychological standpoint? Other, more focused evaluations may also be requested for the assessment of individuals to perform specialized duties or hold a particular status, as well as disability evaluations and forensic assessments secondary to court-ordered sanity boards. Although this chapter's primary focus is on traditional fitness-for-duty evaluations, a short discussion of several of these other forms of evaluation is also included.

To provide some clarity about the fitness-for-duty evaluation process, this chapter discusses key issues that commonly arise in these types of evaluations. However, as there are some relatively minor idiosyncrasies among the services, it is recommended that the reader consult that service's regulations for specific guidance.

Traditional fitness-for-duty evaluations may be requested by referral from a service member's command (command-directed evaluations [CDEs]), by a medical colleague, and from service members themselves

(self-referral). As CDEs have the most stringent guidelines, this chapter addresses fitness-for-duty evaluations from this perspective. The key references for all military psychologists regarding CDEs are provided by the U.S. Department of Defense (1997a), Directive (DoDD) 6490.1, *Mental Health Evaluations of Members of the Armed Forces*, and U.S. Department of Defense (1997b), Instruction (DoDI) 6490.4, *Requirements for Mental Health Evaluations of Members of the Armed Forces*. These documents establish the rights of active-duty military personnel and civilian employees of the armed services who are referred by their commands for mental health evaluations, to include involuntary hospitalization. Although the initial intent was to protect individuals from unwarranted mental health evaluations or involuntary hospitalization as retaliation from the military, they have also served to ensure that the criteria used for the involuntary hospitalization of active-duty service members is commensurate with the standard of care used for civilians. Each of the services has developed its own specific guidance, detailing the procedures that must be followed by commanders and mental health personnel in performing CDEs [U.S. Department of the Air Force (2000c), Instruction 44-109, *Mental Health Confidentiality and Military Law*; U.S. Department of the Army (1999) MEDCOM Regulation 40-38, *Command-Directed Mental Health Evaluations*; U.S. Department of the Navy (1999b) SECNAVINST 6320.24A, *Mental Health Evaluations of Members of the Armed Forces*; and U.S. Department of Homeland Security (2004), *Medical Manual*, Coast Guard COMDTINST M6000.1, Chapter 5].

In addition to CDEs, a number of regulations expressly require an administrative evaluation. Although not meant to be an exhaustive list, most of the services require evaluations for those destined to become recruiters, drill sergeants, substance abuse counselors, submariners, and members of special operation communities, as well as those working with nuclear weapons and holding security clearances. Each of the services has developed procedures, including psychological screening, for individuals claiming conscientious objector status (Wang et al., 1997; see Table 3.1 on p. 44) and the Navy requires an assessment for individuals returned from deserter status. Fitness-for-duty evaluations may also include mental health input for those going before a medical evaluation board, as well as assessments designed to determine eligibility for disability required by the Department of Veterans Affairs (VA). Many mental health services will also see civilian employees for assessment and referral in the manner of an employee assistance program. Representatives of civilian personnel offices should always be consulted by the psychologist considering these types of fitness-for-duty evaluations.

## **NONEMERGENT EVALUATIONS**

Nonemergent evaluations are those in which there is no suspicion of immediate safety concerns for the individual or others. Individuals in this category may be experiencing adjustment problems, depression, learning difficulties, or anxiety disorders, to name a few examples. Evaluations for which there are concerns of suicide and/or homicide are covered in the context of emergent evaluations (see below).

Across all the services it is critical to note that only the individual's commander (Army and Air Force) or commanding officer (Navy and Marine Corps) has the authority to request a CDE, although it is often the case that the observations of the service member's supervisors and/or peers form the basis for concern. Another consistency refers to the required credentials of those mental health providers responsible for the fitness-for-duty evaluation—those individuals must be doctoral-level psychologists, psychiatrists, or social workers. With these stipulations in place, we now address salient issues in the nonemergent evaluation of active-duty personnel.

1. The first step in the process is the discussion that must occur between the individual's commander and the mental health provider. This interaction serves two purposes: It gives the provider the opportunity to assess the reasonableness of the commander's request, and it can be an invaluable source of information about the individual, background factors, and the behavior or attitudes that have raised concern. The following is a brief listing of the issues that, in our experience, frequently precipitate a commander's nonemergent request for consultation, though it should be noted that more extreme forms of some of these behaviors may require an emergent evaluation.

- a. Unpredictable moodiness, irritability, tearfulness, or depression.
- b. Repeated episodes of "acting out," including spousal abuse, gambling, and substance abuse.
- c. Repeated incidents of minor misconduct.
- d. Failure to respond to unit discipline, amid a sense that "they don't seem to care what happens to them."
- e. Illegal behavior (e.g., shoplifting), dramatic change in mood, or obvious decrease in performance for a previously "star performer" or "motivated trooper."
- f. "Odd behaviors" that threaten or scare coworkers.
- g. Inability to learn material intrinsic to the job, raising questions about learning disabilities, or attention-deficit/hyperactivity disorder.

der (ADHD), especially when the member indicates previous difficulties with learning.

- h. Frequent somatic complaints, limiting the service member's ability to complete military duties, including physical training, training exercises, and deployments.
- i. A commander seeking the member's discharge, in absence of the necessary paper trail. Note: This is not an appropriate referral, but it is at times the basis for command referrals.

As the situation is discussed, providers can often sense the commander's interest in working with the individual should they find something that they think can be resolved with the right interventions. In general, the commander is likely to request assistance with the following questions:

- a. Is there a mental health condition that is contributing to the current difficulty?
- b. With treatment, will the member be able to return to full duty?
- c. Can the member carry a weapon at the current time?
- d. Is it appropriate for the member to have access to classified information?
- e. Is the member qualified for worldwide deployment?
- f. Is the member suitable for continued military service?

Should the provider agree that the request for evaluation is appropriate, this is an excellent opportunity to remind the commander of the requirements that must be fulfilled before the service member's appointment. In brief, this process includes completion of the necessary referral paperwork, including the basis for the referral, identifying information of the mental health provider who approved the request, the individual who will be conducting the assessment, and the logistics of the appointment itself. In addition, clear communication of the service member's rights to seek counsel from an attorney, inspector general, and/or military chaplain must be included, along with notification of the service member's right to seek a second opinion from a mental health provider, although that assessment is conducted at personal expense. After both the commander and service member have signed the referral, a copy of this paperwork must be given to the referred individual. In the event that the member declines to sign, an explanation of that decision must be included on the form. To assist commanders, samples of the referral form, as well as the notification of referral that is provided to the member, are also provided in DoDI 6490.4.

2. The next step is to gather all pertinent collateral information. In addition to the information gathered from discussing the case with the com-

mander, this step includes reviewing the service member's outpatient medical record and documentation of previous contact with mental health, family advocacy, or substance abuse programs; hospitalization records, including initial mental health examinations, nursing notes, and discharge narratives; memorandums or statements from the unit, especially first-line supervisors; and any results of official investigations in which misconduct is involved.

3. Sound clinical practice includes sound documentation. Once the referral paperwork arrives, it is imperative that the mental health provider reviews the paperwork for accuracy and thoroughness. Areas that require particular attention include ensurance that the member's evaluation appointment is at least 2 business days after the written date on the member's rights advisement form; that the service member was advised of the rationale for the referral and the associated rights; and that the commander, and not another unit member, has signed the referral request. These are areas of keen interest for the health services inspection teams and inspector general reviews, and thus it is prudent to maintain copies of all paperwork, including the member's rights advisement, in the mental health clinic record. Although there is local variation regarding requirements for additional documentation, units are frequently asked to provide statements from "witnesses" of the member's conduct in question, copies of prior performance evaluations, and statements from the current supervisor about specific job behavior and interpersonal conduct. Should there be evidence that the referral was given in reprisal or that the procedures were not properly followed, the mental health provider must first contact the member's commander for clarification. In the rare instance that this communication does not resolve the question, the provider must then report the situation through his or her chain of command to the next higher level of the referring commander.

4. When conducting a CDE, the provider must inform the service member of the reasons, circumstances, and possible outcomes of the evaluation, as well as the fact that the results of the assessment are not confidential. Developing rapport in this type of evaluation can be challenging and can cause unnecessary anxiety and resistance in the client, impairing the provider's ability to gather the needed information, which can then lead to erroneous conclusions and ineffective recommendations. By making a conscious effort to focus on the relationship factors in the beginning of the evaluation and making rapport a priority, a provider can gain valuable information on the member's interpersonal skills, insight, and degree of responsibility for the situation.

Rapport will be the determinant between getting the needed information or being unable to provide necessary help to the military member, as well as being unable to provide an informed decision to the command. If

the member's difficulties are related to an as yet undisclosed concern about family or other personal issues, for instance, the psychologist is now able to assist the member and provide valuable information to the command. The evaluating psychologist can help the member resolve the underlying issue while informing the commander that the problem is one that may be quite amenable to assistance.

For those members who are seeking a discharge, the evaluating psychologist can explain that the final recommendation may, in fact, support separation. When the member has a lengthy history of acting out or has demonstrated a failure to adjust to military life, or in the view of the provider early discharge would serve the best interests of both the member and the military, administrative separation may be recommended. For those who are actively seeking a discharge, it is necessary to differentiate among malingering, personality disorders, and other mental health disorders. One final note here: Even if the mental health provider recommends administrative separation, the commander always has the final say in this decision, unlike the implementation of a medical board.

5. Completing the assessment itself is quite similar to traditional comprehensive evaluations conducted daily in clinical practice. One caveat is to take one's time in gathering detailed work history, given that a primary purpose of the evaluation is likely to be a recommendation to the commander about fitness to do a particular job, maintain the privileges of a particular occupation, and general capacity to function in a military environment. A general outline of work history questions may include the following:

- a. "Why did you join the military?"
- b. "How did you end up in your career field?"
- c. "What are your thoughts about your job, coworkers, chain of command, and the military overall?"
- d. "If you could change one thing at work, what would it be?"
- e. "If others could change one thing about you, what would it be?"
- f. "Do you want to stay in the military?" (This is often the crux of the evaluation.)

Frequently, a member wants to leave the military and hopes that your recommendation to the commander will facilitate this desire. It is also likely that a "barracks lawyer" or "sea lawyer" (an individual who purports to know a lot about military policy and procedures but whose information is largely inaccurate) has implanted the notion that the mental health provider is the one who determines the member's fate. The assessment of motivation for continued military service is a critical element in the evaluation. If a service member wants to stay on active duty, he or she may tend to minimize the problems. If a service member desperately wants to be dis-

charged, he or she may be apt to exaggerate the problems. See below for more information on assessing malingering in the military.

6. The final step is a timely response to the commander, required within 1 business day. This report is not the same as the comprehensive report for the medical record. In general, commanders are interested in the bottom line. A CDE report will routinely address diagnosis, prognosis, and fitness for duty, as well as recommendations for duty limitations and treatment interventions. When formulating these statements, it is imperative that the provider have a reasonable understanding of the service member's duty requirements (i.e., most have routine access to weapons, work nontraditional hours, and function in unique environments). Whereas the report can include clinical information sufficient for the commander's understanding of the service member's psychological status and determination of reasoned decisions regarding duties, this information should be provided in a judicious manner. Moreover, reports written with an eye to reducing "psychobabble" will go far in ensuring that recommendations are understood and taken seriously.

Commanders are seeking an expert opinion about the current situation, future potential, and disposition options for their members. They are requesting clear, decisive feedback about the rehabilitative potential of the member in conjunction with specific intervention recommendations, one of which may include separation from the military. Equivocal statements do neither the commander nor the individual any benefit. For additional guidance the reader is directed to Fischler (2000, 2001), Guller (2000), Rostow and Davis (2004), and United States Postal Service (2000).

## POSSIBLE OUTCOMES OF THE EVALUATION

### Return to Duty

It is very possible that the evaluation will not result in the diagnosis of a significant psychiatric disturbance. This is often true for members who have been referred primarily to ensure that they receive therapy. These individuals often have relatively normal reactions to situational events, including problems adjusting to military life. They have simply not talked with anyone to help put the event, and their response, into context and gain the support needed to resolve their stressors. Also in this category are individuals who made inappropriate comments about suicide or homicide (e.g., when drinking or after a relationship breakup) but do not represent a true danger to themselves or others. Appendix 3.1 is an example of such an outcome. Also in this category are individuals who have engaged in criminal misconduct but do not have any mental health disorder. In this instance, the evaluator is conveying to the commander that there is no mitigating cir-

circumstance to the misconduct or inappropriate behavior, the member is fully responsible for his or her actions, and the unit should hold the member accountable.

### **Return to Duty in Conjunction with Mental Health Interventions**

Return to duty is also a common outcome for individuals seen for nonemergent evaluations, many of whom present with mood and adjustment disorders. In sum, the member is exhibiting enough symptoms to receive a mental health diagnosis, although not to the degree warranting an unfit-for-duty finding (e.g., Medical Evaluation Board [MEB]). These individuals run the diagnostic gamut, from those distressed because of a divorce or occupational dissatisfaction, to those diagnosed with moderate levels of anxiety or depression, to those dealing with personal or combat-related trauma. As many of these individuals can benefit from psychoeducation, therapy, and/or medication, the provider's interaction with the member's commander can give members the opportunity to access these interventions.

### **Refer for a Medical Evaluation Board**

If unable to perform their military duties because of a mental health disorder, some members will meet criteria for an MEB. Whereas the diagnosis of a psychotic process almost invariably results in an MEB, there is some flexibility with respect to other significant mental health disorders, including major depression, panic disorder, and posttraumatic stress disorder (PTSD). The consensus from the field is that if there is no or minimal improvement after 8 to 12 months of treatment, and/or all levels of care have been offered without results (i.e., outpatient, intensive outpatient, medication, and inpatient), and/or the illness has had a demonstrable and detrimental impact on the member's ability to perform military duties, an MEB should be initiated. Conditions that are presumed to have existed prior to military service [e.g., personality disorders, ADHD (attention-deficit/hyperactivity disorder), or learning disabilities] are not grounds for an MEB.

### **Recommend Administrative Discharge**

Finally, there are those individuals whose character structure and the associated attitudes, emotions, and/or behaviors are, in the opinion of the provider, the primary source of their difficulties in the military. A recommendation for discharge should be made when the prognosis for rehabilitation is poor and/or the potential for continued difficulty with occupational

demands, misconduct, or acting out is high. Poor rehabilitation potential is often demonstrated by unsuccessful attempts by the members to conform their behavior to military standards in the past, despite unit and mental health intervention. See Appendix 3.2 for an example of this type of finding.

It should be noted that the various services handle the recommendation for administrative separation differently (see Table 3.1). The Navy and Marine Corps differentiate between fitness for duty and suitability for duty. Put simply, a finding of not fit for duty generally results in a limited duty board or a full medical board. Diagnoses in this category are usually significant mental health conditions such as psychotic disorders and severe mood disorders. Diagnoses such as learning disorders and personality disorders are considered issues of suitability, and these recommendations are channeled through the command's legal department instead of the medical board. Although the eventual outcome is essentially the same for all services, the language needed in reports to the commander is dramatically different. If faced with having to provide an evaluation to a member of a different service, it is usually prudent to consult with a psychologist in the other service or talk to the judge advocate general (JAG) of the service member's command for guidance. Table 3.1 presents some of the pertinent instructions applicable to each branch of service. Substance-related instructions may be found in Chapter 8 (this volume).

## EMERGENT EVALUATIONS

For service members deemed to be imminently or potentially dangerous, the first priority is minimizing the risk posed to themselves or others. In addition to ensuring that they receive emergent psychological evaluations, precautions to minimize risk include notification of the intended victim, restriction of access to the potential victim, provision of orders prohibiting all contact with the victim (i.e., military protective orders), restriction of the consumption of alcohol and use of firearms, and/or implementation of a suicide watch. In addition to ensuring that the members are transported and monitored in a timely and appropriate manner, the commander must endeavor to consult a mental health provider. In addition, the commander is responsible for informing the members of their rights as soon as is practicable and providing a written memorandum to the provider of the conditions underscoring the emergent evaluation. Evaluations conducted under these circumstances must occur within 24 hours of the initial request and will produce a specific assessment of the risk for imminent danger, as well as plans for periodic reassessment until the member is no longer at significant risk. Finally, the report should clearly state if the member is recom-

**TABLE 3.1. Instructions Pertaining to Fitness-for-Duty Evaluations for Each Service**

	Navy	Marine Corps	Coast Guard	Army	Air Force
Administrative separations—enlisted	SECNAVINST 1910.4B	MCO P1900.16F Chapter 6	COMDTINST M1000.6 Chapter 12	AR 635-200	AFI 36-3208 Chapter 5
Administrative separations—officer	SECNAVINST 1920.6B	MCO P1900.16F Chapter 4	COMDTINST M1000.6 Chapter 12	AR 635-100	AFI 36-3206 Chapter 2
Conscientious objection	MILPERSMAN article 1900-020	MCO 1306.16E	COMDTINST 1900.8	AR 600-43	AFI 36-3204
Personality disorder	MILPERSMAN article 1910-122	MCO P1900.16F	COMDTINST M6000.1 Chapter 5	AR 635-200	AFI 36-3208 AFI-36-3206
Physical evaluation/ medical boards	SECNAVINST 1850.4E	SECNAVINST 1850.4E	COMDTINST M1850.2	AR 40-501	AFI 48-123 AFI 44-157

*Note.* MILPERSMAN, Navy Military Personnel Manual; SECNAVINST, Secretary of the Navy Instruction; MCO, Marine Corps Order; AFI, Air Force Instruction; AR, Army Regulation; MEDCOM, U.S. Army Medical Command; COMDTINST, U.S. Coast Guard Commandant Instruction. Full reference entries for the specific publications noted in this table are listed in the reference list under the “U.S. Department of . . .” entries.

mended for expeditious discharge, a recommendation made when there is a pattern of behavior indicative of a significant potential for continued risk. It is our experience that the diagnosis of a personality disorder, such as antisocial personality disorder or borderline personality disorder, is invariably associated with these situations.

As hospitalization is the disposition for a majority of these referrals, a critical element soon becomes the members’ consent versus the necessity for involuntary admission. The vast majority of individuals admitted to military hospitals for evaluation and/or treatment do so on a voluntary basis, but the process of involuntary admission can be fraught with pitfalls. As in the civilian community, active-duty service members can be involuntarily admitted to a mental health unit only if there is clear evidence of severe mental disorder leading to an immediate risk of harm to themselves or others. As their condition permits, the members must be informed, in writing, of the reasons for the admission, as well as their right to communicate with an attorney, inspector general, or member of Congress. An initial evalua-

tion by the attending mental health provider must occur within 24 hours of admission, and in the event that continued hospitalization is warranted, the member should be informed both orally and in writing of the reason. In addition, a second, independent mental health evaluation must be performed within 72 hours of admission. This latter evaluation determines whether continued involuntary psychiatric hospitalization is warranted, based on available evidence, with the member informed, in writing, of the results of this evaluation. Subsequent mental health reviews occur, at a minimum, every fifth business day for as long as the involuntary hospitalization is continued.

## OTHER TYPES OF FITNESS-FOR-DUTY EVALUATIONS

We now discuss, albeit briefly, several other categories of fitness-for-duty evaluations. The topic of malingering in the military is presented last and is afforded a more in-depth discussion.

### Submarine Duty

The Navy has stringent specifications for submarine duty. Because of the psychological demands involved in this work, individuals must volunteer for it. A fitness evaluation for those seeking this duty focuses predominantly on their potential or ability to serve in confined spaces in close contact with others. To successfully perform in this environment, teamwork, social skills, a calm demeanor, and a lack of psychopathology are of the utmost importance, given that there are no mental health professionals stationed on any submarine and there are often reduced opportunities for medical evacuation. Individuals with a history of a suicide attempt may be automatically disqualified from submarine duty, as are individuals with any personality disorder diagnosis. Other problems that negate submarine duty include suboptimal intelligence, anxiety disorder (e.g. claustrophobia, social anxiety, and obsessive-compulsive disorders), lack of motivation, history of personal ineffectiveness, difficulties within interpersonal relationships, and a lack of adaptability. Interested readers are directed to the *Manual of the Medical Department* (U.S. Department of the Navy, 1996b) for further details and guidelines.

### Security Clearances

Psychologists are frequently asked to assist adjudicators in determining the suitability of U.S. Department of Defense (DoD) personnel to gain or retain a security clearance. The provider is given a packet of information detailing

the concerns that have been raised in the investigation, either through record reviews or interviews with colleagues, supervisors, friends, or family. Most often the request for denial or revocation of a security clearance stems from inappropriate personal conduct, including criminal behavior, financial difficulties, and/or incidents involving substance abuse. In fiscal year 2004, only 74 clearances were denied or revoked on the basis of mental health issues—out of nearly 500,000 investigations conducted by the Army (LTC S. Harvey, personal communication). Ironically, it is the failure to seek mental health assistance when it is warranted, not the experience of psychiatric issues alone, that typically results in the loss of one's security clearance. The provider is cautioned against sharing the nature or source of any potentially derogatory information with the individual and, similar to CDEs, the individual must be informed that the results of the assessment are not confidential. The resulting report must include a narrative case history, as well as diagnosis, treatment progress and compliance, and prognosis. However, the critical component of the evaluation is an assessment of the impact of the individual's psychological condition on his or her overall functioning, now and in the future, and, most important, whether there is a potential for a defect in judgment, reliability, or stability. Although predictions based on a somewhat limited view can be quite difficult to develop, the use of psychological testing can be helpful, as is a thorough clinical interview. In any case, when writing the final report, convoluted language and/or ambivalent responses is of minimal benefit to all parties involved. Although Appendix 3.3 provides an example, individuals performing these types of evaluations should review their service's guidance for further instruction.

### Special Schools

Many schools throughout the services require a psychological evaluation as an element of the selection process. These types of evaluations can be categorized as “screening out,” in that the primary purpose is the identification of mental health issues that could adversely affect performance. In addition to a review of any involvement with mental health, the focus typically includes an overview of social, academic, and occupational functioning, as well as any history of trauma, substance use, legal entanglements, or medical issues. The process involves review of pertinent records, a clinical interview, and the use of psychological measures as required. Units in special operations perform a more extensive selection process, with the goal of “screening in” candidates that meet specific qualifications and “screening out” individuals with unacceptable risk factors. See Chapter 17 (this volume) for more information about these types of assessments.

## Conscientious Objectors

The U.S. Defense Department policy has allowed conscientious objectors to be discharged or transferred to noncombatant duties. By definition, a conscientious objector is an individual who has a firm, fixed, and sincere objection to participation in war, in any form, on the basis of religious, ethical, or moral beliefs. A noncombatant conscientious objector is someone who, by reason of similar beliefs, is opposed to killing but does not object to performing noncombatant duties in the armed forces. Selective objectors, those individuals who would be willing to fight in some wars, but not others, on the basis of policy, pragmatism, expediency, or political views, do not qualify for discharge or transfer. See Table 3.1 for each service's relevant instructions.

In addition to an interview with a chaplain, individuals requesting consideration as conscientious objectors in the Army must be evaluated by a psychiatrist or, in the case of the Air Force, Navy, and Marine Corps, a psychologist. The focus of that assessment is on determining the presence or absence of a condition warranting disposition through either the medical channels or administrative processes. Although recommendations for approval or disapproval of conscientious objector status is not an element of this evaluation, comments about the applicant's level of cooperation, as well as assessment of sincerity, can be a part of the assessment.

## Administrative Separation

Each of the services has developed guidelines for administratively separating enlisted members and officers from their ranks, a number of which require a psychological evaluation as part of the process. The primary focus of this assessment is to determine the presence or absence of a bona fide mental health issue resulting in the initiation of the administrative separation. Misconduct, poor performance, and incompatibility with military service because of personality disorders are the primary reasons for an administrative separation, which can also include individuals being separated as a result of adjustment disorders or hardship circumstances or in lieu of a court-martial. As these evaluations will make up a fair percentage of the workload at a primary mental health clinic, readers should refer to the regulations for their specific service for detailed guidance. It has been our experience that only a handful of members will be removed from the administrative process and placed in the medical channels as a result of these evaluations; however, the assessment can be a venue for important information about the separation process, as well as an exploration of postmilitary plans.

## Veterans Administration

As members leave the military, as a result of administrative separation, MEB, or retirement, they may be eligible to apply for benefits from the VA. If the member is claiming disability based on a mental health condition, the VA requires that an evaluation be completed by a designated psychologist or psychiatrist. With several conditions, including eating disorders and PTSD, the VA requires a specific format, covering a number of detailed questions. Should you find yourself in a situation requiring such an evaluation, it would be wise to go to [www.vba.va.gov/bln/21/Benefits/exams/](http://www.vba.va.gov/bln/21/Benefits/exams/) for guidance.

## Malingering

The last evaluation topic covered here is the special case of malingering. Whether the military psychologist is working in an outpatient mental health clinic, engaged in forensics (e.g., competency to stand trial evaluations), evaluating recruits during basic training, or in a primary care setting, the issue of malingering will present itself (Carrol, 2003; Mark, Fischer, Rabinowitz, & Ribak, 1988). According to the *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition (DSM-IV; American Psychiatric Association, 1994, p. 683), malingering is “the intentional production of false or grossly exaggerated physical or psychological symptoms, motivated by external incentives such as avoiding military duty, avoiding work, obtaining financial compensation, evading criminal prosecution, or obtaining drugs.” The definition of malingering in a military context is found in the Uniform Code of Military Justice, and it refers to any service member who for the express purpose of avoiding a military duty feigns illness, physical disability, or a mental health issue or intentionally inflicts an injury to oneself (Joint Service Committee on Military Justice, 2005).

Although the specific manifestation of malingering may vary, common situations arise for the military psychologist. These include individuals who simulate depressive symptoms; make suicidal comments or gestures that are not motivated by true suicidal ideation; or endorse nonexistent psychotic symptoms to avoid a specific military duty, to be relieved from a specific duty (e.g., deployment), or to attempt to leave military service before the end of a contract. Malingering is perhaps the most difficult diagnostic dilemma for a military psychologist, and the implications of making a mistake are significant (e.g., failure to provide appropriate care and/or subsequent legal charges based on the diagnosis).

Subtle or confusing feigned mental health symptoms can be quite difficult to distinguish from true symptoms. The military psychologist must have a wide knowledge and command of the symptomatology of all of the

known mental disorders, training in detecting malingering, and a good operating knowledge of how the military system works when a service member claims an inability to perform a specific job so that possibilities of secondary gain can be evaluated. There is no litmus test for malingering, but the following behaviors should raise a red flag for the evaluating military psychologist: The member keeps adding symptoms during the interview, the symptoms do not make diagnostic sense, there seems to be clear secondary gain in avoiding duty or deployment, elevations on psychological testing suggest exaggeration of symptoms (Heinze, 2003; Lally, 2003; Lewis, Simcox, & Berry, 2002; Wang et al., 1997), and/or a resolution of symptoms occurs immediately after the desired outcome has been obtained by the member. For an excellent resource on the detection of malingered mental health symptoms see Rogers (1997).

For members who are already deployed, their units are sometimes anxious to cooperate, perhaps because of their fear of not acting on information should the member escalate behavior, make a suicidal gesture, or assault someone. The sensitivity and concerns about keeping armed forces personnel deployed when these behaviors have been threatened are especially high. Erring on the side of safety is a likely outcome, though cooperating with a malingering trooper results in morale problems for those left in the deployed location and may result in increased malingering behavior among those same deployed troops. Jones (1995) notes that few people consciously create mental health symptoms to avoid duty in combat environments. Anxiety and somatization symptoms are commonplace, and individuals present mainly with unconsciously derived symptoms. Jones further cautions that the diagnosis of malingering in deployed service members results in the inadvertent strengthening of symptoms because the active-duty member is then put in a position of having to challenge the diagnosis. For appropriate intervention of individuals with stress reactions in a combat zone, see Chapter 10 (this volume).

In contrast to those individuals who simulate mental health symptoms, there are also those who adamantly deny symptoms that actually exist. This phenomenon is sometimes known as reverse malingering, faking good, or dissimulation. These individuals are often seen for evaluation of depression, suicidal or homicidal ideation, an alcohol incident, or domestic abuse. In these examples the secondary gain is to avoid the stigma of a mental health diagnosis or a negative career impact (e.g., administrative separation, grounding from flight status, loss of confidence by leadership, or inability to deploy). In such cases, the individual should not receive a diagnosis of malingering but instead should receive the appropriate diagnosis (e.g., depression or substance abuse).

In cases of suspected simulation and dissimulation, information must be gleaned from at least four sources. The first and most important for the

evaluating psychologist is collateral information from the command. A member's immediate supervisors and senior enlisted personnel are usually the best sources of information as they will know the most about a service member's behavior, psychosocial stressors, and work performance. The second source is provided by the active-duty patient during the course of the clinical interview and during any subsequent sessions. The third source is the active-duty member's medical record, and the fourth is psychological testing.

The development of specific standardized symptom validity scales (e.g., Minnesota Multiphasic Personality Inventory-2, Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989) or cognitive effort tests (e.g., TOMM; Tombaugh, 1996) can provide valuable information for both suspected simulators and dissimulators. For example, neuropsychologists have reported that malingering occurs in over 25% of civilian forensic cases (Reynolds, 1998), and Slick, Tan, Strauss, and Hultsch (2004) have reported that 79% of neuropsychologists use at least one specialized technique for detecting malingering when performing neuropsychological evaluations involving financial compensation claims. The use of a symptom validity test should be part of any military psychologist's or neuropsychologist's evaluation.

## FINAL THOUGHTS

Briefings to commanders and their staff on fitness-for-duty evaluations provide an excellent avenue for conveying the wealth of resources that a mental health clinic can offer. Whether to facilitate introductions among key personnel, identify areas for psychoeducational intervention, provide guidance for the referral process, or discuss recommendations in the event of significant trends or high-profile events, such interactions can prove critical in addressing the stigma attached to seeking mental health services. We have attempted to provide the military psychologist with guidance on the process of conducting fitness-for-duty evaluations. Some of the critical elements in this process include understanding why commanders commonly refer members for fitness-for-duty evaluations; relevant resources for the provider and the commander; how to give useful and succinct feedback to commanders; and how to describe the outcomes of the evaluation, depending on whether the member has been recommended for retention or discharge from the service. When done correctly the fitness-for-duty evaluation demonstrates some of the essential skills psychologists provide to unit commanders and to the military installation as a whole. Successful implementation of these skills can catalyze the early referral process for members

experiencing distress, increase retention in the military, and decrease sentinel events like suicide and workplace violence.

## REFERENCES

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.

Butcher, J. N., Dahlstrom, W. G., Graham, J. R., Tellegen, A. M., & Kaemmer, B. (1989). *MMPI-2: Manual for administration and scoring*. Minneapolis: University of Minnesota Press.

Carroll, M. (2003). Malingering in the military. *Psychiatric Annals*, 33, 732-736.

Fischler, G. (2000). Assessing fitness-for-duty and return-to-work readiness for people with mental health problems. *The MCDA Communiqué*. Apple Valley, MN: Minnesota Career Development Association.

Fischler, G. (2001). Psychological fitness-for-duty examinations: Practical considerations for public safety departments. *Illinois Law Enforcement Executive Forum*, 1, 77-92.

Guller, M. (2000). *Caselaw summaries: Psychological fitness for duty of police and public safety personnel*. Oakland, CA: Institute for Forensic Psychology.

Heinze, M. (2003). Developing sensitivity to distortion: Utility of psychological tests in differentiating malingering and psychopathology in criminal defendants. *Journal of Forensic Psychiatry and Psychology*, 14, 151-177.

Joint Service Committee on Military Justice. (2005). *Manual for courts-martial*. Washington, DC: U.S. Government Printing Office.

Jones, F. D. (1995). Traditional warfare combat stress casualties. In R. Zajtchuk & R. F. Bellamy (Eds.), *Textbook of military medicine: War psychiatry* (pp. 63-84). Washington, DC: Office of the Surgeon General, U.S. Department of the Army.

Lally, S. (2003). What tests are acceptable for use in forensic evaluations?: A survey of experts. *Professional Psychology: Research and Practice*, 34, 491-498.

Lewis, J., Simcox, A., & Berry, D. (2002). Screening for feigned psychiatric symptoms in a forensic sample by using the MMPI-2 and the Structured Inventory of Malingered Symptomatology. *Psychological Assessment*, 14, 170-176.

Mark, M., Fischer, U., Rabinowitz, S., & Ribak, J. (1988). Malingering in the military: Understanding and treatment of the behavior. *Military Medicine*, 152, 260-262.

Reynolds, C. (1998). *Detection of malingering during head injury litigation*. New York: Plenum.

Rogers, R. (1997). *Clinical assessment of malingering and deception*. New York: Guilford Press.

Rostow, C., & Davis, R. (2004). *A handbook for psychological fitness-for-duty evaluations in law enforcement*. Binghamton, NY: Haworth Press.

Slick, D. J., Tan, J. E., Strauss, E. H., & Hultsch, D. F. (2004). Detecting malingering: A survey of expert's practices. *Archives of Clinical Neuropsychology*, 19, 465-473.

Tombaugh, T. N. (1996). *The Test of Memory Malingering (TOMM)*. New York: Multi-Health Systems.

U.S. Department of the Air Force. (1994). *Procedures for applying as a conscientious objector*. (Air Force Instruction 36-3204). Washington, DC: Author.

U.S. Department of the Air Force. (2000a). *Administrative Discharge Procedures For Commissioned Officers*. (Air Force Instruction 36-3206). Washington, DC: Author.

U.S. Department of the Air Force. (2000b). *Medical evaluation boards (MEB) and continued military service*. (Air Force Instruction 44-157). Washington, DC: Author.

U.S. Department of the Air Force. (2000c). *Mental health, confidentiality, and military law*. (Air Force Instruction 44-109). Washington, DC: Author.

U.S. Department of the Air Force. (2001). *Medical examinations and standards*. (Air Force Instruction 48-123). Washington, DC: Author.

U.S. Department of the Air Force. (2003). *Administrative separation of airmen*. (Air Force Instruction 36-3208). Washington, DC: Author.

U.S. Department of the Army. (1989). *Personnel separations: Officer personnel*. (Army Regulation 635-100). Washington, DC: Author.

U.S. Department of the Army. (1998). *Conscientious objection*. (Army Regulation 600-43). Washington, DC: Author.

U.S. Department of the Army. (1999). *Command-directed mental health evaluations*. (United States Army Medical Command Regulation 40-38). Fort Sam Houston, TX: Author.

U.S. Department of the Army. (2004a). *Active duty enlisted administrative separations*. (Army Regulation 635-200). Washington, DC: Author.

U.S. Department of the Army. (2004b). *Standards of medical fitness*. (Army Regulation 40-501). Washington, DC: Author.

U.S. Department of Defense. (1997a). *Mental health evaluations of members of the armed forces*. (Department of Defense Directive Number 6490.1). Washington, DC: Author.

U.S. Department of Defense. (1997b). *Requirements for mental health evaluations of members of the armed forces*. (Department of Defense Instruction Number 6490.4). Washington, DC: Author.

U.S. Department of Homeland Security. (2002). *Coast Guard personnel manual*. (Commandant, United States Coast Guard Instruction M1000.6). Washington, DC: Author.

U.S. Department of Homeland Security. (2004). *Medical manual*. (Commandant, United States Coast Guard Instruction M6000.1). Washington, DC: Author.

U.S. Department of the Navy. (1986). *Conscientious objectors*. (Marine Corps Order 1306.16E). Washington, DC: Author.

U.S. Department of the Navy. (1996a). *Enlisted administrative separations*. (SECNAVINST 1910.4B). Washington, DC: Author.

U.S. Department of the Navy. (1996b). *Manual of the medical department*. (NAVMED P-117). Washington, DC: Author.

U.S. Department of the Navy. (1999a). *Administrative separation of officers*. (SECNAVINST 1920.6B). Washington, DC: Author.

U.S. Department of the Navy. (1999b). *Mental health evaluations of members of the armed forces*. (SECNAVINST 6320.24A). Quantico, VA: Author.

U.S. Department of the Navy. (2000). *Marine corps separation and retirement manual*. (Marine Corps Order P1900.16F). Quantico, VA: Author.

U.S. Department of the Navy. (2002a). *Department of the Navy (DON) disability evaluation manual*. (SECNAVINST 1850.4E). Washington, DC: Author.

U.S. Department of the Navy. (2002b). *Naval military personnel manual*. (Bureau of Naval Personnel 15560D). Millington, TN: Author.

U.S. Department of Transportation. (1990). *Conscientious objectors and the requirement to bear arms*. (Commandant, United States Coast Guard Instruction 1900.8). Washington, DC: Author.

U.S. Department of Transportation. (1996). *Physical disability evaluation system*. (Commandant, United States Coast Guard Instruction M1850.2). Washington, DC: Author.

United States Postal Service. (2000). *Fitness-for-duty examinations*. (Management Instruction EL-860-2000-7). Washington, DC: Author.

Veteran's Benefits Administration. (n.d.). *Index to disability examination work-sheets*. Retrieved August 27, 2005, from [www.vba.va.gov/bln/21/Benefits/exams/](http://www.vba.va.gov/bln/21/Benefits/exams/).

Wang, E. W., Rogers, R., Giles, C. L., Diamond, P. M., Herrington-Wang, M. S., & Taylor, E. R. (1997). A pilot study of the Personality Assessment Inventory (PAI) in corrections: Assessment of malingering, suicide risk, and aggression in male inmates. *Behavioral Sciences and the Law*, 15, 469-482.

**APPENDIX 3.1. Example Fitness-for-Duty Evaluation Report for a Commanding Officer—Fit for Duty (Marines)****MEMORANDUM**

From: LT A. Smith, Outpatient Division Officer, Mental Health Department  
To: Commanding Officer, Generic Marine Corps Command

Subj.: PYCHOLOGICAL SUMMARY OF J. DOE, PFC/USMC/AD

Ref.: MENTAL HEALTH REFERRAL

1. The service member was seen as an outpatient at the Mental Health Department of the United States Naval Hospital on 25 December 2005. He was referred by his commanding officer due to an e-mail suggestive of suicidal ideation. The service member voluntarily participated in the evaluation. He noted that the e-mail was sent within the context of a “bad week,” secondary to both occupational and personal stressors. Currently assigned to a job outside his MOS (welding) he described having difficulty meeting the expectations of his supervisor. He also detailed a fight with his fiancée. However, he reported that his command is moving him into a job focused on welding and that the argument with his fiancée was based on a misunderstanding, which is now resolved. He denied ever having thoughts of suicide and regrets his poor choice of words when venting in his e-mail. He described use of effective coping strategies, such as going to the gym and talking with friends when under stress. The service member currently denies all symptoms of any mental disorder, including suicidal/homicidal ideation.

**DIAGNOSTIC IMPRESSIONS (DSM-IV):**

- Axis I: No diagnosis
- Axis II: No diagnosis
- Axis III: No diagnosis
- Axis IV: Routine military duties
- Axis V: Current level of functioning = 80, on a scale from 0-100

2. The service member is psychologically fit for full duty, to include any duty required of his MOS, deployments, and weapons handling.
3. The service member is not in need of psychological services at this time. He understands that if he has a need for mental health services in the future to contact his medical officer for a referral.
4. Command POC is Major Joe Smith (555-1234).
5. Questions regarding this case may be directed to LT Smith at 555-0000.

A. Smith

## APPENDIX 3.2. Example Fitness-for-Duty Evaluation—Not Fit for Duty (Army)

MEMORANDUM FOR COMMANDER: 000 Support Unit, Generic Army Command

FROM: Division Mental Health, Generic Army Command

SUBJECT: Results of Commander-Directed Mental Health Evaluation for PFC J. Doe

1. *Identifying Information:* On 29 May 04, PFC Doe, a 23-year-old active-duty soldier with 15 months' time in service, was seen by MAJ Smith for a Command-Directed Mental Health Evaluation after a second psychiatric hospitalization for depression and suicidal ideation. All procedures outlined in DoDD 6490.1, DoDI 6490.4, and MEDCOM regulation 40-38 were followed. All documentation sent by the unit was reviewed, as were his outpatient and inpatient mental health records. PFC Doe has a prior diagnosis of alcohol abuse.
2. *Significant History:* The member was first seen on 23 Dec 03, after arriving to the mental health clinic as a crisis walk-in secondary to marital difficulties. Married for 7 months, this marriage has been impacted by poor communication, marginal problem solving and impulsive actions, as well as episodes of angry outbursts. During the initial assessment, the member voiced suicidal thoughts "if she leaves me." He was seen for 9 sessions over the next 4 weeks, attended anger management class, and was placed on an antidepressant medication by a family practice provider.

On 16 Mar 04, after another argument with his wife, he wrote a suicide note and took an overdose of his prescription medication. Upon waking up the next morning, he purchased over-the-counter sleeping pills and took 10 of them prior to calling his wife, who then called emergency services. He was admitted to the psychiatric unit on 17 Mar 04 and then transferred to a partial hospitalization program on 19 Mar 04, with follow-up arranged with his established outpatient psychologist. Of note is that PFC Doe reported that he was psychiatrically hospitalized for 3 days, under similar conditions, at the age of 16. On 30 Mar 04, the member was rehospitalized with a recurrence of suicidal ideation after being told that his wife was seeking a divorce. He was released on 5 Apr 04 to outpatient care.

His unit describes PFC Doe as a marginal soldier at best, with multiple counseling statements attesting to his poor performance and work ethic. This pattern is consistent with his civilian performance—he left school at the age of 15, attaining his GED at the age of 20, and was fired from four of his five minimum-wage jobs.

3. *Results of Clinical Interview:* Alert and oriented, PFC Doe was appropriately groomed and attired. No overt difficulties in gross motor coordination were noted, and he did not appear to be in any physical discomfort. Expressive

speech was felt to be unremarkable, and receptive language appeared intact. His responses were logical and coherent, with no evidence of hallucinations, delusions, or otherwise disturbed mentation. While he described himself as “a little irritated and frustrated,” affect and mood were congruent and essentially unremarkable. Sleep, appetite, and energy are currently within expected parameters. While he reports having “cut down a lot,” he did admit to occasional use of alcohol; he denied use of illicit drugs. He reported ongoing suicidal ideation but without plan or intent as he “realized how much his death would hurt his family now.” While “angry” at the man his wife is living with, he denied any thoughts of harming that individual. Insight was poor. Judgment for reasonable life decisions appears adequate. His potential for rehabilitation with respect to continued military service is considered poor.

4. *Diagnosis, in Accordance with (IAW) the DSM-IV:*

Axis I: 309.28 Adjustment disorder with disturbance of mood and conduct  
305.00 Alcohol abuse, per previous diagnosis

Axis II: 309.9 Personality disorder NOS (borderline and dependent features)

Axis III: No specific medical concerns.

Axis IV: Marital problems, routine military duties

Axis V: Current level of functioning = 65, on a scale from 0–100.

5. *Summary and Recommendations:*

- a. It is recommended that PFC Doe be expeditiously discharged from military service IAW AR 635-200, chapter 5-13. His personality disorder is to the degree and extent that his ability to function effectively in the military environment will be significantly impaired for the foreseeable future. The adverse effects of the conditions on assignment and duty performance are chronic depression, poor stress tolerance, impulsivity, poor judgment, difficulty operating independently, difficulty making decisions, constant needs for reassurance, and recurrent suicidal ideation. His condition is not amenable to treatment in the military setting, given that he has already received multiple and intensive forms of treatment without success. He has no condition warranting medical board action. He is responsible for pay and records and knows the difference between right and wrong, and should be held responsible for all actions and behaviors.
- b. While he does not pose a current risk with respect to harm to self or others, PFC Doe presents with a lifelong pattern of maladaptive responses to common stressors. Given his recent history, amid current social and occupational stressors, it is recommended that PFC Doe be restricted from access to weapons.
- c. PFC Doe will continue to receive assistance through outpatient mental health as well as the substance abuse counseling center.
- d. Should a decision be made to retain the member against the advice of this recommendation for discharge, DoD Directive 6490.1, “Mental Health Evaluations of Members of the Armed Forces,” requires that you notify your

next senior commanding officer within 2 business days explaining your decision to act against medical advice regarding administrative management of this service member.

- e. Member has been briefed on and understands these recommendations.
- 6. POC for this memorandum is the undersigned at 555-0000.

J. Smith  
*Clinical Psychologist*

Z. Jones  
*Commander, Generic Army Hospital*

### APPENDIX 3.3. Memorandum for Security Evaluation (Army)

MEMORANDUM FOR COMMANDER: 000 Support Unit, Generic Army Command

FROM: Department of Behavioral Health, Generic Army Hospital

SUBJECT: Results of Security Evaluation for Mr. J. Doe

*Identifying Information:* Mr. Doe, a married 35-y/o male currently employed as a GS-9 employee, was referred for a security evaluation after receiving a DUI. He was counseled that the findings from this evaluation would be provided to his command, given the nature of the referral, and he expressed his understanding of that process. In addition to a clinical interview, this provider reviewed the packet of information provided by his command, as well as a summary of his treatment with a local provider. It is important to note this provider's concerns with Mr. Doe's veracity, as it is likely that he downplayed his difficulties.

*Date of Examination:* 15 October 2004

*Place of Examination:* Generic Army Hospital

*Pertinent History:* Mr. Doe received a DUI on 29 Jan 04, after he was stopped "for going too slow." As a result, he lost his driving privileges, was fined approximately \$2,500, incurred \$6,000 in legal fees and had his security clearance suspended. While he did not deny being intoxicated that evening, he placed responsibility for his actions on marital discord, indicating that his wife had complained about his going out, and had withheld intimacy for 8 months as a result. He reported that she sought legal counsel a year ago and, feeling that divorce continued to be a possibility, he sought treatment in Oct 03. Mr. Doe states that his wife has become "less controlling" of his behavior, with the couple considering the possibility of another child.

In 1987, Mr. Doe was arrested for driving an unregistered and unlicensed moped without a helmet or driver's license on a snow-covered road. At that time his BAC was registered as 0.23. Six years later, he was arrested for driving while intoxicated, but reported that an administrative error resulted in the case being dropped.

*Current Substance Use:* Mr. Doe denied that his alcohol use was problematic. He did acknowledge, however, cutting back since 15 Feb 04 (the date his security clearance was suspended), stating that his doctor had limited him to 2-3 glasses of wine daily—he dated his last drink to 2000 yesterday. Prior to 15 Feb 04, he described consuming 5-6 glasses nightly and up to 10-12 glasses on rare occasions. He agreed with the experience of increased tolerance, but denied other physiological symptoms commonly associated with alcohol dependence. His described his first drink at age 19, with alcohol consumption a routine part of his life by the following

year. His beverage of choice is wine, and he denied drinking either beer or hard liquor.

A review of the treatment summary provided by his physician revealed that Mr. Doe had been seen for 18 individual sessions since Oct. 03. He arrived for one of his appointments with a breath-metered BAC of 0.17. While he initially denied this event, he eventually acknowledged its occurrence upon questioning, explaining that he "didn't feel drunk." The physician reported that Mr. Doe, while quite concerned about losing his job, had difficulty accepting responsibility for his actions. He indicated that Mr. Doe was offered the option of inpatient hospitalization, but declined that service due to concerns about time lost from work, and has refused to consider Antabuse. Mr. Doe has been prescribed Imipramine to assist with his distress, although the physician voiced concern about his compliance. While Mr. Doe reported that the physician had suggested a decrease in his alcohol intake to "no more than 2-3 glasses" daily, the physician documented a recommendation for abstinence. Laboratory results conducted by this same physician support the diagnosis of alcohol-induced mild cirrhosis, as well as other markers of chronic alcohol use.

*Present Medical, Occupational, and Social History:* Born in North Carolina, Mr. Doe is an only child. He knows very little about his biological father and was raised by his mother and maternal grandmother until the age of 11, when his mother married her present husband. He denied the experience of any personal abuse or trauma, but described a contentious relationship with his stepfather. After graduating from high school, Mr. Doe joined the military, training in the telecommunications field. After leaving the service after 6 years, with the rank of SPC(P), Mr. Doe was hired as an information technology specialist in 1998. He denied any difficulties with his work performance, feeling that his supervisors view him in a positive light. This position requires a top-secret security clearance.

A college graduate, Mr. Doe has attained a master's degree in business. Married for 11 years, this couple has two sons—ages 4 and 5. At present, he described both his marital and parenting relationships in positive terms. Mr. Doe denied any family history of depression, anxiety, or other psychiatric illnesses, including substance use. Medically, Mr. Doe has been diagnosed with hypertension, which he controls with medication. Outside of treatment received for substance abuse, he denied any other history of mental health interventions.

*Mental Status Examination:* Alert and oriented, Mr. Doe was appropriately groomed and attired. No overt difficulties in gross motor coordination were noted. Expressive speech was felt to be unremarkable and receptive language appeared intact. His responses were logical and coherent, with thought processes devoid of hallucinations, delusions, or otherwise disturbed mentation. Affect and mood were congruent and essentially unremarkable, although he is concerned about his occupational situation. Somatic complaints were essentially denied, with sleep, appetite, and energy well within normal parameters. Use of all illicit substances was denied. Past and present indicators of suicidality and homicidality were absent. Judgment

for reasonable life decisions appears adequate. Insight regarding his present condition is poor.

*Diagnosis:*

Axis I: 303.90 Alcohol dependence with physiological dependence  
Axis II: V71.09 No diagnosis  
Axis III: Alcohol-induced cirrhosis (mild), hypertension  
Axis IV: Occupational difficulties  
Axis V: Current level of functioning = 70, on a scale from 0-100

*Conclusions:*

1. Mr. Doe's alcohol use has had a deleterious repercussion on his financial situation and social relationships. There is objective medical evidence indicative of physical deterioration associated with excessive alcohol use, and should he lose his security clearance, he will be unemployed. Despite these factors, Mr. Doe continues to drink.
2. Mr. Doe's immediate and long-term prognosis is guarded. While he describes benefit from his current treatment, that assessment appears directly tied to improvements in his marital situation as opposed to an acknowledgement of his alcohol use. He has not sought involvement with AA, nor accepted his physician's recommendation for residential services. His treating physician has concerns regarding his compliance with prescribed medication, and he has not followed through with a recommendation for Antabuse.
3. It is likely that this recent DUI was not the result of a single episode of poor judgment. In addition, given the threats he faces to his occupational and social status, it is certainly possible that Mr. Doe could be placed in a compromising position as a result of his alcohol use and, more important, his desire to obscure any adverse impact.

J. Smith

## CHAPTER 4



# Brief Psychotherapy in the U.S. Military

*Principles and Applications*

J. D. BALL  
THOMAS H. PEAKE

Over the past century the practice of psychotherapy, as well as the principles of psychological assessment, have defined the field of clinical psychology. It is not surprising that related to the advancements of this field are similar advances in psychotherapy in the military setting. As reviewed in Chapter 1 (this volume), the growth of military psychology and professional psychology have developed more or less hand in hand. However, the special needs of the military have been a particularly prominent force in the shaping of military psychology. The need for psychologists to be flexible and adaptive to the varying needs of the armed forces and the requirement for timely intervention are two characteristics that deserve special recognition. In the civilian environment, the evolution of managed care in the 1980s propelled an effort for shorter and more efficient forms of psychotherapy, resulting in briefer and more targeted approaches to therapeutic intervention. The development of brief psychotherapy was related to those external pressures, as well as to the advent of a scientific understanding of cognitive-behavioral and multimodal approaches of therapy. Modern brief therapy has evolved to include especially such specific approaches as

cognitive-behavioral interventions, problem-focused-solution therapy, dialectical behavior therapy, brief psychodynamic therapy, and a wide range of such specific methods as assertiveness training, anger management, weight reduction, smoking cessation, parent education, child behavior management, pain control, and stress reduction strategies, all of which are now practiced regularly in military settings. This chapter reviews broader principles within the context of brief forms of therapeutic intervention, which is appropriately applied in all of these approaches and methods. That is, briefer forms of psychotherapy are a reliable and valid form of psychotherapeutic interventions, which are especially appropriate for the military culture.

Psychotherapy has a clear and important place in the work lives of modern military psychologists tasked with maintaining the psychological health and readiness of active-duty personnel. The importance of this activity, especially during wartime, is best illustrated by the large and rapid growth of psychotherapy services after World War II, when psychologists were instrumental in providing both group and individual therapy. Civilian clinical psychologists owe their ability to engage in the independent practice of psychotherapy to advances that were first made by military psychologists when demand for psychotherapy services exceeded the supply from psychiatrist clinicians (Strickland, 1988). As detailed in Chapter 1 (this volume), clinical psychologists were in high demand during World War II for both assessment and intervention skills. Prospective enlistees had to be screened for their psychological suitability for military service and then assigned to jobs that best matched their capabilities. The scientific basis for this work and the tools necessary to implement it were taken from what was then the very young science of psychometric assessment. Large numbers of psychologists were recruited for military service to meet the need to help select and place a massive number of new recruits (Buros, 1949). When psychiatric war casualties began to require diagnosis and treatment, there was a high demand for clinicians, for faster and better assessment methods, and for treatment. These pressures spurred new methods of psychotherapy and the emergence of a new subdiscipline—clinical psychology. By the end of World War II, an enormous infusion of patients into Veterans Administration hospitals provided the impetus for a dramatic expansion of psychotherapy services (Miller, 1946).

Military mental health practitioners have been adaptive in applying new methods and thinking in their provision of services for large numbers of active-duty personnel, retirees, and family members (Ball, 1980; Ball & Meck, 1979; Hayes, 1979; Jennings, 1980). Spurred by the mental health needs of large numbers of military personnel and their families and the military's focus on pragmatic expediency, military practitioners were among the earliest users of brief therapy techniques (e.g., Peake & Ball, 1988;



LT Michael Dial Ward engages in psychotherapy with a sailor aboard the USS *Nimitz* (CVN-68). An aircraft carrier psychologist can be the sole mental health provider for up to 12,000 people when deployed. Photo courtesy LT Michael Dial Ward.

Peake, Borduin, & Archer, 2000). Military clinicians were seeing patients in planned short-term treatment episodes well before these methods were widely accepted by civilian clinicians to meet the cost-saving requirements of managed care. Military clinicians have developed a range of psychotherapy services, including psychoeducational offerings that are designed to provide preventative mental health support and to intervene quickly and efficiently, even when making referrals for follow-up care of family members and retirees (Ball & Henning, 1981; Ball & Meck, 1979 Jennings & Ball, 1980).

## THE PRACTICE OF BRIEF PSYCHOTHERAPY

Modern clinicians may trace an interest in brief psychotherapy to the mandates of managed care and may see it simply as traditional therapy conducted more quickly. Brief therapy has been practiced for decades and arose initially from the conviction that more efficient services could be delivered to selected patients if therapy were carefully planned and executed (Alexander & French, 1946). It is so well suited to the work of military psychotherapists that traditional long-term therapy is virtually nonexistent in the military. As service members are continuously moving through

different geographic assignments and are often deployed or engaged in training exercises, both clients and therapists are too mobile for long-term therapy to be realistic. These factors and limited resources help make brief therapy in the military the treatment of choice. Therapy goals in military mental health clinics tend to be symptom-specific and narrow in scope, and therapists tend to be active and directive. This may contrast with a reluctant acceptance of brief therapy on the part of many civilian clinicians who feel compelled under managed care limitations to abbreviate their work.

Those who are critical of brief therapy often view it as palliative, leaving patients vulnerable to recurrent episodes of distress. However, well-conducted brief therapy is not just working faster, offering fewer sessions, or covering over deeper problems. Done with proper assessment, planning, and strategy, brief therapy can be effective and can occur in short intervals when needed (Lambert, 2004; Mays & Franks, 1985; Peake, Borduin, & Archer, 2000).

### Common Characteristics

Universal considerations about good brief therapy apply equally to military and civilian treatment settings. Even when long-term therapy was practiced more frequently, research revealed that most of it involved fewer than eight sessions (Koss & Butcher, 1986). Yet, there can be substantial benefits to these short therapeutic episodes (Follette & Cummings, 1967). Despite years of intense debate over theories of change, different schools of therapy were found to produce comparably positive results (see Borduin, 1984, and Stiles, Shapiro, & Elliot, 1986, for reviews).

Many psychotherapists and third-party payers may have incorrectly surmised from psychotherapy research findings that, simply by abbreviating care, therapists would be able to reap greater benefits at less cost. But, if we are to avoid harm to patients and/or not waste resources, we must consider early research, as Norcross (2002) recently reaffirmed, showing that critical ingredients differentiate between what works and what does not (Lambert, 2004). Frank (1985) described core characteristics common to all psychotherapy: (1) an emotionally charged, confiding relationship with the helping person; (2) a healing setting; (3) a rationale or conceptual scheme for symptom relief; (4) and active participation and a shared faith, from both patient and therapist, that the therapy can work.

### Organizing Principles

There is extensive professional debate about the definition of brief therapy; here we are assuming that it involves between 6 and 25 sessions. With that

premise, there are several key principles for effective brief therapy (Peake, Borduin, & Archer, 2000).

### *Appropriateness*

Brief therapy is not for everyone. Military psychotherapists may be less apt to encounter patients with poorly resolved early developmental issues centering around basic trust, such as severe borderline personality disorder. These individuals may not be able to withstand the stresses of basic training. They can be further damaged by a brief therapy process that accelerates the formation and then the loss of an intense relationship. With brief therapy, the more disturbed the patient, the more limited the therapeutic goals. A quality in patients that seems consistently related to poor outcome is excessive negativism.

### *Limitations*

False assumptions about the scope and potency of therapy are clearly problematic. Strupp, Hadley, and Gomez-Schwartz (1977) and Norcross (2002) emphasize that there should be an early discussion of therapy goals, plus an agreement between therapist and patient that these goals are attainable and in the patient's interest. Military psychologists may be less likely to broaden goals beyond immediately achievable, specified objectives that would allow a quick return to duty. But even in military settings, patients' habits, conflicts, or unmet concerns may pull the therapist into trying to fit a long-term treatment model into a short time frame. When limitations are not understood in advance, patients may finish therapy without the end-stage goal of learned optimism.

### *Developmental Considerations*

Shifting problem areas and therapy needs in a brief therapy model often mean intermittent interventions over the course of the patient's development. This is analogous to a family practice model, where the therapist addresses the treatment crisis as necessary and then falls back to on-call availability for another treatment episode as the developmental needs of the patient dictate (Kovacs, 1982). On-call availability of a particular therapist to a particular patient is an objective that is clearly challenged by our very mobile modern society. Particularly in the military, both patient and therapist are apt to be reassigned within a 2- to 3-year period, as well as deployed frequently. However, interventions might still be delivered in a series of treatment episodes by different clinicians, each session with limited

goals and with work conducted out of respect for developmental life changes (Norcross, 2002).

There may be developmental considerations, even in the selection of what brief therapy method is best suited for this patient at this point in his or her own development (Peake & Ball, 1991). For their part, therapists should be aware of how their own stages of personal and professional development may influence what models of therapy they apply (e.g., technique-focused strategies when therapists are inexperienced and dependent on external guidance) and what age or developmental level they tend to address in patients. Psychodynamic formulations can remind therapists to attend to countertransference problems with personal developmental conflicts, and family systems theory cues the therapist to be cognizant of his or her own family of origin and transgenerational issues. This sensitivity improves the psychotherapy process. Precious time can be lost and much more serious pitfalls encountered if a patient's developmental level is misread or one's own developmental influences are ignored.

### *Fiscal Reality*

For civilian clinicians, shifts in public policy and reimbursement for psychotherapy have led to a new enthusiasm for brief therapy from those who provide reimbursement. These pressures have had both a good and a bad effect on the process, spurring acceptance of brief therapy for prospective patients and encouraging therapists to learn to do brief therapy well. But sometimes pushing inappropriate patients into a poorly conceived abbreviated therapy process leads to brief therapy by default rather than by design. Military psychologists have dealt with these factors longer than civilian therapists since military medicine has always represented a large health maintenance organization. In the military, cost savings are important and attractive, even if not driven by a profit motive, and (as in the civilian sector) brief therapy has a valuable cost offset. The ability to return capable individuals to fighting units as quickly as possible strengthens the mission of national defense. At the same time, those whose therapy needs require more extended treatment can be placed on limited-duty assignments that permit 8 to 16 months of mental health treatment.

### *Termination*

Termination may be the single most important organizing principle of brief therapy. With an emphasis on faster care, brief therapy should begin with discussions of the end. Existentialists have long held that awareness of death heightens the intensity of life (Yalom, 1980). In brief therapy, as in life, an early awareness of the end stage can enhance decisions, commit-

ments, and a sense of personal meaning. Particularly in brief psychotherapy, those who best utilize resources are those who know they are time-limited. Here, military psychologists face a double-edged sword. Military members make a conscious commitment to give their own lives for the national defense. Therapist and patient alike will do well to focus early on termination themes. On the negative side, the frequent “hails” and “farewells” that accompany a military career may make it difficult for therapist and patient to strike a therapeutic balance in their own relationship. Early open discussions of the finite nature of brief therapy are necessary. These discussions can build on urgency and can help prepare patients to put therapeutic learning into the rest of their lives.

### **Phases of Brief Therapy**

A central tenet of psychotherapy is to foster helpful change in a patient’s assumptive world or frame of mind. If this work takes place over a short time, it is even more important to have a plan.

#### *Beginning Phase*

First, the therapist must address patients’ expectations about therapy itself. Of course, this should include frank discussions about risks, benefits, confidentiality, and aspects of treatment structure, including approximate length. Patients should understand that this work will differ from a medical model in which they present themselves to the doctor and passively await and then undergo the doctor’s proposed treatment. Particularly if the work is to be condensed, patients must understand that they are to be active. In addition to a role-induction process, which ensures that patients are playing an active role, the beginning phase of therapy should promote hope. Health-engendering expectations may include what Peake and Archer (1984) call “credibility induction,” whereby there is a conscious use of personal and contextual stimuli (e.g., professional or hospital setting) to facilitate positive expectations. It is crucial for therapists to be engaged in assessment work during the beginning phase since this will be the means by which decisions are made regarding the scope and focus of therapy. History taking, mental status examination, and ongoing assessments of interpersonal strengths and weaknesses are just some of the assessment content.

#### *Middle Phase*

The middle phase launches the treatment. The therapy process may include exploring and deepening the relationship, challenging resistance, interpreting, modeling, relearning, and reworking. A chief focus in brief work is the

use of the therapeutic relationship as a means of reshaping the patient's extratherapy relationships. This work may be guided by an understanding of a common pattern that plays itself out within the therapeutic relationship—patients may typically experience conflicts in attempting to balance vulnerability and control, and too much of either thwarts intimacy.

Military psychologists often have specific therapy goals for patients with a variety of specific concerns. These may include overcoming phobias about wearing gas masks; contending with panic reactions when trying to learn or perform novel, complex tasks in wartime circumstances; and coping with interpersonal conflict in the close confines of military quarters. Also there may be posttraumatic stress or grief and bereavement associated with the loss of a loved one or military friend. These themes and concerns become the content for psychotherapy during the middle phase.

### *Ending Phase*

Brief psychotherapists attend early to producing good endings, as defined by (1) preventing symptom recurrence, (2) reducing excessive medical utilization, (3) and inoculating against future symptomatic crises (Nathan & Gorman, 1998; Peake, Borduin, & Archer, 2000). Sigmund Freud once said that emotional health is the ability to *love well, work well, and play well*. Gerald Caplan (the father of preventive psychiatry) said he would add a fourth dimension—the ability to *expect well*. If psychotherapy is to combat demoralization and promote a sense of competence and self-determination, therapy endings should promote both coping skills and personal confidence. If brief therapy is poorly planned and executed, the ending phase is most likely to be compromised. For patients to finish therapy properly, the therapist and patient should be able to look back together and identify what goals were accomplished and what work was most helpful. The patient's confidence rests on a new set of coping skills that can forestall future problems.

## CASE EXAMPLE

As a brief illustration, the following case example necessarily omits many important details and highlights only major themes of brief therapy work, as delineated in the preceding pages.

George was a 22-year-old (E-5) who had entered the service after high school and had done well in the military. He came for psychotherapy after referral from a chaplain. He was concerned that coming for services could possibly jeopardize his career plans, but he was sufficiently reassured when

told that his treatment would be confidential unless his problems were so severe that he would be deemed unfit for service, an unlikely outcome, since he was clearly still performing well.

George was experiencing gastric difficulty that had been evaluated through the hospital outpatient clinics and found to represent "nothing serious." As the military psychologist took a personal history and explored the nature, severity, duration, and precipitants of this problem, it became evident that George was worried about his new wife's adjustment to the prospect of his projected deployment into a war zone. Of course, this was also a safe way for George to discuss his own anxieties in this regard. Stomach pain during the day had sometimes resulted in leaving work early to be home with his wife. He was caught between a fear of being seen by his peers as trying to evade his responsibilities whenever he left work for home and a fear of being seen by his wife as insensitive to her needs whenever he did not.

Quickly, after an assessment and role induction process over several sessions, the military psychologist moved into discussions of the time-limited nature of the therapy, especially in the light of George's projected departure within several months. Through these early discussions, goal setting was a chief objective, and specific goals evolved to help relieve George's stomach pain directly, through guided imagery and muscle relaxation, and to work on his stomach pain indirectly, through specific plans and strategies to prepare his wife to cope while he was away. The psychologist deliberately discussed a range of specific techniques that George would hear more about later, as therapy unfolded, because it was important to instill a sense of hope and trust that the therapist had both a clear understanding of George and the expertise to be of help.

The array of issues associated with his case fit well within a multi-model of brief therapy techniques, and the issue of his pending deployment into a war zone lent urgency to the work, making the need for brief therapy obvious and ever present. The therapist was able to use George's (and his wife's) anxiety about deployment to mobilize quick therapeutic change. He began by asserting early in this work that George's symptoms were certainly bothersome and a good reason for him to have sought help, but they were common, not serious, and most important, not enough to prevent his deployment. Although this assertion might have made a more seriously disturbed patient more anxious (or manipulative), the military psychologist had accurately discerned that once George understood that he was not perceived as unfit for duty, he could further relax his fears about undergoing psychotherapy and trust the psychologist. Moreover, a pronouncement that George would be leaving soon regardless of the outcome of therapy enabled him to relax some performance anxiety within therapy itself and

with regard to his readiness for duty. Finally, this early decision, based on keen clinical assessment, allowed George and his wife to make immediate preparations for an inevitable separation rather than to remain in a state of anxious uncertainty, with mixed feelings of hope and shame that there might be no deployment.

The middle phase of therapy consisted of a variety of specific techniques and activities, including instruction in relaxation training, guided imagery, self-hypnosis, and methods of exercising personal mental control over physiological processes that had first seemed outside of personal influence. References to literature on behavior medicine and simple bio-feedback demonstrations of personal control over autonomic physiological mechanisms lent credibility to this work. Metaphorically, this work also enabled George (and his wife) to appreciate that even in situations of broader diminished personal control and high stress (such as deployments and life in war zones), the powers of the mind enable us to escape immediate stress and take better care of the body. George and his wife were seen together so that she might help him learn these relaxation methods by talking him through guided imagery and exercises at home. In this way, George's wife could be involved in his treatment, enhancing their intimacy while offering them both new coping strategies. As George was the "identified patient," his wife was able to learn these coping skills without accentuating her sense of vulnerability as the spouse who would be left alone to cope while he bravely served his country. Thus, she was empowered to think of herself as a strong "assistant therapist," and George experienced relief in recognizing his wife's capabilities and growing repertoire of personal coping skills. Similar processes were used in the introduction of cognitive therapy methods to help George (and his wife) avoid irrational, emotionally provocative thinking patterns such as catastrophizing; overgeneralizing; and inadvertently, wrongly, and unknowingly convincing themselves that the best way of showing love for one another would be to adopt the shared belief that neither could cope without the other. There were sessions on helping them problem solve and think through together how they might improve their separate access to various supportive resources while he was gone.

The end phase of this work was spent in reviewing the goals and work accomplished and in assessing what gains had been made and what work remained. George (and his wife) were pleased with the skills acquired and lessons learned, and they each had new resources, including a small bibliography of supportive reading materials to reinforce earlier therapeutic lessons. At termination, it remained uncertain whether or when George might actually be deployed. His stomach pain was much less significant to him. He reported feeling comfortable with terminating therapy, as initially

planned, and he was content with a new therapy contract to call the therapist on an as-needed basis should he feel a need for a “booster shot” or lesson review in any of the work accomplished.

Clearly, this case example has trimmed those aspects of any therapy, brief or otherwise, that are characterized by slow progress or even regression and that are sources of discouragement for therapist and patient alike. Lest the reader believe that brief therapy is typically straightforward or technique-focused, we would hasten to add that the deepest therapeutic value in this work, as in long-term therapy, may come from unconscious or preconscious changes, some of which may later be recognized. Ideally, therapists are aware of this potential and are consciously planting seeds of constructive change, even when the work is too fast or the insight too disruptive to discuss them openly. The case discussed here is replete with those opportunities and interventions. Brief therapists may never know whether those seeds of change reach fruition. For example, embedded in the work with George (and his wife) was a therapeutic process that was conscious to the therapist but not necessarily to the client. Specifically, this work was designed to help George and his wife shift out of the roles of frightened newlyweds, experiencing a regressive pull into one another’s arms to avoid a cruel and threatening world, into the roles of young adults with emerging new skills and exciting adventures ahead that each could face alone, if necessary, with full confidence that each has the other’s love and interests at heart.

## SUMMARY

Brief psychotherapy is not only well suited to the U.S. military but also has its roots there. After World War II, early psychologists paved the way for our profession. There has continued to be a rich exchange between military and civilian psychotherapists so that every modern approach or application of brief therapy is shared across both military and civilian settings. Broad principles of brief therapy found in all of these techniques merit review, particularly as they apply to the unique context of the military environment. Good brief therapy requires that patients be appropriately selected, limits clearly stated, and therapist and patient developmental phenomena considered. Finally, brief therapy that works uses careful planning and specific therapist activities and strategies in the beginning, middle, and ending phases. There are a host of extra-therapy variables that affect treatment in the military, and many of them make brief therapy approaches the treatment of choice for military clients with mental health concerns.

## REFERENCES

Alexander, F., & French, T. M. (1946). *Psychoanalytic therapy: Principles and applications*. New York: Ronald Press.

Ball, J. D. (1980). Assertiveness training. *USAF Medical Services Digest*, 31, 19-23.

Ball, J. D., & Henning, L. H. (1981). Rational suggestions for premarital counseling. *Journal of Marital and Family Therapy*, 7, 69-73.

Ball, J. D., & Meck, D. S. (1979). Clinical psychology: The old and the new. *USAF Medical Services Digest*, 30, 13-14.

Borduin, C. M. (1984). Problems, progress, and prospects in psychotherapy outcome research. *Clinical Supervisor*, 2, 7-25.

Buros, O. K. (Ed.). (1949). *The third mental measurements yearbook*. New Brunswick, NJ: Rutgers University Press.

Follette, W. T., & Cummings, N. A. (1967). Psychiatric services and medical utilization in a prepaid health plan setting. *Medical Care*, 5, 23-35.

Frank, J. (1985). Therapeutic components shared by all psychotherapies. In J. J. Mahoney & A. Freeman (Eds.), *Cognition and psychotherapy* (pp. 49-78). New York: Plenum Press.

Hayes, F. W. (1979). The faces of psychiatry. *USAF Medical Services Digest*, 30, 9-12.

Jennings, R. M. (1980). Preventing professional burnout. *USAF Medical Services Digest*, 31, 26-28.

Jennings, R. M., & Ball, J. D. (1980). Patient compliance with CHAMPUS mental health referrals. *Professional Psychology*, 13, 172-173.

Koss, M. P., & Butcher, J. N. (1986). Research on brief psychotherapy. In S. L. Garfield & A. E. Bergin (Eds.), *Handbook of psychotherapy and behavior change: An empirical analysis* (3rd ed., pp. 627-670). New York: Wiley.

Kovacs, A. L. (1982). Survival in the 1980's: On the theory and practice of brief psychotherapy. *Psychotherapy: Theory, Research, and Practice*, 19, 142-159.

Lambert, M. (2004). *Bergin and Garfield's handbook of psychotherapy and behavioral change*. New York: Wiley.

Mays, D. T., & Franks, C. M. (1985). *Negative outcome in psychotherapy and what to do about it*. New York: Springer.

Miller, J. G. (1946). Clinical psychology in the Veterans Administration. *American Psychologist*, 1, 181-189.

Nathan, P., & Gorman, J. (1998). *A guide to treatments that work*. New York: Oxford University Press.

Norcross, J. (2002). *Psychotherapy relations that work*. New York: Oxford University Press.

Peake, T. H., & Archer, R. P. (1984). Status: Force and counterforce. *The Clinical Supervisor*, 2, 95-103.

Peake, T. H., & Ball, J. D. (1988). Brief psychotherapy: Planned therapeutic change in changing times. *Psychotherapy in Private Practice*, 5, 53-63.

Peake, T. H., & Ball, J. D. (Eds.). (1991). *Psychotherapy training: Contextual and developmental influences on settings, stages and mind sets*. Binghamton, NY: Haworth.

Peake, T. H., Borduin, C. M., & Archer, R. P. (2000). *Brief psychotherapies: Changing frames of mind* (3rd ed.). Northvale, NJ: Jason Aronson.

Stiles, W. B., Shapiro, D. A., & Elliot, R. (1986). Are all psychotherapies equivalent? *American Psychologist*, 41, 165-180.

Strickland, B. R. (1988). Clinical psychology comes of age. *American Psychologist*, 43, 104-107.

Strupp, H. H., Hadley, S. W., & Gomez-Schwartz, B. (1977). *Psychotherapy for better or worse: An analysis of the problem of negative effects*. New York: Jason Aronson.

Yalom, I. (1980). *Existential psychotherapy*. New York: Basic Books.

## CHAPTER 5



# Clinical Health Psychology and Behavioral Medicine in Military Healthcare Settings

ALAN L. PETERSON

This chapter reviews the specialty area of behavioral medicine and clinical health psychology in military healthcare. The chapter begins with the definition of various terms used to describe this area. Next, the recommended education and training for individuals interested in working in this specialty are evaluated. The chapter examines the spectrum of applications of behavioral medicine and clinical health psychology, including disease management and health interventions. Finally, the chapter provides a brief review of individual and group evidence-based interventions for common behavioral risk factors and medical conditions treated in military behavioral medicine and clinical health psychology settings.

### DEFINITIONS OF CLINICAL HEALTH PSYCHOLOGY AND BEHAVIORAL MEDICINE

A number of terms have been used to describe this specialty area, including “behavioral medicine” (Schwartz & Weiss, 1978), “medical psychology” (Prokop & Bradley, 1981), “psychosomatic medicine” (Lipowski, Lipsitt, & Whybrow, 1977; Weddington & Blindsight, 1983), “behavioral health”

(Matarazzo, 1980), “behavioral health psychology” (Matarazzo, Weiss, Herd, Miller, & Weiss, 1984), “health psychology” (Goldberg, Carlson, & Paige-Dobson, 1994; Millon, 1982; Stone et al., 1987), and “clinical health psychology” (Belar & Deardorff, 1995).

As a multidisciplinary profession, “behavioral medicine” is probably the best term to describe this specialty area. The Society of Behavioral Medicine (SBM) was established in 1978 with 60 charter members who were originally part of the Association for Advancement of Behavior Therapy (AABT). The fact that SBM was spawned from AABT is a testament to the strong behavioral and scientific underpinnings in this professional organization. The emergence of behavioral medicine was due in part to the success of the fields of behavior modification, applied behavioral analysis, and behavior therapy (Blanchard, 1982). SBM includes psychologists, psychiatrists, social workers, nurses, dentists, and physicians from a number of nonpsychiatric specialties such as internal medicine. SBM now has over 3,000 members, the largest proportion of which is psychologists (Society of Behavioral Medicine, 2004).

There are some limitations with the term “behavioral medicine” as it relates to the discipline of psychology. By definition, individuals who work in the field of behavioral medicine collaborate closely with medical and dental colleagues. However, the term “medicine” is a bit of a misnomer as it relates to departments (e.g., academic departments of psychology) or clinics that are staffed exclusively by psychologists. Therefore, the use of “behavioral medicine” in this context can be misconstrued to mean that psychologists are practicing medicine.

The best term to describe this specialty, that is, the clinical practice of psychologists in healthcare settings, is “clinical health psychology.” The term was initially archived by the American Psychological Association (APA) in 1997 and is defined as follows:

The specialty of Clinical Health Psychology applies scientific knowledge of the interrelationships among behavioral, emotional, cognitive, social and biological components in health and disease to the promotion and maintenance of health; the prevention, treatment and rehabilitation of illness and disability; and the improvement of the health care system. The distinct focus of Clinical Health Psychology is on physical health problems. The specialty is dedicated to the development of knowledge regarding the interface between behavior and health, and to the delivery of high quality services based on that knowledge to individuals, families, and health care systems. [Commission for the Recognition of Specialties and Proficiencies in Professional Psychology (CRSPPP), 2004a]

Behavioral medicine and clinical health psychology have been the fastest-growing specialties in psychology over the past 25 years. Clinical

health psychology is currently the most popular specialty in postdoctoral training. Out of the 87 postdoctoral fellowship programs listed in the Association of Psychology Postdoctoral and Internship Centers guide (APPIC, 2004), 46 programs (53%) provide training in clinical health psychology. This is significantly more than neuropsychology (15 programs; 17%), one of the other most popular programs.

Another testament to the growth of this specialty is the number of psychologists who work at medical schools. In 1953, 255 psychologists were employed by American medical schools. By 1993 that number had grown to over 3,500. Similarly, the average number of psychologists employed by each medical school grew from 2 in the 1950s to 28 in the 1990s (Sheridan, 1999).

The specific names of clinics and clinical services in military healthcare that offer this type of clinical assessment and treatment have varied over the past 2 decades to include the terms “behavioral medicine clinic” and “behavioral health psychology service.” Currently, the term “clinical health psychology” best describes the practice of this specialty in most military and civilian healthcare settings.

### CLINICAL PROBLEMS ADDRESSED BY BEHAVIORAL MEDICINE AND CLINICAL HEALTH PSYCHOLOGY

Clinical health psychologists at major medical centers in the military provide nonpharmacological, nonsurgical interventions for conditions in which behavioral factors play a primary or secondary role. Common areas of emphasis include chronic pain, insomnia, obesity, tobacco dependence, diabetes, hypertension, gastrointestinal disorders, chronic obstructive pulmonary disease, cancer, and behavioral cardiology. Patients are usually treated outside of the usual mental health clinic population to help avoid the mental health stigma and to clearly differentiate the treatment of medical versus mental health conditions. Clinical health psychologists usually provide treatment primarily for diagnosed medical conditions or behavioral factors that affect health (e.g., smoking). Patients referred by physicians to clinical health psychologists often believe that this means that their physicians think their problem is “not real” or “all in their head.” Therefore, it is often helpful to reassure patients early on during an evaluation that it is presumed that they are being evaluated for a true medical or dental condition and that if it were believed that the patient had a primary mental health condition, then he or she would have been referred to the mental health clinic instead. This is one reason that many clinical health psychology clinics are established as separate and independent clinics from mental health clinics. In most cases, patients referred to a clinical health psychol-

ogy service are seen for evaluation only when referred by a physician, dentist, or other health care provider. In most cases, patients should be medically cleared by the referring provider before the initiation of behavioral treatment to ensure that there is no underlying physical cause that has not yet been adequately evaluated or treated (e.g., a headache caused by a brain tumor).

Clinical health psychologists evaluate and treat a wide variety of health-related conditions. The Commission for the Recognition of Specialties and Proficiencies in Professional Psychology (2004b) has outlined the clinical problems frequently addressed by the specialty of clinical health psychology:

1. Psychological conditions secondary to diseases/injury/disability (e.g., post myocardial infarction depression, family issues in chronic illness or death, body image concerns secondary to burns, amputation, and surgery).
2. Somatic presentations of psychological dysfunction (e.g., chest pain in panic attack and somatization disorders).
3. Psychophysiological disorders (e.g., tension and migraine headache and irritable bowel syndrome).
4. Physical symptoms/conditions responsive to behavioral interventions (e.g., vasospasms, urinary and fecal incontinence, and anticipatory nausea).
5. Somatic complications associated with behavioral factors (e.g., mismanagement of diabetes, and noncompliance with medical regimens).
6. Psychological presentation of organic disease (e.g., hypothyroidism presenting as depression, and steroid-induced psychosis).
7. Psychological and behavioral aspects of stressful medical procedures (e.g., pain, lumbar puncture, wound debridement, and cardiac catheterization).
8. Behavioral risk factors for disease/injury/disability (e.g., smoking, weight, substance abuse, and risk taking).
9. Problems of health care providers and health care systems (e.g., physician-patient relationships, staff burn out, and care delivery systems).
10. Preferences for learning the development and maintenance of healthy lifestyles.

Many military clinical or counseling psychologists have experience and training in the assessment and treatment of a number of these conditions. However, fellowship training in clinical health psychology is recommended for individuals whose primary clinical practice consists of the evaluation and treatment of patients with these conditions. Fellowship-trained clinical

health psychologists often serve as the chief of a clinical health psychology service or clinic at a major military medical center and are often the final tertiary referral source for many of these patients. In these settings, clinical health psychologists are often the only specialty-trained provider for assessment and treatment for all of the different conditions outlined by CRSPPP (2004b). Military psychologists who are generalists, as well as those who are specialists, must be sure they have adequate education and training to be able to practice within their scope of care (APA, 2002).

## RECOMMENDED EDUCATION AND TRAINING

Training in clinical health psychology occurs at the doctoral, internship, and postdoctoral levels (Sheridan et al., 1988; Stone et al., 1987). Many graduate programs in clinical and counseling psychology have specialty tracks in clinical health psychology or behavioral medicine. Individuals in these programs take specialty coursework and complete at least one clinical practicum in a healthcare setting. Similarly, many psychology internship programs have either a primary emphasis or a major rotation in clinical health psychology or behavioral medicine.

Most educators recommend that the primary specialty training should occur at the postdoctoral level (Sheridan et al., 1988). Postdoctoral fellowships in clinical health psychology are usually 1 or 2 years long. The specific focus of each fellowship varies, depending on the program. Most programs include supervised training in the following areas: (1) the assessment and management of chronic disease and illness, (2) the maintenance of health through prevention efforts, (3) the evaluation of intervention effectiveness, (4) the development of interdisciplinary collaboration with other healthcare providers, (5) the skills necessary to develop disease management teams, (6) the use of population health assessment and treatment strategies, and (7) the development of skills necessary to complete applied clinical research. Most civilian fellowship programs have a targeted focus in one or two specific areas of behavioral medicine such as pain management or weight management. The military-sponsored fellowship at Wilford Hall Medical Center in Texas and Tripler Army Medical Center in Hawaii are much broader and prepare graduates to serve as the chief of clinical health psychology at a military medical center (James, Folen, Porter, & Kellar, 1999). These programs prepare clinical health psychologists to handle almost any type of behavioral medicine referral. The military fellowship programs do allow for a specific emphasis in an area of interest of the postdoctoral fellow along with the more broad-based clinical health psychology training.

The number of APA-accredited postdoctoral fellowship programs has increased significantly since 1999, when the APA first offered to evaluate specialty accreditation applications. The clinical health psychology program at Wilford Hall Medical Center in San Antonio, Texas, was the first postdoctoral fellowship program in the country to apply to the APA as a specialty program. The postdoctoral fellowship program in behavioral medicine at Wilford Hall Medical Center was established in 1981 under the direction of Tommie Cayton. The title of the fellowship has evolved over the past 24 years, reflecting changes in the maturity of this specialty area. It was first called a postdoctoral fellowship in behavioral medicine. In 1985, the title was changed to behavioral health psychology under the guidance of our civilian national consultant, Joseph Matarazzo. The change followed Matarazzo's (1980) seminal article, "Behavioral Health and Behavioral Medicine," which helped lay the foundation for the development of this specialty. This change was made to more clearly indicate that the fellowship was a psychology fellowship and not one in medicine. The title of the fellowship was changed again in 1997 to clinical health psychology at the same time that this term was archived by the APA. The Army also sponsors a postdoctoral fellowship in clinical health psychology at Tripler Army Medical Center in Hawaii. Both the Air Force and Army fellowships in clinical health psychology are accredited by the APA. The Navy utilizes the Army program to train clinical health psychologists.

The capstone of education and training in clinical health psychology is to become board-certified by the American Board of Professional Psychology (ABPP). Graduates of the fellowship programs at Wilford Hall and Tripler have been very successful in obtaining an ABPP in clinical health psychology. There are currently more ABPPs in clinical health psychology who are graduates of the Wilford Hall fellowship than from any other individual fellowship in the country. Military psychologists currently receive board certification pay of \$2,000–\$5,000 per year for obtaining a diplomate in one of the ABPP specialties.

## EVIDENCE-BASED TREATMENT APPROACHES

Numerous excellent textbooks provide comprehensive reviews of behavioral medicine and clinical health psychology (Baum, Revenson, & Singer, 2001; Belar & Deardorff, 1995; Boll, Johnson, Perry, & Rozensky, 2002; Frank, Baum, & Wallander, 2004; Frank & Elliott, 2000; Llewelyn & Kennedy, 2003; Nicassio & Smith, 1995; Raczyński & Leviton, 2004). Therefore, detailed information on epidemiology, assessment, and empirically supported treatment for each of these conditions is not reviewed in

this chapter. The *Journal of Consulting and Clinical Psychology* (JCCP) has published a special issue devoted to behavioral medicine and clinical health psychology every decade since 1982 (Blanchard, 1982, 1992; Smith, Kendall, & Keefe, 2002). This special issue provides one of the best reviews of the literature on the assessment and treatment of individual patients that are most commonly seen in a behavioral medicine or clinical health psychology service.

There are a variety of behavioral medicine and clinical health psychology treatments with specific relevance to military healthcare settings including tobacco cessation, weight management, pain management, insomnia management, diabetes management, temporomandibular disorders management, cardiac rehabilitation, and pulmonary rehabilitation. Formal, manualized treatment programs for all of these areas are available from me through the Clinical Health Psychology Service at Wilford Hall Medical Center, including both provider and patient manuals for most of these areas. Four of these areas—tobacco cessation, weight management, chronic pain management, and insomnia management—are of significant importance to military clinical health psychologists and will subsequently be addressed here in depth.

## Tobacco Cessation

Tobacco cessation is the most important target of behavioral medicine interventions for psychologists in both military and civilian settings (Niaura & Abrams, 2002; Wetter et al., 1998). Tobacco use is the leading cause of preventable death in the U.S. (Centers for Disease Control and Prevention, 1997), and more than 400,000 Americans die each year from smoking-related causes (Mokdad, Marks, Stroup, & Gerberding, 2004). About 48 million Americans smoke (Centers for Disease Control and Prevention, 2000), and it can be expected that between one-third and one-half of them will die from smoking-related causes (Mokdad et al., 2004).

Smoking is also the single most important health risk for the U.S. military. More Americans will die this year from smoking-related illnesses than have died in the past 100 years in military combat. Additional healthcare and decreased productivity costs related to smoking in the U.S. military have been estimated at \$930 million per year (Robbins, Chao, Coil, & Fonseca, 2000). Service members who smoke are significantly more likely to be prematurely discharged from active duty than nonsmokers, resulting in an approximate annual cost of over \$130 million in excess training costs across all service branches (Klesges, Haddock, Chang, Talcott, & Lando, 2001). Smoking affects personnel readiness through lower levels of physical fitness, increased risk for injuries, and more sick days (Altarac et al., 2000; Lincoln, Smith, Amoroso, & Bell, 2003). Although smoking by active-duty

U.S. military personnel steadily declined for almost 2 decades (1980–1998), there has been a significant increase in smoking from 1998 to 2002 (Bray et al., 2003). We have no scientific data identifying the cause of this increase, but one hypothesis is that it may be related to the increase in stress on military members related to deployments and other work-related demands since September 11, 2001. The current prevalence of smoking in the military (any smoking in the past 12 months) is as follows: Army, 35.6%; Navy, 36.0%; Marine Corps, 38.7%; Air Force, 27.0%. Service comparisons in the prevalence of any smokeless tobacco use in the past 12 months is as follows: Army, 14.0%; Navy, 9.0%; Marine Corps, 20.4%; Air Force, 8.8% (Bray et al., 2003).

Almost every U.S. military installation offers programs for tobacco cessation. The specific details of each program differ, depending on the location and available resources, but most include some combination of a behaviorally based program combined with nicotine replacement therapy (NRT) such as patches and gum (Fiore, Smith, Jorenby, & Baker, 1994; Hatsukami et al., 2000), and buproprion hydrochloride (Zyban; Hurt et al., 1997). Current research indicates that the combination of those three components (behavioral counseling, NRTs, and Zyban) results in the greatest quit rates (Fiore et al., 2000; Jorenby et al., 1999). Most programs result in quit rates of about 25–35%, as seen by 7-day point prevalence measures at the 1-year follow-up (Fiore et al., 2000). Many military cessation programs have advertised themselves as having extremely high quit rates (e.g., >75%). However, on closer scrutiny, these high rates are usually an artifact of the mode of measurement (e.g., not including all who start a program—only those who can be contacted at follow-up—or poor measurement of tobacco use status). The only recent published study of tobacco cessation in a military setting found a 27% abstinence rate through the Tripler Tobacco Cessation Program (Faue, Folen, James, & Needels, 1997).

It is recommended that tobacco cessation programs be based on currently available scientific evidence and practice guidelines (Abrams et al., 2003; Fiore et al., 2000; Niaura & Abrams, 2002; Wetter et al., 1998). *The Tobacco Dependence Treatment Handbook: A Guide to Best Practices* (Abrams et al., 2003) can be used as an additional guide for tobacco cessation facilitators who are interested in learning more about this program. The Wilford Hall Tobacco Cessation Program is a comprehensive eight-session program based on these guidelines and includes both provider and patient manuals (Peterson, Davidson, & Janke, 2003a, 2003b). In the program, Zyban is started during week 2 for those who are medically eligible, and the quit date is usually at the start of week 3. Weeks 4–8 focus on overcoming urges, relapse prevention, limiting weight gain (Talcott et al., 1995; Peterson, 1999; Peterson & Helton, 2000; Russ, Fonseca, Peterson,

Blackman, & Robbins, 2001), stress management, relaxation training, and assertive communication. The program is designed for smoking and smokeless tobacco cessation (Cigrang, Severson, & Peterson, 2002).

Four to 8 weeks of nicotine replacement therapy, involving the nicotine patch or nicotine gum, are available as part of the program for those participants who are medically qualified (Fiore et al., 1994). Nicotine replacement therapy begins on the third session, which is the established quit date for the program, although some programs use it longer. However, nicotine patch treatment of 4–8 weeks has been shown to be as efficacious as longer treatment periods (Fiore et al., 1994). Therefore, we use 6 weeks of nicotine patches, gum, or both for our program. When both nicotine patches and nicotine gum are used, the patches are the primary form of NRT, with a few pieces of gum (usually < 6 per day) to help with additional cravings. Zyban is also available for 8 weeks, beginning the second week of the program. It is recommended that participants take Zyban for at least a week prior to their quit date. In most military tobacco cessation programs, the medications are bundled with the program, meaning that individuals must participate in the program and attend weekly sessions to obtain the medications. Research indicates that these medications do not work well unless combined with a comprehensive behavioral treatment program. However, there is evidence that less intensive programs can also be somewhat effective if delivered by a primary care provider (Fiore et al., 2000) or behavioral health consultant (Hunter & Peterson, 2001; James, Folen, Porter, & Kellar, 1999).

A tobacco cessation program can be administered by a number of types of clinicians. Programs offered by a clinician (psychologist, physician, dentist, health educator, nurse, etc.) increases the smoking cessation rates relative to interventions in which there is no provider (Fiore et al., 2000). There is no evidence that cessation rates are increased if the program is administered by a former tobacco user as opposed to a clinician who has never used tobacco regularly. In the U.S. Air Force, psychologists receive training in tobacco cessation during their residency program and are the primary providers in these programs at most Air Force bases. In the Navy, individuals working or volunteering in health and wellness departments (dieticians, personal trainers, former tobacco users, etc.), psychologists, and substance abuse counselors are the primary facilitators of tobacco cessation courses, with augmentation by a family practice physician or physician's assistant, who provides prescriptions and assists enrollees in choosing their most optimal quit method.

One unique aspect of tobacco cessation in the military is related to tobacco use policies. Over the years all four of the military services have banned tobacco use during basic training (Woodruff, Conway, & Edwards, 2000). Several studies have evaluated the impact of this ban, as well as

whether cessation rates can be improved with the addition of cessation and prevention programs. Most research has indicated that the policy banning tobacco use has a significant impact in helping some individuals remain abstinent after basic training (Klesges, Haddock, Lando, & Talcott, 1999; Woodruff et al., 2000). However, the impact of the additional interventions has yielded much more modest effects (Conway et al., 2004). Additional research is needed to further evaluate population-based interventions and policy.

## Weight Management

Obesity is second only to tobacco use in the risk for morbidity and mortality in the United States (Mokdad et al., 2004). According to national surveys that track weight trends, rates of overweight and obesity have increased steadily among adults over the past 40 years. For example, according to data from the National Health and Nutrition Examination Survey (NHANES), obesity [body mass index (BMI)  $\geq 30$ ] prevalence has increased from 13.4% in 1960–1962 to 30.9% in 1999–2000 (Flegal, Carroll, Ogden, & Johnson, 2002). Not surprisingly, the prevalence of overweight (BMI  $\geq 25$ ) has demonstrated similar patterns. For example, among adults surveyed in NHANES, the number of individuals who are overweight has increased from 45% in 1960–1962 to 64% in 1999–2000 (Fried, Prager, McKay, & Xia, 2003). Similarly, the annual Behavioral Risk Factor Surveillance System Survey, using a random telephone survey of self-reported weight and height, has documented similar trends among adults. Overweight and obesity combined climbed from 44.7% in 1990 to 59.1% in 2002 (Centers for Disease Control and Prevention, 2004).

Despite an emphasis on fitness and readiness, the U.S. military has also had substantial increases in overweight and obese personnel. For example, Bray et al. (2003) report that the number of individuals who were overweight in 1995 amounted to 49.0%, increasing to 57.2% by 2002. Maintaining healthy body weight is a critical part of readiness in the military. The many possible consequences of being overweight include decreased fitness, poor public perception of military readiness, increased medical costs, and numerous administrative costs. Annual obesity-related hospitalization costs in the U.S. Navy have been estimated at \$5,842,627 for the top 10 obesity-related diagnoses (Bradham et al., 2001). Also, it was recently estimated that the yearly costs of weight problems in the Air Force are over \$28 million, with about \$24 million in direct medical costs and \$4 million in indirect costs due to lost workdays (Robbins, Chao, Russ, & Fonseca, 2002). Excessive weight may be of particular concern for critical military operations since it is associated with increased daytime sleepiness, even without sleep apnea (Vgontzas et al., 1998). This may be due to the lack of

physical fitness and/or eating habits characterized by excessive intake of high-fat foods, both of which have been shown to be a cause of low perceived energy. Also, the excessive administrative pressure to maintain or lose weight in the military is associated with disordered eating behaviors (McNulty, 2001; Peterson, Talcott, Kelleher, & Smith, 1995).

In-depth details of evidence-based behavioral interventions for weight management are beyond the scope of this chapter. Behavioral interventions provide a methodology for systematically modifying eating, exercise, or other behaviors that are thought to contribute to or to maintain excessive weight (Stunkard, 2001). Most of the various behavior therapies have several factors in common, including the use of self-monitoring and goal setting, stimulus control and modification of eating styles and habits, cognitive restructuring strategies that focus on challenging and modifying unrealistic or maladaptive thoughts or expectations, stress reduction and management strategies, and the use of social support (Foreyt & Goodrick, 1994; Perri & Fuller, 1995). The best published review of the current state of knowledge on overweight and obesity is the National Institutes of Health (1998) book, *Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity*. The best manualized intervention with significant empirical evidence of its efficacy is the *LEARN Program for Weight Management* (Brownell, 2004). This is a 16-week program emphasizing lifestyle, education, attitude, relationships, and nutrition. The Tripler Army Medical Center LE3AN Program (emphasizing healthy lifestyles, reasonable exercise, realistic expectations, emotions, attitudes, and nutrition) gives active-duty service members a treatment strategy that involves a reasonable low-intensity exercise regimen, behavior modification, intensive nutritional counseling, healthy meal planning, relapse prevention strategies, cognitive coping strategies, and healthy lifestyle principles for weight loss and maintenance. Several articles have demonstrated that this program is associated with significant weight loss for active-duty military participants (James et al., 1997; James, Folen, Page, et al., 1999; Simpson, Earles, Folen, Trammel, & James, 2004). There is some evidence that behavioral interventions for weight management can be administered over the Internet (Tate, Wing, & Winett, 2001), and a large, randomized, controlled trial of this approach is currently underway at Wilford Hall Medical Center (Hunter et al., 2004).

### Tobacco Cessation and Weight Gain in Military Personnel

One of the limitations of tobacco cessation is that many people gain weight afterward. This can be particularly problematic for military personnel because of the potential negative impact that being overweight can have on their military careers. Studies show that smokers lose weight after starting

to smoke, weigh less than nonsmokers, and gain weight when they quit (French & Jeffery, 1995; Gritz, Klesges, & Meyers, 1989; Klesges, Myers, Klesges, & La Vasque, 1989; Perkins, 1993). A U.S. surgeon general's report (United States Department of Health and Human Service, 1990) indicates that 80% of smokers who quit gain an average of 5 pounds. The results of the second NHANES indicate that female smokers who quit tend to gain more weight (8.4 pounds) than their male counterparts (6.2 pounds; Williamson et al., 1991). Furthermore, about 10% of male and 13% of female ex-smokers gained more than 28 pounds. A study of active-duty military personnel indicates that they gained about the same amount of weight after smoking cessation as their civilian counterparts (Peterson & Helton, 2000). Therefore, it should not be surprising that weight gain following smoking cessation is seen as a primary deterrent to the latter.

Postcessation weight gain has been attributed to a variety of factors, including changes in metabolism, activity level, taste preferences, and energy storage, and increases in food intake, especially sweet, fat, and salty foods (Klesges et al., 1989; Perkins, 1993; Williamson et al., 1991). Current practice guidelines for tobacco cessation include strategies to prevent weight gain (American Psychiatric Association, 1996), even though interventions designed specifically for that problem have generally been unsuccessful (Hall, Tunstall, Vila, & Duffy, 1992). One recent study (Spring et al., 2004) compared the effects of adding a diet and exercise intervention to a tobacco cessation program either concurrently or after smoking cessation. The weight management intervention was added to the first 8 weeks or the final 8 weeks of a 16-week tobacco cessation program. The results indicated that behavioral weight control did not undermine smoking cessation and produced better weight gain suppression when initiated after the smoking quit date.

Only one study to date has been successful in eliminating weight gain after smoking cessation (Talcott et al., 1995). This study evaluated U.S. Air Force recruits who were forced to quit smoking as part of their basic military training. The results indicated that smokers who quit in basic training did not gain weight during their 6-week training program. However, this study was conducted in a very controlled environment (i.e., limited access to sweet and fatty foods, no access to alcohol, and significantly increased levels of exercise).

One important factor may be one's knowledge of body weight prior to cessation of smoking. A meta-analysis of 24 studies on self-reported weight compared to measured weight in the general population and in individuals in a weight-loss program found that the average self-report was lower than 84% of measured weights; the typical self-report underestimated actual weight by 2 to 5 pounds (Bowman & Delucia, 1992). Similarly, a study by Peterson (1999) found that about two-thirds of the individuals entering a

smoking cessation program significantly underestimated their body weight. Of those subjects, females weighed about 9 pounds and males about 6 pounds more than their estimates. These weight differences are of the same magnitude found in controlled studies of weight gain after smoking cessation (Klesges et al., 1989; Perkins, 1993; Williamson et al., 1991). The significance of these results is that because many people underestimate their body weight prior to smoking cessation, they believe that they have gained about twice as much weight as they actually have. This may be particularly true for those who weigh themselves only after they have quit smoking.

It has been suggested that a common reason for people to smoke is to help control their weight. One military study examined concern about weight gain and found that active-duty members, especially those who were close to or over their maximum allowable weight, had significantly higher levels of concern about weight gain with tobacco cessation and increased risk of anticipated relapse with weight gain than did civilians (Russ et al., 2001).

Despite the impact of tobacco use on the health and fitness of active-duty members, as well as the large direct medical costs and indirect costs (lost work days), there are no official negative consequences for tobacco use in the military (Robbins et al., 2000). In contrast, poor cardiovascular fitness and excess abdominal girth place active-duty individuals under immediate scrutiny by their commander. Should the members fail to make adequate improvements in fitness and/or abdominal circumference, they could be separated from the service. Given such consequences, military personnel are in a bind because, although they would like to quit smoking, it may have a negative impact on their military career.

### Chronic Pain Management

Military clinical health psychologists treat a variety of chronic pain conditions including musculoskeletal disorders (Guzman et al., 2001), headaches (Holroyd, 2002), arthritis (Keefe, Smith, et al., 2002), fibromyalgia (Baumstark & Buckelew, 1992), temporomandibular disorders (Peterson, Dixon, Talcott, & Kelleher, 1993; Turk, Zaki, & Rudy, 1993), and abdominal pain (Blanchard & Scharff, 2002), to name just a few. Although there are many similarities in the behavioral treatment of various chronic pain conditions, there are also unique differences. A review of the specific treatment approaches for each pain condition is beyond the scope of this chapter. However, chronic musculoskeletal pain is of particular importance for military clinical health psychologists. Such pain conditions are the leading cause of medical discharge from active duty for the Army (53%), Navy and Marine Corps (63%), and Air Force (22%). Chronic musculoskeletal disorders are also a significant economic cost to the Department of Defense

in terms of disability payments. For example, the Army paid \$485 million for disability cases in 1993 alone (Amoroso & Canham, 1999). The discharge of one active-duty member for a musculoskeletal pain condition costs the U.S. government an estimated \$250,000 in lifetime disability payments, not including potential additional healthcare costs (Feuerstein, Berkowitz, Pastel, & Huang, 1999).

The most effective treatment for chronic musculoskeletal disorders in terms of reducing pain and improving function in civilian populations is an interdisciplinary chronic pain rehabilitation program (Guzman et al., 2001; Turk & Okifuji, 2002). These programs, usually fulltime for several weeks, include physical therapy, occupational therapy, biofeedback, cognitive therapy, relaxation, and a gradually increasing self-managed physical exercise program. The exercise portion is one of the most important, yet most poorly understood, part of chronic pain rehabilitation for musculoskeletal disorders. For most patients, if a particular behavior or activity increases their pain, they will avoid doing it. Unfortunately, what this usually means for chronic pain conditions is a gradual pattern of avoidance, physical deconditioning, and continued or increased levels of pain. Pain, avoidance, and deconditioning often lead to depression, which further perpetuates this downward spiral to what is eventually referred to as chronic pain syndrome. A physical therapy consultation is a common referral for chronic pain cases. Unfortunately, in most instances the physical therapy prescription will be treated as an acute pain case, with a standardized list of exercises designed for a particular pain condition. In response to these exercises, most patients either will say that they cannot do the exercises because of their pain or they will do all of the exercises just as prescribed, thereby significantly overworking the muscles—resulting in greatly exacerbated pain and an almost total cessation of behaviors and activities or even extended bed rest.

An alternative to the standard physical therapy approach is the use of a behavioral quota system (Fordyce, 1976). The goal of this approach is to establish a baseline level for each physical reconditioning exercise and then set quotas for the gradual increase of exercise over time. A clinical case example will be helpful to demonstrate this approach. Let's assume that Sergeant Jones is a 36-year-old male with an 18-month history of chronic low-back pain. Treatment with a variety of pain and anti-inflammatory medications and physical therapy did not result in any noticeable reduction in the pain. Sergeant Jones was subsequently referred to a clinical health psychologist for chronic pain management. Treatment recommendations included cognitive therapy, relaxation training, electromyographic biofeedback, and initiation of a gradually increasing exercise program based on Fordyce's quota system. The first treatment session would involve the measurement of the initial baseline level at which to initiate a walking program.

Sergeant Jones would be positioned in the clinic hallway and given the following instructions: "I would like you to start walking at a normal pace and then stop as soon as you feel a just noticeable increase in pain, fatigue, or weakness. I don't want you to force yourself to go as long as you can, but only do as much as you can until you notice one of those three symptoms." Upon initiation of walking, the psychologist would start a stopwatch and then briefly repeat the instructions to walk until there was an increase in pain, fatigue, or weakness. Let's assume that after exactly 2 minutes, 43 seconds, Sergeant Jones stopped and said, "There, I just noticed a slight increase in pain in my back." He would be asked to take a seat in the hallway and rest momentarily to allow him to recover.

Sergeant Jones's walking baseline would therefore be established at 163 seconds. Next, the recommendation would be to have Sergeant Jones begin his walking exercise program the next day by starting at about 80% of his baseline average, or about 130 seconds. To this, Sergeant Jones might very likely reply, "I don't see how this is going to help. I already walk a lot more than this every day. In fact, it takes me about 10 minutes just to walk in from the parking lot for this appointment." It would then be explained to him that he should continue with whatever walking he is required to do to accomplish his work and his regular activities of daily living. He would also be told that his walking program needed to start at a very low level to ensure that he did not injure himself or overwork the muscles. Starting the exercises at too high a level would very likely result in a significant increase in pain, requiring another period of rest or discontinuation of physical activities.

Sergeant Jones would then be given directions to walk on a daily basis according to a carefully designed quota system. He would be told to walk an exact number of minutes and seconds per day and that he could increase the duration of walking by about 5% per day. He would also be told that after his initial baseline measurement, he was to ignore his pain during his walking program and that he was *not* to use pain as a guide to his exercise. In other words, he would be instructed to exercise for a specific amount of time—no more or no less—and not to stop early because of pain or to exceed his prescribed goal even if he had no pain. He would also be told that although it did not appear to be much exercise, he would actually be increasing his amount of walking at a fairly rapid pace so that before long he would be getting a good workout on a daily basis. He would be given an exercise schedule for the next week that included the exact number of minutes and seconds he was to exercise on a daily basis so that he increased his total exercise time by 5% each day. Based on Sergeant Jones's initial baseline level of walking, he would exceed 20 minutes of walking per day by the sixth week of exercise. A similar approach would be used for each of the different types of exercise that were prescribed by the physical therapist.

This approach helps ensure that muscles are gradually reconditioned and that no injuries or muscular overexertion injuries occur. It also allows the patient to see daily progress because each day the amount of exercise completed is greater than on the day before.

## **Insomnia Management**

Insomnia is another common condition of significant importance to military clinical health psychologists because of its high prevalence rate and potential source of accidents, especially in deployed locations (Peterson, Satterfield, Brim, & Goodie, 2003). Chronic insomnia is one of the most common clinical symptoms in primary care settings, with an estimated prevalence rate of 32% (Kushida et al., 2000; National Heart, Lung, and Blood Institute Working Group on Insomnia, 1999). Insomnia is associated with increased healthcare utilization (Kapur et al., 2002) and decreased health-related quality of life (Katz & McHorney, 2002; Zammit, Weiner, Damato, Sillup, & McMillan, 1999).

Pharmacological treatments for insomnia are the most commonly used approaches (Morin, Colecchi, Stone, Stood, & Brink, 1999; Morin & Wooten, 1996), although such treatments are most helpful with acute insomnia (Smith et al., 2002). Behavioral approaches are the treatment of choice for chronic insomnia and include a combination of stimulus control, sleep hygiene, and sleep restriction (Lichstein & Riedel, 1994; Morin, Colecchi, et al., 1999; Morin, Culbert, & Schwartz, 1994; Morin, Hauri, et al., 1999; Murtagh & Greenwood, 1995; Smith, Perlis, et al., 2002). Group treatment for insomnia has also been demonstrated to be clinically effective in military healthcare settings (Hryshko-Mullen, Broeckl, Haddock, & Peterson, 2000) and to result in a significant reduction in overall healthcare utilization (Peterson, Hryshko-Mullen, Alexander, & Nelson, 1999).

Before initiating treatment for insomnia, it is important to have a patient complete a 1- to 2-week sleep diary. The sleep diary is the gold standard for the objective assessment of insomnia on an outpatient basis (Mimeaule & Morin, 1999; Morin, 1993) and provides a relatively reliable picture of a patient's sleep patterns. A daily sleep diary allows for the calculation of total sleep time, sleep onset latency, number of nighttime awakenings, sleep efficiency, and other sleep variables. These results can then be used for setting goals and planning treatment.

Sleep hygiene education instructs the patient to avoid caffeine consumption within 4–6 hours of bedtime, smoking near bedtime, alcohol after dinner, sleep medications, alcohol as a sleep aid, rigorous exercise within 2 hours of bedtime, and napping (Riedel, 2000). Although changes in such practices alone do not often lead to significant improvements in insomnia, poor sleep hygiene can aggravate it.

Stimulus control is the behavioral treatment approach with the strongest scientific evidence for its efficacy (Bootzen & Epstein, 2000; Chesson et al., 1999). With stimulus control, the bed and bedroom should be reserved for sleep and sex only (e.g., do not watch television, listen to the radio, eat, or read in the bedroom). The general guidelines for stimulus control are to (1) set a reasonable bedtime and arising time and stick to them, (2) go to bed only when you are sleepy, (3) get out of bed when you can't fall asleep or go back to sleep in about 15 minutes, (4) return to bed only when you are sleepy, and (5) repeat steps 2–4 as often as necessary. Sleep restriction involves limiting or restricting the sleep window (established bedtime and awakening time) to the average total sleep time obtained from the sleep diary (Spielman, Saskin, & Thorpy, 1987).

For a case example of the use of sleep restriction, suppose that Petty Officer (PO) Smith's sleep diary indicates that he usually goes to bed at about 2000, takes about 90 minutes to fall asleep, wakes up about three times during the night, lies awake in bed for about 30 minutes each time he wakes up, and gets out of bed about 0600 immediately after he wakes up in the morning. In this case, PO Smith's total time in bed would be 10 hours, his total sleep time would be 7 hours, and his sleep efficiency would be 70% [total sleep time (7 hours)/total time in bed (10 hours) = 70%]. In this case, a sleep window of 7 hours would be recommended to PO Smith. The provider would then collaborate with him to establish the sleep window. Let's assume that PO Smith indicates that he would prefer to continue to wake up at 0600. His sleep window would then be set for 2300 to 0600. In this case, PO Smith would probably be shocked at the suggestion that he has to stay awake until 2300, 3 hours after his regular bedtime. The provider would then discuss the fact that he was already spending 3 hours awake in bed every night and then ask what kinds of activities he might engage in if he had an additional 3 hours of time available to him every day. In all likelihood, PO Smith would still not be convinced that the sleep restriction approach would work for him, and he would probably suggest that he did not think he could possibly stay up that late every night. In this case, a useful response by the provider might be to ask him, "Which do you think would be more difficult for you to do, force yourself to fall asleep or force yourself to stay awake?" To this question, PO Smith would most likely acknowledge that trying to force himself to fall asleep had not worked in the past. The provider might then suggest, "Would you be willing to try an experiment? Perhaps you could try this approach for just 1 week and see what happens? If your sleep gets worse after a week of trying this, you can always stop and go back to your approach again."

Assuming that PO Smith agreed to give this approach a try, it would be important to encourage him to continue to maintain his sleep diary as a "scientific" way to see if the experiment works. It would also be helpful to

review the sleep hygiene and stimulus control procedures with him before starting the sleep restriction. If PO Smith was able to come up with a good plan to keep himself awake until 2300 each evening, he would probably be very tired by 2300, he would be looking forward to his bedtime (instead of dreading it), and he would probably fall asleep within about 15 minutes. If his sleep efficiency were to remain above 85% for the week, the duration of his sleep window would be increased by 20 to 30 minutes so that his bedtime was reset for 2230 or 2240. This same procedure of gradually increasing the sleep window each week that sleep efficiency remained above 85% would be repeated until sleep disruption occurred. This would indicate that the sleep window was too wide, and the duration of the window would be fine-tuned until PO Smith reached his optimum sleep window.

### **Primary Care Psychology**

Most military clinical health psychologists work in a specialty mental health setting. In this type of setting, the psychology service is a separate and independent clinic that receives referrals from medical and dental providers. A recent development in the field of clinical health psychology is working in primary care settings as one of the primary care team members (Gatchel & Oordt, 2003).

There has been an increased emphasis over the past decade on the role of psychologists in primary care (Blount, 1998; Brantley, Veitia, Callon, Buss, & Sias, 1986; Cummings, Cummings, & Johnson, 1997; McDaniel, 1995; Strosahl, 1996). During 1999, the Air Force initiated the Primary Care Optimization Project. The purpose of this program was to reengineer primary care clinics and to optimize healthcare services in primary care settings throughout the Air Force Medical Service. This project called for psychologists to work as part of the primary care team. Similar programs have also been initiated in the Army (James, Folen, Porter, & Kellar, 1999) and the Navy. Primary care physicians have long known that psychosocial problems are prevalent in the patients they treat, and they deliver nearly one-half of all formal mental healthcare in the United States (Narrow, Regier, Rae, Manderscheid, & Locke, 1993; Regier et al., 1993). A growing body of research demonstrates that targeted behavioral health interventions integrated into primary care can lead to improved patient and provider satisfaction (Katon, et al., 1996), decreased medical costs (Cummings, 1997), and improved patient outcomes (Hellman, Budd, Borysenko, McClelland, & Benson, 1990). Primary care psychology training programs have now been developed at Army, Navy, and Air Force internship sites (Hunter & Peterson, 2001).

Numerous models have been used to guide how psychologists operate in primary care settings (Blount, 1998; Brantley et al., 1986; Cummings et

al., 1997; McDaniel, 1995; Strosahl, 1996). Primary care psychology is not simply locating psychologists in primary care settings to do the kind of work they would ordinarily do in an outpatient mental health setting. Rather, it requires specific clinical skills and a comprehensive knowledge of behavioral assessment, applied behavioral analysis, behavior therapy, behavioral medicine, differential diagnosis, and psychopharmacology. All of these skills may be called on during a 15- to 30-minute primary care appointment.

The Army, Navy, and Air Force adopted the primary care psychology training program developed by Kirk Strosahl (1996). This model includes having a psychologist colocated in the primary care setting, working for the primary care manager as a behavioral health consultant. Appointment time slots are modeled after those of primary care managers. Psychologists provide brief behavioral health consultations and interventions with the medical patients but do not follow patients for outpatient therapy, as they might in a specialty mental health clinic (e.g., outpatient mental health clinic or clinical health psychology clinic). Patients can be seen as many times as needed but usually have three or fewer appointments. If more comprehensive assessment or treatment is required, the psychologist will refer the patient to a specialty mental health clinic.

Some initial data have been reported on the application of behavioral medicine and clinical health psychology treatment approaches in military primary care settings. In one study (Goodie et al., 2005), military clinical health psychologists collaborated with family practice physicians in an enhanced weight-loss intervention program as compared to a minimal contact, standard care program. Providers followed brief, structured guidance derived from evidence-based practice guidelines. The results indicated that participants in the enhanced care group lost a significant amount of weight, whereas there was no difference for the minimal contact group.

Another study (Isler, Hunter, Isler, & Peterson, 2003) evaluated the effectiveness of a brief behavioral treatment for insomnia in a military primary care setting. Participants were referred by their primary care manager to a clinical health psychologist working in the primary care clinic. The sessions consisted of brief behavioral treatment (Isler, Peterson, & Isler, 2005) and the use of a self-help book for insomnia (Zammit, 1997). The results indicated improvements in sleep efficiency and in sleep impairment of a magnitude similar to that obtained in specialty care.

A limitation of primary care psychology is that it requires additional staff to effectively run the primary care and specialty care settings. The Air Force Primary Care Optimization Project attempted to integrate psychologists into primary care without adding any staff. Unfortunately, this became a significant challenge at many locations, especially those in which the specialty care clinics were already booked fulltime with specialty care patients.

A new development that requires less time and yet addresses the needs of many primary care providers is the use of drop-in group medical appointments (DIGMAs) or shared medical appointments (Bronson & Maxwell, 2004). Shared medical visits are a new concept in patient care in which a physician and a behaviorist (usually a psychologist) collaborate in a group medical appointment. The physician performs a series of one-on-one patient encounters in a group setting during a 90-minute visit, and the psychologist facilitates group discussion, problem solving, and strategies for health behavior change between each individual patient encounter. Participation is on a voluntary basis, and patients agree to have their medical condition managed and to be advised in front of the other patients. Patients benefit from improved access to their physician, increased education, group support, and in most cases improved patient satisfaction. Providers can boost their access and productivity by 200–300% without increasing hours.

## POPULATION HEALTH AND DISEASE MANAGEMENT

Clinical health psychologists in the military have much to contribute to population health management, that is, the management of the overall health of a population through surveillance, proactive delivery of prevention and intervention services, disease management, and outcome measurement (Peterson, 2003). Surveillance includes methods to measure the health status of a population, such as the review of population data from the universal assessment of tobacco use and weight in primary care clinics or from a health-risk assessment completed during annual physical exams. Population health management includes a combination of primary, secondary, and tertiary prevention programs. Primary prevention includes strategies to prevent the onset of a targeted condition in asymptomatic individuals (i.e., tobacco use prevention in basic military training). Secondary prevention focuses on approaches to identify asymptomatic individuals who have known behavioral health risks or preclinical disease (i.e., overweight military members). Tertiary prevention treats symptomatic patients in order to mitigate untoward consequences of their disease (i.e., smoking cessation and weight management for active-duty diabetics).

“Disease management” is another term used to describe the spectrum of approaches, from primary prevention to intensive tertiary treatments. Disease management is a clinical management process that spans the continuum of care from primary prevention to ongoing and long-term health maintenance for individuals with chronic health conditions or diagnoses (Friedman, 2002). It involves the optimal management of the most common and costly acute and chronic disease states (e.g., diabetes) across the continuum of care. For example, the U.S. military healthcare system should

not wait to be involved in services until after a patient is diagnosed with diabetes. Programs should be available to identify and intervene with high-risk individuals (e.g., overweight). On the other end of the spectrum, comprehensive and multidisciplinary diabetes treatment programs can help limit the progression of potential health consequences in insulin-dependent diabetics.

One limitation of many evidence-based, comprehensive treatment programs is that although they are effective for those who participate, they have a minimal impact on the overall health of the population because of limited recruitment, enrollment, or participation. For example, many comprehensive tobacco cessation programs achieve high quit rates, but only a small percentage of the population of tobacco users enrolls in such programs. Consider a population of 1,000 smokers; a 30-second primary care tobacco cessation intervention universally applied to every patient seen in a clinic as part of the annual preventive health assessment might result in an annual quit rate of 3% ( $1,000 \times 3\% = 30$  quits). By comparison, a comprehensive, multisession tobacco cessation program that yields a 40% quit rate would result in less overall successful quits if only 5% of the population participated ( $1,000 \times 5\% = 50$ ;  $50 \times 40\% = 20$  quits). This example demonstrates the potential impact on population health of intervention programs that are brief, population based, and focused on a behavioral risk factor. Improving the overall health of a population requires the use of creative behavioral medicine and clinical health psychology interventions. These approaches often extend outside of the healthcare organization to include families, schools, employers, communities, health policy changes, and environmental improvements (Epping-Jordan, 2004; Keefe, Buffington, Studts, & Rumble, 2002).

## CONCLUSIONS

In the near future it is anticipated that clinical health psychology and behavioral medicine will continue to grow at a rapid pace. One area of expected growth is the use of technology for behavioral medicine assessment, treatment, and prevention programs (Keefe, Buffington, et al., 2002). A number of areas have already employed Internet-based behavioral interventions in such areas as weight management (Hunter et al., 2004; Tate et al., 2001) and tobacco cessation (Severson, 2004). Other technological applications deserving continued attention include the use of telemedicine, personal digital assistants, pagers, cell phones, and DVDs (digital video devices).

The financial aspects of healthcare for clinical health psychologists will become even more important in the future. The possibility of reducing costs

and healthcare utilization by improving health and lifestyle behaviors make clinical health psychologists a valuable asset in healthcare organizations. However, it can be very challenging to evaluate the financial aspects of behavioral interventions (Kaplan & Groessl, 2002). Future studies of treatment outcomes should evaluate the cost-effectiveness of interventions and the potential impact of medical cost offset.

Some clinical health psychologists have boldly suggested that in the future clinical and counseling psychology will be considered subspecialties under the broader umbrella of clinical health psychology. This model posits that in the future clinical health psychology will be thoroughly integrated throughout the entire healthcare setting to include all primary care and most specialty medical care. Most patients will seek healthcare from their primary care or specialty care physician, who will have a clinical health psychologist that is part of the primary or specialty healthcare team. This model also assumes that the majority of patients will be able to be treated successfully by clinical health psychologists embedded into these healthcare settings. Those individuals who cannot be successfully treated by the clinical health psychologist will then be referred to a mental health specialty clinic staffed by clinical and counseling psychologists and other mental health specialists. The overall number of patients needing to be referred to these specialty clinics will be a minority of the overall patient population seen throughout the entire healthcare system. This bold model is a bit extreme, and only the future will tell whether or not the field of clinical health psychology develops to this extent. Nevertheless, clinical health psychology and behavioral medicine have great potential to continue to significantly influence the future of healthcare in both military and civilian settings.

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## REFERENCES

Abrams, D. B., Niaura, R., Brown, R. A., Emmons, K. M., Goldstein, M. G., & Monti, P. M. (2003). *The tobacco dependence treatment handbook: A guide to best practices*. New York: Guilford Press.

Altarac, M., Gardner, J. W., Popovich, R. M., Potter, R., Knapik, J. J., & Jones, B. H. (2000). Cigarette smoking and exercise-related injuries among young men and women. *American Journal of Preventive Medicine*, 18, 96–102.

American Psychiatric Association. (1996). Practice guideline for the treat-

ment of patients with nicotine dependence. *American Journal of Psychiatry*, 153(Suppl.), 1–31.

American Psychological Association (APA). (2002). Ethical principles of psychologists and code of conduct. *American Psychologist*, 57, 1060–1073.

Amoroso, P. J., & Canham, M. L. (1999). Disabilities related to the musculoskeletal system: Physical Evaluation Board data. In B. H. Jones, P. J. Amoroso, & M. L. Canham, *Atlas of Injuries in the U.S. Armed Forces Military Medicine*, 164, 4–1 to 4–73.

Association of Psychology Postdoctoral and Internship Centers (APPIC). (2004). *Postdoctoral directory*. Retrieved November 10, 2004, from [www.appic.org/directory/search\\_dol\\_postdocs.asp](http://www.appic.org/directory/search_dol_postdocs.asp).

Baum, A., Revenson, T. A., & Singer, J. E. (Eds.). (2001). *Handbook of health psychology*. Mahwah, NJ: Erlbaum.

Baumstark, K. E., & Buckelew, S. P. (1992). Fibromyalgia: Clinical signs, research findings, treatment implications, and future directions. *Annals of Behavioral Medicine*, 14, 282–291.

Belar, C. D., & Deardorff, W. W. (1995). *Clinical health psychology in medical settings: A practitioner's guidebook*. Washington, DC: American Psychological Association Press.

Blanchard, E. B. (1982). Behavioral medicine: Past, present, and future. *Journal of Consulting and Clinical Psychology*, 50, 795–796.

Blanchard, E. B. (1992). Behavioral medicine: An update for the 1990s. *Journal of Consulting and Clinical Psychology*, 60, 537–551.

Blanchard, E. B., & Scharff, L. (2002). Psychosocial aspects of assessment and treatment of irritable bowel syndrome in adults and recurrent abdominal pain in children. *Journal of Consulting and Clinical Psychology*, 70, 725–738.

Blount, A. (Ed.). (1998). *Integrated primary care: The future of medical and mental health collaboration*. New York: Norton.

Boll, T. J., Johnson, S. B., Perry, N., & Rozensky, R. H. (2002). *Handbook of clinical health psychology (Vol. 1): Medical disorders and behavioral applications*. Washington, DC: American Psychological Association Press.

Bootzin, R. R., & Epstein, D. R. (2000). Stimulus Control. In K. L. Lichstein & C. M. Morin (Eds.), *Treatment of late-life insomnia* (pp. 167–184). Thousand Oaks, CA: Sage.

Bowman, R. L., & Delucia, J. L. (1992). Accuracy of self-reported weight: A meta-analysis. *Behavior Therapy*, 23, 637–655.

Bradham, D. D., South, B. R., Saunders, H. J., Heuser, M. D., Pane, K. W., & Dennis, K. E. (2001). Obesity-related hospitalization costs to the U.S. Navy, 1993–1998. *Military Medicine*, 166, 1–10.

Brantley, P. J., Veitia, M. C., Callon, E. B., Buss, R. R., & Sias, C. R. (1986). Assessing the impact of psychological intervention on family practice clinic visits. *Family Medicine*, 18, 351–354.

Bray, R. M., Hourani, L. L., Rae, K. L., Dever, J. A., Brown, J. M., Vincus, A. A., et al. (2003). *2002 Department of Defense survey of health related behaviors among military personnel*. Report Prepared for the Assistant Secretary of Defense (Health Affairs).

Bronson, D. L., & Maxwell, R. A. (2004). Shared medical appointments: Increasing

patient access without increasing physician hours. *Cleveland Clinic Journal of Medicine*, 71, 369–370.

Brownell, K. D. (2004). *The Learn Program for Weight Management*. Dallas: American Health Publishing.

Centers for Disease Control and Prevention. (1997). Perspectives in disease prevention and health promotion smoking-attributable mortality and years of potential life lost—United States, 1984. *Morbidity and Mortality Weekly Report*, 46, 444–451.

Centers for Disease Control and Prevention. (2000). Cigarette smoking among adults—United States, 1998. *Morbidity and Mortality Weekly Report*, 49, 881–884.

Centers for Disease Control and Prevention. (2004). *Behavioral Risk Factor Surveillance System Prevalence Data*. Retrieved November 22, 2004, from [wwwapps.nccd.cdc.gov/brfss](http://wwwapps.nccd.cdc.gov/brfss).

Chesson, A. L., Anderson, W. M., Littner, M., Davila, D., Hartse, K., Johnson, S., Wise, M., et al. (1999). Practice parameters for the nonpharmacologic treatment of insomnia. *Sleep*, 22, 1128–1133.

Cigrang, J. A., Severson, H. H., & Peterson, A. L. (2002). Pilot evaluation of a population-based health intervention for reducing use of smokeless tobacco. *Nicotine & Tobacco Research*, 4, 127–131.

Conway, T. L., Woodruff, S. I., Edwards, C. C., Elder, J. P., Hurtado, S. L., & Hervig, L. K. (2004). Operation Stay Quit: Evaluation of two smoking relapse prevention strategies for women after involuntary cessation during US Navy recruit training. *Military Medicine*, 169, 236–342.

Commission for the Recognition of Specialties and Proficiencies in Professional Psychology (CRSPPP). (2004a). *Archival description of clinical health psychology*. Retrieved November 10, 2004, from [www.apa.org/crsppp/health.html](http://www.apa.org/crsppp/health.html).

Commission for the Recognition of Specialties and Proficiencies in Professional Psychology (CRSPPP). (2004b). *Parameters to define professional practice in clinical health psychology*. Retrieved November 10, 2004, from [www.apa.org/crsppp/health.html](http://www.apa.org/crsppp/health.html).

Cummings, N. A. (1997). Behavioral health in primary care: Dollars and sense. In N. Cummings, J. Cummings, & J. Johnson (Eds.), *Behavioral health in primary care* (pp. 3–21). Madison, CT: Psychosocial Press.

Cummings, N., Cummings, J., & Johnson, J. (Eds.). (1997). *Behavioral health in primary care*. Madison, CT: Psychosocial Press.

Epping-Jordan, J. E. (2004). Research to practice: International dissemination of evidence-based behavioral medicine. *Annals of Behavioral Medicine*, 28, 81–87.

Fau, M., Folen, R. A., James, L. C., & Needels, T. (1997). The Tripler Tobacco Cessation Program: Predictors for success and improved efficacy. *Military Medicine*, 162, 445–449.

Feuerstein, M., Berkowitz, S. M., Pastel, R., & Huang, G. D. (1999, July). *Secondary prevention program for occupational low back pain-related disability*. Paper presented at the Worker's Compensation Research Group, New Brunswick, NJ.

Fiore, M. C., Bailey, W. C., Cohen, S. J., Dorfman, S. F., Goldstein, M. G., & Gritz,

E. R. (2000). *Treating tobacco use and dependence. Clinical Practice Guideline*. Rockville, MD: U.S. Department of Health and Human Services, Public Health Service.

Fiore, M. C., Smith, S. S., Jorenby, D. E., & Baker, T. B. (1994). The effectiveness of the nicotine patch for smoking cessation: A meta-analysis. *Journal of the American Medical Association*, 27, 1940-1947.

Flegal, K. M., Carroll, M. D., Ogden, C. L., & Johnson, C. L. (2002). Prevalence and trends in obesity among US adults, 1999-2000. *Journal of the American Medical Association*, 288, 1723-1727.

Fordyce, W. E. (1976). *Behavioral methods for chronic pain and illness*. St. Louis, MO: CV Mosby.

Foreyt, J. P., & Goodrick, G. K. (1994). Attributes of successful approaches to weight loss and control. *Applied and Preventive Psychology*, 3, 209-215.

Frank, R. G., Baum, A., & Wallander, J. L. (2004). *Handbook of clinical health psychology (Vol. 3): Models and perspectives in health psychology*. Washington, DC: American Psychological Association Press.

Frank, R. G., & Elliott, T. R. (2000). *Handbook of rehabilitation psychology*. Washington, DC: American Psychological Association Press.

French, S. A., & Jeffery, R. W. (1995). Weight concerns and smoking: A literature review. *Annals of Behavioral Medicine*, 17, 234-244.

Fried, V. M., Prager, K., MacKay, A. P., & Xia, H. (2003). Chartbook on trends in the health of Americans. In *Health, United States, 2003* (p. 471). Hyattsville, MD: National Center for Health Statistics.

Friedman, N. (2002). Evidence-based medicine: The key to guidelines, disease and care management programmes. *Annals Academy of Medicine Singapore*, 31, 446-451.

Gatchel, R. J., & Oordt, M. S. (2003). *Clinical health psychology and primary care: Practical advice and clinical guidance for successful collaboration*. Washington, DC: American Psychological Association Press.

Goldberg, G. M., Carlson, E., & Paige-Dobson, B. (1994). Health psychology in the Navy: Emergence of a new discipline. *Navy Medicine*, 85(1), 15-77.

Goodie, J. L., Hunter, C. L., Hunter, C. M., McKnight, T., Leroy, K., & Peterson, A. L. (2005, March). *Comparison of weight loss interventions in a primary care setting: A pilot investigation*. Poster presented at the Society of Behavioral Medicine's 26th Annual Meeting and Scientific Sessions, Boston.

Gritz, E. R., Klesges, R. C., & Meyers, A. W. (1989). The smoking and body weight relationship: Implications for intervention and post-cessation weight control. *Annals of Behavioral Medicine*, 11, 144-153.

Guzman, J., Esmail, R., Karjalainen, K., Malmivaara, A., Irvin, E., & Bombardier, C. (2001). Multidisciplinary rehabilitation for chronic low back pain: Systematic review. *British Medical Journal*, 322, 1511-1516.

Hall, S. M., Tunstall, C. D., Vila, K. L., & Duffy, J. (1992). Weight gain prevention and smoking cessation: Cautionary findings. *American Journal of Public Health*, 82, 799-803.

Hatsukami, D. K., Grillo, M., Boyle, R., Allen, S., Jensen, J., Bliss, R., & Brown, S.

(2000). Treatment of spit tobacco users with transdermal nicotine system and mint snuff. *Journal of Consulting and Clinical Psychology*, 68, 241–249.

Hellman, C. J. C., Budd, M., Borysenko, J., McClelland, D. C., & Benson, H. (1990). A study of the effectiveness of two group behavioral medicine interventions for patients with psychosomatic complaints. *Behavioral Medicine*, 16, 165–173.

Holroyd, K. A. (2002). Assessment and psychological management of recurrent headache disorders. *Journal of Consulting and Clinical Psychology*, 70, 656–677.

Hryshko-Mullen, A. S., Broeckl, L. S., Haddock, C. K., & Peterson, A. L. (2000). Behavioral treatment of insomnia: The Wilford Hall insomnia program. *Military Medicine*, 165, 200–207.

Hunter, C. L., & Peterson, A. L. (2001). Primary Care Training at Wilford Hall Medical Center. *The Behavior Therapist*, 24, 220–222.

Hunter, C. M., Foreyt, J., Peterson, A. L., Alvarez, L., Brundige, A., Poston, C. W., et al. (2004, March). Minimal contact weight loss intervention with the U.S. Air Force: Combining interactive Internet, motivational interviewing and self-help materials. Poster presented at the Peer Reviewed Medical Research Program Investigators' Meeting, San Juan, Puerto Rico.

Hurt, R. D., Sachs, D. P. L., Glover, E. D., Offord, K. P. J., Johnston, A., Dale, L. C., et al. (1997). A comparison of sustained-release bupropion and placebo for smoking cessation. *New England Journal of Medicine*, 337, 1195–1202.

Isler, W. C., III, Hunter, C. L., Isler, D. E., & Peterson, A. L. (2003, March). *Minimal contact intervention for insomnia in the primary care setting*. Poster presented at the Society of Behavioral Medicine's 24th Annual Meeting and Scientific Sessions, Salt Lake City, UT.

Isler, W. C., Peterson, A. L., & Isler, D. (2005). Behavioral treatment of insomnia in primary care settings. In L. James (Ed.), *The primary care consultant: The next frontier for psychologists in hospitals and clinics* (pp. 121–151). Washington, DC: American Psychological Association Press.

James, L. C., Folen, R. A., Garland, F. N., Edwards, C., Noce, M., Gohdes, D., et al. (1997). The Tripler Army Medical Center LEAN Program: A healthy lifestyle model for the treatment of obesity. *Military Medicine*, 162, 328–332.

James, L. C., Folen, R. A., Page, H., Noce, M., Brown, J., & Britton, C. (1999). The Tripler LE3AN Program: A two-year follow-up report. *Military Medicine*, 164, 389–395.

James, L. C., Folen, R. A., Porter, R. I., & Kellar, M. A. (1999). A conceptual overview of a proactive health psychology service: The Tripler Health Psychology Model. *Military Medicine*, 164, 396–400.

Jorenby, D. E., Leischow, S. J., Nides, M. A., Rennard, S. I., Johnston, A. J., Hughes, A. D., et al. (1999). A controlled trial of sustained-release bupropion, a nicotine patch, or both for smoking cessation. *New England Journal of Medicine*, 340, 685–691.

Kaplan, R. M., & Groessl, E. J. (2002). Applications of cost-effectiveness methodologies in behavioral medicine. *Journal of Consulting and Clinical Psychology*, 70, 482–493.

Kapur, V. K., Redline, S., Nieto, F. J., Young, T. B., Newman, A. B., & Henderson, J. A. (2002). The relationship between chronically disrupted sleep and health-care use. *Sleep*, 25, 289–296.

Katon, W., Robinson, P., Von Korff, M., Lin, E., Bush, T., Ludman, E., et al. (1996). A multifaceted intervention to improve treatment of depression in primary care. *Archives of General Psychiatry*, 53, 924–932.

Katz, D. A., & McHorney, C. A. (2002). The relationship between insomnia and health-related quality of life in patients with chronic illness. *Journal of Family Practice*, 51, 229–235.

Keefe, F. J., Buffington, A. L. H., Studts, J., & Rumble, M. (2002). Behavioral medicine: 2002 and beyond. *Journal of Consulting and Clinical Psychology*, 70, 852–856.

Keefe, F. J., Smith, S. J., Buffington, A. L. H., Gibson, J., Studts, J., & Caldwell, D. S. (2002). Recent advances and future directions in the biopsychosocial assessment and treatment of arthritis. *Journal of Consulting and Clinical Psychology*, 70, 640–655.

Klesges, R. C., Haddock, C. K., Chang, C. F., Talcott, G. W., & Lando, H. (2001). The association of smoking and the cost of military training. *Tobacco Control*, 10, 43–47.

Klesges, R. C., Haddock, C. K., Lando, H., & Talcott, G. W. (1999). Efficacy of forced smoking cessation and an adjunctive behavioral treatment on long-term smoking rates. *Journal of Consulting and Clinical Psychology*, 67, 952–958.

Klesges, R. C., Myers, A. W., Klesges, L. M., & La Vasque, M. E. (1989). Smoking, body weight, and their effects on smoking behavior: A comprehensive review of the literature. *Psychological Bulletin*, 106, 204–230.

Kushida, C. A., Nichols, D. A., Simon, R. D., Young, T., Grauke, J. H., Britzmann, J. B., et al. (2000). Symptom-based prevalence of sleep disorders in an adult primary care population. *Sleep and Breathing*, 4, 9–14.

Lichstein, K. L., & Riedel, B. W. (1994). Behavioral assessment and treatment of insomnia: A review with an emphasis on clinical application. *Behavior Therapy*, 25, 659–688.

Lincoln, A. E., Smith, G. S., Amoroso, P. J., & Bell, N. S. (2003). The effect of cigarette smoking on musculoskeletal-related disability. *American Journal of Industrial Medicine*, 43, 337–349.

Lipowski, Z. J., Lipsitt, D. R., & Whybrow, P. C. (1977). *Psychosomatic medicine: Current trends and clinical applications*. New York: Oxford University Press.

Llewelyn, S., & Kennedy, P. (2003). *Handbook of clinical health psychology*. Indianapolis: Wiley.

Matarazzo, J. D. (1980). Behavioral Health and Behavioral Medicine. *American Psychologist*, 35, 807–817.

Matarazzo, J. D., Weiss, S. M., Herd, J. A., Miller, N. E., & Weiss, S. M. (Eds.). (1984). *Behavioral health: A handbook of health enhancement and disease prevention*. New York: Wiley.

McDaniel, S. (1995). Collaboration between psychologists and family PCMs: Implementing the biopsychosocial model. *Professional Psychology: Research and Practice*, 26, 117–122.

McNulty, P. A. (2001). Prevalence and contributing factors of eating disorder be-

haviors in active duty service women in the Army, Navy, Air Force, and Marines. *Military Medicine*, 166, 53–58.

Millon, T. (1982). On the nature of clinical health psychology. In T. Millon, C. Green, & J. Meagher (Eds.), *Handbook of clinical health psychology* (pp. 1–28). New York: Plenum Press.

Mimeault, V., & Morin, C. M. (1999). Self-help treatment for insomnia: Bibliotherapy with and without professional guidance. *Journal of Consulting and Clinical Psychology*, 67, 511–519.

Mokdad, A. H., Marks, J. S., Stroup, D. F., & Gerberding, J. L. (2004). Actual causes of death in the United States, 2000. *Journal of the American Medical Association*, 291, 1238–1245.

Morin, C. M. (1993). *Insomnia: Psychological assessment and management*. New York: Guilford Press.

Morin, C. M., Colecchi, C., Stone, J., Stood, R., & Brink, D. (1999). Behavioral and pharmacological therapies for late-life insomnia: A randomized controlled trial. *Journal of the American Medical Association*, 281, 991–999.

Morin, C. M., Culbert, J. P., & Schwartz, S. M. (1994). Nonpharmacological interventions for insomnia: A meta-analysis of treatment efficacy. *American Journal of Psychiatry*, 151, 1172–1180.

Morin, C. M., Hauri, P. J., Espie, C. A., Speilman, A. J., Buysse, D. J., & Bootzin, R. R. (1999). Nonpharmacological treatment of chronic insomnia. *Sleep*, 22, 1134–1156.

Morin, C. M., & Wooten, V. (1996). Psychological and pharmacological approaches to treating insomnia. *Clinical Psychology Review*, 16, 521–542.

Murtagh, D. R., & Greenwood, K. M. (1995). Identifying effective psychological treatments for insomnia: A meta-analysis. *Journal of Consulting and Clinical Psychology*, 63, 79–89.

Narrow, W. E., Regier, D. A., Rae, D. S., Manderscheid, R. W., & Locke, B. Z. (1993). Use of services by persons with mental and addictive disorders: Findings from the National Institute of Mental Health epidemiologic catchment area program. *Archives of General Psychiatry*, 50, 95–107.

National Heart, Lung, and Blood Institute Working Group on Insomnia. (1999). Insomnia: Assessment and management in primary care. *American Family Physician*, 59, 3029–3038.

National Institutes of Health. (1998). *Clinical guidelines on the identification, evaluation, and treatment of overweight and obesity: The evidence report*. Washington, DC: U.S. Government Printing Office.

Niaura, R., & Abrams, D. B. (2002). Smoking cessation: Progress, priorities, and prospectus. *Journal of Consulting and Clinical Psychology*, 70, 494–509.

Nicassio, P. M., & Smith, T. W. (1995). *Managing chronic illness: A biopsychosocial perspective*. Washington, DC: American Psychological Association Press.

Perkins, K. A. (1993). Weight gain following smoking cessation. *Journal of Consulting and Clinical Psychology*, 61, 768–777.

Perri, M. G., & Fuller, P. R. (1995). Success and failure in the treatment of obesity: Where do we go from here? *Medicine, Exercise, Nutrition, and Health*, 4, 255–272.

Peterson, A. L. (1999). Inaccurate estimation of body weight prior to smoking ces-

sation: Implications for quitting and weight gain. *Journal of Applied Bio-behavioral Research*, 4, 79-84.

Peterson, A. L. (2003, March). *Population health management: Building healthy communities with behavioral medicine*. Presentation at the Society of Behavioral Medicine's 24th Annual Meeting and Scientific Sessions, Salt Lake City, UT.

Peterson, A. L., Davidson, B. M., & Janke, R. (2003a). *Wilford Hall Tobacco Cessation Program participant's manual*. San Antonio, TX: Author.

Peterson, A. L., Davidson, B. M., & Janke, R. (2003b). *Wilford Hall Tobacco Cessation Program provider's manual*. San Antonio, TX: Author.

Peterson, A. L., Dixon, D. C., Talcott, G. W., & Kelleher, W. J. (1993). Habit reversal treatment of temporomandibular disorders: A pilot investigation. *Journal of Behavior Therapy and Experimental Psychiatry*, 24, 49-55.

Peterson, A. L., & Helton, J. (2000). Smoking cessation and weight gain in the military. *Military Medicine*, 165, 536-538.

Peterson, A. L., Hryshko-Mullen, A. S., Alexander, R. W., & Nelson, L. (1999, November). *Evaluation of health care utilization after behavior therapy for insomnia*. Paper presented at the 33rd Annual Convention of the Association for Advancement of Behavior Therapy, Toronto.

Peterson, A. L., Satterfield, W. A., Brim, W. L., & Goodie, J. L., (2003, March). *Impact of military deployment on sleep: A pilot investigation*. Poster presented at the Society of Behavioral Medicine, 24th Annual Meeting and Scientific Sessions, Salt Lake City, UT.

Peterson, A. L., Talcott, G. W., Kelleher, W. J., & Smith, S. D. (1995). Bulimic weight-loss behaviors in mandatory versus voluntary weight management programs. *Military Medicine*, 160, 616-620.

Prokop, C., & Bradley, A. A. (1981). *Medical psychology: Contributions to behavioral medicine*. New York: Academic Press.

Raczynski, J. M., & Leviton, L. C. (2004). *Handbook of clinical health psychology (Vol 2): Disorders of behavior and health*. Washington, DC: American Psychological Association Press.

Reiger, D., Narrow, W., Rae, D., Manderschied, R., Locke, B., & Goodwin, F. (1993). The de facto U.S. mental and addictive disorders service system: Epidemiologic catchment area prospective 1-year prevalence rates of disorders and services. *Archives of General Psychiatry*, 50, 85-94.

Riedel, B. W. (2000). Sleep hygiene. In K. L. Lichstein & C. M. Morin (Eds.), *Treatment of late-life insomnia* (pp. 125-146). Thousand Oaks, CA: Sage.

Robbins, A. S., Chao, S. Y., Coil, G. A., & Fonseca, V. P. (2000). Costs of smoking among active duty U.S. Air Force personnel in 1997. *Morbidity and Mortality Weekly Reports*, 49, 441-445.

Robbins, A. S., Chao, S. Y., Russ, C. R., & Fonseca, V. P. (2002). Costs of excess body weight among active duty personnel, U.S. Air Force, 1997. *Military Medicine*, 167, 393-397.

Russ, C. R., Fonseca, V. P., Peterson, A. L., Blackman, L. R., & Robbins, A. S. (2001). Weight gain as a barrier to smoking cessation among military personnel. *American Journal of Health Promotion*, 16, 79-84.

Schwartz, G. E., & Weiss, S. M. (1978.). Yale conference on behavioral medicine: A

proposed definition and statement of goals. *Journal of Behavioral Medicine*, 1, 3–12.

Severson, H. (2004). Chewer's choice: Interactive smokeless tobacco cessation for adults. Retrieved December 1, 2004, from [www.appliedbehaviorscience.com/sltCessation\\_main.htm](http://www.appliedbehaviorscience.com/sltCessation_main.htm).

Sheridan, E. P. (1999). Psychology's future in medical schools and academic health care centers. *American Psychologist*, 54, 267–271.

Sheridan, E. P., Matarazzo, J. D., Boll, T. J., Perry, N. W., Jr., Weiss, S. M., & Belar, C. D. (1988). Postdoctoral education and training for clinical service providers in health psychology. *Health Psychology*, 7, 1–17.

Simpson, M., Earles, J., Folen, R., Trammel, R., & James, L. (2004). The Tripler Army Medical Center's LE3AN program: A six-month retrospective analysis of program effectiveness for African-American and European-American females. *Journal of the National Medical Association*, 96, 1332–1336.

Smith, M. T., Perlis, M. L., Park, A., Smith, M. S., Pennington, J., Giles, D. E., et al. (2002). Comparative meta-analysis of pharmacotherapy and behavior therapy for persistent insomnia. *American Journal of Psychiatry*, 159, 5–10.

Smith, T. W., Kendall, P. C., & Keefe, F. (2002). Behavioral medicine and clinical health psychology: Introduction to the special issue. *Journal of Consulting and Clinical Psychology*, 70, 459–462.

Society of Behavioral Medicine. (2004). About the Society of Behavioral Medicine. Retrieved November 22, 2004, from [www.sbm.org/about/overview.html](http://www.sbm.org/about/overview.html).

Spielman, A. J., Saskin, P., & Thorpy, M. J. (1987). Treatment of chronic insomnia by restriction of time in bed. *Sleep*, 10, 45–56.

Spring, B., Doran, N., Pagoto, S., Schneider, K., Pingitore, R., & Hedeker, D. (2004). Randomized controlled trial for behavioral smoking and weight control treatment: Effect of concurrent versus sequential intervention. *Journal of Consulting and Clinical Psychology*, 72, 785–796.

Stone, G., Weiss, S., Matarazzo, J., Miller, N., Rodin, J., Belar, C., et al. (1987). *Health psychology: A discipline and a profession*. Chicago: University of Chicago Press.

Strosahl, K. (1996). Confessions of a behavior therapist in primary care: The odyssey and the ecstasy. *Cognitive and Behavioral Practice*, 3, 1–28.

Stunkard, A. J. (2001). Current views on obesity. *American Journal of Medicine*, 100, 230–236.

Talcott, G. W., Fiedler, E. R., Pascale, R. W., Klesges, R. C., Peterson, A. L., & Johnson, R. S. (1995). Is weight gain following smoking cessation inevitable? *Journal of Consulting and Clinical Psychology*, 63, 313–316.

Tate, D. F., Wing, R. R., & Winett, R. A. (2001). Using Internet technology to deliver a behavioral weight loss program. *Journal of the American Medical Association*, 285, 1172–1177.

Turk, D. C., & Okifuji, A. (2002). Psychological factors in chronic pain: Evolution and revolution. *Journal of Consulting and Clinical Psychology*, 70, 678–690.

Turk, D. C., Zaki, H. S., & Rudy, T. E. (1993). Effects of intraoral appliance and biofeedback/stress management alone and in combination in treating pain and depression in patients with temporomandibular disorders. *Journal of Prosthetic Dentistry*, 70, 158–164.

U.S. Department of Health and Human Service. (1990). *The health benefits of smoking cessation: A report of the surgeon general*. Washington, DC: U.S. Government Printing Office.

Vgontzas, A. N., Bixler, E. O., Tan, T. L., Kantner, D., Martin, L. F., & Kales, A. (1998). Obesity without sleep apnea is associated with daytime sleepiness. *Archives of Internal Medicine*, 158, 1333-1337.

Weddington, W. W., Jr., & Blindsight, K. (1983). Behavioral medicine: A new development. *Hospital Community Psychiatry*, 34, 702-708.

Wetter, D. W., Fiore, M. C., Gritz, E. R., Lando, H. A., Stitzer, M. L., Hasselblad, V., et al. (1998). The Agency for Health Care Policy and Research Smoking Cessation clinical practice guideline: Findings and implications for psychologists. *American Psychologist*, 6, 657-669.

Williamson, D. F., Madans, J., Anda, R. F., Kleinman, J. C., Giovino, G. A., & Byers, T. (1991). Smoking cessation and severity of weight gain in a national cohort. *New England Journal of Medicine*, 324, 739-745.

Woodruff, S. I., Conway, T. L., & Edwards, C. C. (2000). Effect of an eight week smoking ban on women at US navy recruit training command. *Tobacco Control*, 9, 40-46.

Zammit, G. K. (1997). *Good nights: How to stop sleep deprivation, overcome insomnia, and get the sleep you need*. Kansas City, KA: Andrews McMeel.

Zammit, G. K., Weiner, J., Damato, N., Sillup, G. P., & McMillan, C. A. (1999). Quality of life in people with insomnia. *Sleep*, 22, S379-S385.

## CHAPTER 6



# Neuropsychological Practice in the Military

LAURIE M. RYAN  
THOMAS M. ZAZECKIS  
LOUIS M. FRENCH  
SALLY HARVEY

Military neuropsychology's roots date back to World War I, when early assessment and neurological rehabilitative efforts were first undertaken as a result of the many head injuries sustained by service members during combat (Boake, 1989). Since that time, military neuropsychology has grown and neuropsychological assessment practices continue to play a key role in operational readiness and maintenance of peak performance of military members. This chapter provides an overview of this specialized field, with brief discussions of requisite training, common areas of clinical practice, aerospace neuropsychology, operational applications, and recent developments in telemedicine.

### NEUROPSYCHOLOGY TRAINING IN THE MILITARY

Practicing as an active-duty neuropsychologist requires specialty training, and competitive fellowships in neuropsychology are provided through all three services. The Army trains active-duty neuropsychologists at its flag-

ship medical center, Walter Reed Army Medical Center (WRAMC) in Washington, DC, as well as at Tripler Army Medical Center in Honolulu, Hawaii. The Navy and Air Force generally contract with accredited universities (e.g., University of Virginia, University of Oregon, and University of California at Los Angeles) for neuropsychology fellowships, although the WRAMC and Tripler fellowships are open to all service branches, as well as to civilians.

The fellowship curriculum, regardless of program location or supervisor, places a strong emphasis on the development of extensive knowledge in brain-behavior relationships, as well as in specific skills in evaluation, diagnosis, consultation, and research. Military neuropsychology fellows training at either military or civilian facilities have the opportunity to study under experienced neuropsychologists and receive exposure to a wide variety of conditions that affect cerebral function, such as traumatic brain injury and dementia. The goal of this training is to have clinicians capable of providing the best neuropsychological services to active-duty members, retirees, and their families. Military and civilian neuropsychologists working in a military setting must be prepared to assess the gamut of disorders and populations; make viable and informed recommendations regarding fitness for duty, rehabilitation, and treatment; and engage in state-of-the-art research.

## MILITARY CLINICAL PRACTICE IN NEUROPSYCHOLOGY

Military neuropsychology mirrors, in many respects, that of civilian practice. In military settings, a neuropsychologist sees not only active-duty personnel but also retired service members and dependents, and so can expect to evaluate individuals experiencing the full range of neurocognitive disorders across their lifespans, including traumatic brain injury, toxic exposure, stroke, dementia, epilepsy, neoplasms, central nervous system infections, and other medical conditions.

Referrals are often made for the active-duty population following neurological diagnosis or other critical medical illnesses, as well as for evaluation of possible learning or attentional problems—or cognitive decline in older service members—in relation to fitness-for-duty decisions. In addition, several specific situations require the administration of a neuropsychological assessment, including disposition of individuals with special jobs who require peak cognitive performance (e.g., those who handle explosives or have flight status, submarine duty, diving duty, or parachuting duties). Generally an acquired neurological condition precludes continued involvement in these professions, though sometimes waivers are considered, on a

case-by-case basis in the event that neuropsychological assessment indicates appropriate neurocognitive functioning.

Whereas the neuropsychological evaluation practices in all military settings adhere to the standards of the field, there are differing medical regulations specific to each service branch in relation to various jobs that must be taken into consideration when an evaluation is completed and recommendations are made. Interested readers are encouraged to review each service's regulations (Air Force Instruction 48-123, Army Regulation 40-501, and Coast Guard Commandant Instruction M6000.1; U.S. Department of the Navy, 1996).

Military neuropsychological assessment practices are slightly different from those of civilian practices in the areas of baseline assessment data and measures for special populations (e.g., aviation). One distinct advantage of military neuropsychology is the availability of premorbid or baseline assessment data for most military members. Given that premorbid functioning guides determinations of the extent of cognitive impairment, progress in rehabilitation, prognosis, and ultimate fitness for duty, this is a fundamental component of the military neuropsychological evaluation. In the case of enlisted personnel, military neuropsychologists are fortunate to have a reliable indicator of premorbid general ability in the form of the Armed Service Vocational Aptitude Battery (ASVAB; Kennedy, Kupke, & Smith, 2000; Welsh, Kucinkas, & Curran, 1990). Orme, Ree, and Rioux (2001) also report good reliability when estimating premorbid ability through the Air Force Officer Qualifying Test (AFOQT). In addition to this information, military neuropsychologists have available to them all individual service records, which include documentation of military educational attainment and job performance. Neuropsychologists rely on these records to guide their interpretations of neuropsychological test findings.

Another divergence from traditional neuropsychological practice is the development of neuropsychological tests for use in specific military populations. For example, continuous performance tasks, including components of vigilance, discrimination, and impulsivity, are commonly used in the assessment of attentional difficulties. To meet the needs of the military, the Aeromedical Vigilance Test was developed and standardized on Navy pilots at the Naval Operational Medicine Institute (Almond, Harris, & Almond, 2005).

## **FITNESS-FOR-DUTY EVALUATIONS**

Military neuropsychologists are asked to assess fitness for duty as a result of multiple disorders. Military members who are diagnosed with some neu-

rological conditions, such as epilepsy, are automatically disqualified from service, but others require a careful assessment of impairment, level of functioning, and prognosis after rehabilitation. Today's neuropsychologists are evaluating many war-related neurological injuries, including both penetrating head wounds and neurological blast injuries, which also require the involvement of the Veterans' Administration (VA). Second only to traumatic brain injury (TBI) are referrals for suspected attention deficit or learning disorders. These most common active-duty referral questions are reviewed here, though other reasons for referral are changes in cognition or personality following cardiac arrest (Baggett, Kelly, Korenman, & Ryan, 2003) or surgical intervention, electrical injuries, and questions of cognitive decline in older personnel.

### Traumatic Brain Injury

TBI is the principal cause of death and disability in active young adults today. Every 21 seconds, a person in the United States sustains a TBI; 5.3 million Americans live with disability as a result of a brain injury, with an estimated cost to society of \$48.3 billion annually (CDC, 1999; Lewin, 1992). Because of the physical rigors of training and combat, military service members are at a high risk for TBI. In peacetime, over 7,000 Americans with TBI are admitted to military and veterans' hospitals annually (Ommaya, Salazar, & Schwab, 1999). The military loses thousands of service years in experience and hundreds of thousands of training and education dollars because of the effects of TBI in soldiers prematurely returned to active duty or separated from the service outright.

This chapter is not intended as a detailed overview of the neuropsychology of TBI, and the interested reader can consult Silver, McAllister, and Yudofsky (2005). Briefly, TBI can result in a variety of cognitive, emotional, behavioral, and physical sequelae, depending on the severity of the injury and the location of the cerebral damage. The cognitive deficits associated with TBI often involve attention and concentration, executive functioning (e.g., speed of information processing, problem solving, mental flexibility, and initiation), memory, and expressive language. Emotional and behavioral problems include disinhibition, apathy, irritability, mood lability, depression, and anxiety. The physical symptoms after TBI include dizziness, balance problems, vision changes, hearing changes, and headaches. These symptoms demand thorough evaluation to monitor change and to ultimately make a fitness-for-duty decision. Unfortunately, even small decrements in abilities, such as attention or processing speed, can have significant implications for the fighting force and its combat effectiveness during that recovery period.

### Combat-Related TBI

The global war on terrorism (GWOT) has brought both increased training operations and increased exposure to battlefield conditions for our armed forces. In the present conflict in Iraq, over 2,000 soldiers have been killed and over 14,000 have been injured, the large majority during combat. Although much of the previous focus in military-related brain injuries has been on penetrating injury, concussive force may be a greater concern at present. This may be due to a number of factors including increased use of explosive devices against our troops, and sophisticated body armor that allows troops to survive attacks they would not have survived before.

Although explosion, or blast-related, TBI has not been systematically studied in humans for obvious ethical reasons, it has been described in experiments with rats. A series of studies (Cernak, Wang, Jiang, Bian, & Savic, 2001a, 2001b) have shown structural, biochemical, and cognitive impairments in the brain after either whole-body or local (chest) over-pressure while the head was protected. The animals displayed evidence of neuronal injury in the hippocampus, including myelin deformation, increased numbers of cytoplasmic vacuoles, and expanded perineurial spaces. In the whole-body group, there was a highly significant decline in performance on a previously learned task that persisted to the end of the 5-day study. The local (chest) group also demonstrated a significant drop in performance, but with normalization by 24 hours. There was a significant linear relationship between injury severity and impaired task performance in both groups. Biochemical changes were also noted in both groups, with evidence of oxidative stress and altered antioxidant enzyme defense. The authors concluded that the pattern of neural dysfunction was comparable to that found in direct TBI. The findings from these studies suggest that cerebral damage can result from the concussive force of the blast alone.

The clinical characteristics of blast-related TBI in human survivors, including neuroanatomical and neurobehavioral sequelae, are not well described in the literature. Most research on blast injury to date has focused on injuries to the internal organs, torso, and extremities and to the potential for penetrating head injuries from shrapnel and flying debris. Although it is important to address penetrating injuries, they are typically identified and cared for immediately. Closed injuries, especially milder ones, however, may not be as readily identified, particularly when occurring with other more life-threatening injuries. One study (Trudeau et al., 1998) compared a group of 27 war veterans with a history of exposure to blasts to a group without such a history. The blast group reported significantly more attentional symptoms, had more electroencephalogram (EEG) abnormalities, and showed more abnormalities on a continuous perfor-

mance test of sustained attention, even while accounting for the effects of history of attention-deficit/hyperactivity disorder (ADHD) or substance abuse. The authors speculated that the type of axonal injury in blasts might lead to persistent deficits. Another study (Cernak, Savic, Ignjatovic, & Jevtic, 1999) examined the effects on individuals injured by explosive munitions in the former Yugoslavia who had only extremity wounds, without other penetrating injuries. Fifty-one percent, or 665 patients out of 1,303 casualties, had physical signs and symptoms compatible with a diagnosis of primary blast-induced brain injury. Significant biochemical alterations that could not be accounted for by severity of the injuries were seen very acutely in blast victims. Moreover, at 1 year postinjury, 30% of the blast-injured group, compared to only 4% of the nonblast-injured group, had neurological signs and symptoms.

### *Combat TBI Screening and Evaluation*

WRAMC, in Washington, DC, is at the forefront in the treatment of soldiers injured in theater in recent conflicts, Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF). Many of these soldiers have sustained injuries from explosive devices. After treatment in the field and at combat support hospitals, most of the wounded who need further care are transported to Landstuhl Regional Medical Center in Germany and later transferred to the Washington, DC area: WRAMC and the National Naval Medical Center (NNMC). There they are further assessed, treated, and transferred to other military and VA medical sites as needed. As part of the continuum of care for those affected with blast and nonblast TBI, the Defense and Veterans Brain Injury Center (DVBIC) clinical staff at WRAMC review the medical summaries for all patients coming from air evacuation flights. Before their arrival, DVBIC clinicians identify all those at risk for brain injury, based on the mechanism of injury. In some cases, a TBI has already been identified and therefore automatically receives further evaluation. For those at apparent risk (from blasts, vehicle crashes, falls, gunshot or shrapnel wounds to the head or neck, etc.), clinical staff members conduct brief interviews to assess their current physical state, recall of events surrounding the injury, loss or alteration of consciousness (LOC or AOC), alterations of recall surrounding the injury (retrograde amnesia or posttraumatic amnesia), and current cognitive or emotional symptoms. For those individuals meeting criteria for at least a mild TBI (Kay et al., 1993) and continuing to have post-TBI symptoms, more extensive evaluation is conducted. This evaluation includes neuropsychological testing; a neurological examination; an audiology examination; a psychiatric interview; an EEG and neuroimaging as clinically indicated, including magnetic reso-

nance imaging (MRI) of the brain to look for evidence of diffuse axonal injury or hemorrhage, among other abnormalities; and blood draw for laboratory analysis. All individuals screened receive educational materials alerting them to common postconcussive symptoms, information on the typical course of recovery, and how to receive further assistance if symptoms of concern emerge after hospital discharge.

### **Attention-Deficit/Hyperactivity Disorder and Learning Disorders**

Attention-deficit/hyperactivity disorder (ADHD) is attributed to 5% of mental health attrition from basic training in the Air Force (Cigrang, Carbone, Todd, & Fiedler, 1998) and is an increasing referral question for neuropsychologists in the military. ADHD is a difficult diagnostic dilemma for the military, which requires individuals to maintain high levels of consistent attention and concentration to perform effectively and safely. Individuals with a history of ADHD, unsatisfactory academic performance, and/or current need for medication are disqualified from entering military service in any job (U.S. Department of Defense, 2004). Any history of ADHD will negate participation in jobs that have high attentional demands and other rigorous cognitive requirements, such as aviation, though a waiver may be obtained if the individual has not required medication for the past 12 months and does not show deficits on neuropsychological testing geared for aviation positions (Almond, Harris, & Almond, 2005).

Should individuals find themselves on active duty prior to the diagnosis of ADHD or a learning disorder, depending on their specific military rate, retention is possible only if the disorder does not interfere with their capability to perform their job. It is not uncommon for these diagnoses to be recognized for the first time in adulthood, particularly in the military, given the complexity of task demands. Consider disorders of reading or written expression. Increases in rank result in increases in administrative responsibilities. Individuals with disorders that primarily affect reading and writing (writing fitness reports, providing written briefs to committees, etc.) often reach a rank in which they can no longer compensate for the disorder, and it is not uncommon for them to be identified with a specific learning disorder when this occurs. Anecdotally, the service generally makes a concerted effort to work with individuals who have a significant amount of time in service and are motivated to perform well. However, it should be noted that learning disorders, as is ADHD, are considered a cause for administrative separation when individuals are unable to perform their military duties as a result. Because of the nature of the military environment, accommodations such as those one would receive in a school-based program are impossible to implement.

## Military Aerospace Neuropsychology

Aerospace neuropsychology is the branch of clinical neuropsychology that manages the selection, assessment, and disposition of individuals in the armed services and National Aeronautics and Space Administration (NASA) who are on flying status. It involves the unique integration of three fields of psychology (clinical, aviation, and neuropsychology) in order to ensure maximum functioning and the safety of pilots and crew. Aside from the standard assessment of the individual, the aerospace neuropsychologist may also be asked (Stokes & Kite, 1994) to investigate human information processing (e.g., perception), cognition (e.g., spatial disorientation), sleep and fatigue (e.g., circadian rhythm), stress (e.g., effects), ergonomics (e.g., aircraft controls), toxicity (e.g., exposure to fuels, medications, or other substances) and personality (e.g., group decision making).

American aerospace neuropsychology began on December 17, 1903, with the first successful flights of the Wright Brothers at Kill Devil Hills in North Carolina and the realization that unique human factors were involved in flying (Chant, 2001). The original aircraft were literally “seat of the pants” machines, requiring tremendous somatosensory capacity to “feel” the plane. The aircraft were steered by shifting the body weight, much like modern hang gliders. Today human factors contribute to over 90% of flight mishaps, so it is imperative to assess those capacities in any individual operating these complex devices (Wiegmann & Shapelle, 1997). Neuropsychology, which provides the most thorough analysis of brain and behavior relationships (Reitan & Wolfson, 1985), is the logical choice for assessing flying skills.

Having successfully used lighter-than-air aircraft for surveillance in 19th-century wars, the military was interested in the early flying machines. Ironically, the combat potential for the aircraft was not realized until World War II, in spite of the prognostication of wise individuals in World War I, such as General Billy Mitchell (Bradley, 2003). The first flight in a military aircraft was piloted by Lt. Benjamin Foulois, who successfully flew an A-Model Wright at Ft. Sam Houston in San Antonio on March 2, 1910. Soon after that, pilots began to die while in flight. Lt. George Kelly was the first in 1911, and he had an airfield named after him, which later became Brooks Air Force Base (Brown, 2001). Legend has it that the namesake of the base, Lt. Stanley Brooks, died after losing consciousness while flying, allegedly because of a reaction to inoculations. In any event, the military realized very early on that it had to regulate and monitor the health of pilots in order to ensure safety. Thus, the School of Aviation Medicine was born in New York at Mitchell Field. It moved to Brooks Air Force Base (AFB) during the peak of pilot training there from 1921 to 1931. It later moved to Randolph AFB in San Antonio and back to Brooks in 1959. It



Atlantic Ocean (October 13, 2005). Landing signal officers (LSOs) observe and grade the arrested landing of an F/A-18C Hornet, as it approaches the flight deck of the aircraft carrier USS *Harry S. Truman* (CVN 75). Pilots describe landing aboard an aircraft carrier as targeting a moving postage stamp, given the small mobile target as seen from the air. There is little room for cognitive error. U.S. Navy photo by Photographer's Mate 3rd Class Ryan O'Connor. Retrieved from *Navy NewsStand*.

was renamed the School of Aerospace Medicine (SAM) and was officially inaugurated by President Kennedy in 1963 (the day before his assassination). The Army and Navy developed parallel schools and consultation services, which are now located at Ft. Rucker, Alabama, and Pensacola, Florida, respectively.

Aeromedical Consultation Services (ACS), such as the one at the Air Force School of Aerospace Medicine (USAFSAM) and the Naval Aerospace Medicine Institute (NAMI), exist to evaluate pilots and crew members for waivers for various physical and psychological problems. Since neuropsychology incorporates both aspects in the evaluation process, it is an integral part of the assessment. The neuropsychologist is also typically involved in a myriad of aviation issues such as pilot selection and retention, fitness for duty, motivation to fly, stress reactions to flying, crew resource management, airsickness, gravity-induced loss of consciousness (G-LOC), hypoxia, air traffic control, mishap investigation, remote piloted aircraft (RPAs), resident training, and research in human factors. Since aviators acquire the full range of human disorders, the neuropsychologist assesses a great variety of problems, from demyelinating disorders to toxic exposure. Aviators tend to be a rather healthy, young, and energetic group, although often

prone to head injuries, but they also acquire the typical diseases of aging as they progress in their careers, such as cardiac disease and sleep apnea. A unique challenge for the neuropsychologist is that aviators are typically “reverse malingeringers” and will consciously or unconsciously minimize or hide their problems because of their high degree of motivation to fly. This requires redundancy in the assessment battery in order to check for weaknesses that may interfere with flight safety.

Military pilots generally exhibit intellectual functioning in the superior range—mean Full Scale Intelligence Quotient (IQ) = 120—and therefore the assessments are tailored to examine the relative decrement in performance rather than a level of impairment. Rarely, even in head-injured pilots, does performance fall in the impaired range on standardized neuropsychological tests. This produces a need for specific norms for this population to accurately assess any problems relative to the flying function (see below). Pilots arrive at training with these high capacities, although intelligence is not formally assessed in the selection process. Pilots take the standard officer’s qualifying tests and have to meet their minimal standards. These aptitude tests provide estimates of intelligence to establish baseline functioning, but actual IQ scores are not used for selection.

Historically, pilot selection was accomplished by a screening process that involved a review of records and a board decision. Early aviators underwent a variety of tests that measured their balance, attention, reaction time, and decision-making capacity. These preceded modern neuropsychological measures and became the basis for some of the tests used today. R. M. Reitan adapted portions of the Army alpha tests, some of which continue to constitute the Halstead–Reitan Neuropsychological Battery. The early process, especially in the astronaut program, was an attempt to “select in” for the most capable individuals. Tom Wolfe’s (1980) book *The Right Stuff* depicts the lengths the early astronauts went to in order to be selected. The thinking was that “the best of the best” had to be selected to have the highest success rate in training and performance. However, with this strategy the U.S. Army Air Force attrition rates for aviation cadets was 45–75%. When the services shifted to a “select-out” stratagem, using base requirements of success in college, lack of disqualifying disorders, and absence of criminal record, the attrition rates plummeted. Current estimates for attrition for all Air Force undergraduate pilot training (UPT) bases is now 6–10%.

Previous attempts at systematizing pilot selection included the 1941 Aviation Cadet Qualifying Exam. This test, which had 150 questions and took 3 hours to complete, primarily measured comprehension and problem solving. It did an adequate job of predicting success and elimination. The top stanine (mean + 1.75 standard deviation [SD]) included the top 10% of the scores and predicted 95% success. In contrast, the bottom stanine

(mean – 1.75 SD) included the bottom 9% of the scores and predicted a 75% elimination rate (Flanagan & Fitts, 1944).

Flanagan (1942) reviewed the findings of current and past studies and determined that the aviation cadet must have a minimum level of general intelligence, alertness, speed of decision making, reaction time, and coordination. The person should also exhibit aggressiveness, fearlessness, calmness, and similar personality traits as the other applicants. These factors were not quantified, and cutoff scores were not established for selection.

Concurrently with the above study, the Navy Pensacola Project examined the selection and training of aircraft pilots. In 1942, the Aviation Classification/Flight Aptitude Rating system was developed (Flanagan & Fitts, 1944). World War II increased the need for psychologists to work on human factors, flight simulators, layout of instruments, and basic flying skills. Over 1,000 behavioral scientists worked on these issues, including selection, in the San Antonio area in the 1950s alone. As aircraft became more complex, so did the research focusing on mental and perceptual workload limits of human cognition in complex multitasking situations. Neuropsychological application of these findings helps reduce human error, thus decreasing mishaps, increasing performance and efficiency, and improving the fit for specific aircraft.

Each of the services has developed unique methods of pilot selection, though all include a board for the selection of applicants. The Department of Defense, through the Navy, created a computer-based neuropsychological-screening battery called the Automated Neuropsychological Assessment Metrics (ANAM), which later became available as the CogScreen (Kay, 1995). The Air Force is currently improving the Pilot Candidate Selection Method (PCSM), which is a comprehensive psychological and neuropsychological battery (Caretta & Ree, 1993). According to J. L. Moore (personal communication, September 29, 2005), the Navy uses a parallel aptitude-related selection battery, the Aviation Selection Test Battery (ASTB). The Army does not have a specific battery for selection but does test candidates as required.

Since 1994, the Air Force at Brooks AFB has been using a four-test computer-based neuropsychological battery as part of the Medical Flight Screening (MFS) program. The MFS evaluation includes screening in ophthalmology, cardiology, anthropometrics, and neuropsychology. It is now a part of an integrated Flying Class I (pilot) entry physical. After completion of UPT, the candidate is designated as Flying Class II and is subject to another set of tests. However, the four neuropsychological tests are baseline for future evaluations and are not used for selection or elimination for pilot training. Currently, the Air Force is the only service that uses a systematic baseline evaluation for their pilots, although all three services have used or currently use the CogScreenAE for evaluations. The baseline testing

was considered essential to facilitate the waiver process for aviators who have sustained head injuries, developed central neurological diseases, or developed other problems that have a neuropsychological impact (e.g., sleep apnea). The availability of the baseline data greatly improves the evaluation process by allowing a comparison of the pilot's current functioning with premorbid status. It also provides a rich pool of information for research in pilot selection, airframe suitability, crew resource management (CRM), and mishap investigations. The Air Force currently tests approximately 2,200 applicants per year at two sites (Brooks AFB and the USAF Academy in Colorado Springs, Colorado).

Flynn, Sipes, Gosenbach, and Ellsworth (1994) confirmed the feasibility of using computerized neuropsychological testing to assess aviator skills. The four computer-based tests currently being used for baseline testing by the Air Force are (1) Multidimensional Aptitude Battery-II (MAB-II), (2) Armstrong Laboratory Aviator Personality Survey, (3) NEO PI-R (Neuroticism, Extraversion, and Openness Personality Inventory—Revised), and (4) MicroCog. The MicroCog replaced the CogScreen in 2002 because it had a broader neuropsychological application. The CogScreen Aeromedical Edition is still used in testing pilots for general aviation.

The MAB-II is an IQ test that correlates highly (0.91) with the Wechsler Adult Intelligence Scale—Revised (WAIS-R; Jackson, 1984). It assesses general cognition and has 10 subtests, with an administration time of about 70 minutes. It provides both a Verbal IQ and Performance IQ score, as well as the Full Scale IQ. Retzlaff, Callister, and King (1999) determined that military aviators generally perform 1 *SD* above the mean on standardized intelligence tests. Orme, Zazeckis, and Thompson (2004) updated these norms and provided differential norms for sex and ethnicity of aviators. In this study, based on 5,617 individuals accepted for Air Force pilot training, the Full Scale IQ was well above that (120.8; *SD* 8.2). The authors note that, when skills are normally distributed in the population, the cut-off scores are sometimes used to suggest when a performance is in the “impaired” range. This is usually when the score is 2 *SDs* below the mean (Lezak, Howieson, & Loring, 2004). In this case, a pilot with an IQ score of 100 is technically impaired, which emphasizes the need for special understanding of the neuropsychological test outcome for pilots as compared to the normal population (see below). Orme and Brehm (2001) also used the data from the MAB gathered on pilots and established conversion scores for IQ from the standardized officer entry exam, AFOQT, thus providing an invaluable estimate of premorbid intelligence for those pilots who did not take the MFS.

The MicroCog is a standardized computer-based neuropsychological test battery with nine subscales (Attention/Mental Control, Memory, Reasoning/Calculation, Spatial Processing, Reaction Time, Information Pro-

cessing Speed, Information Processing Accuracy, General Cognitive Functioning and General Cognitive Proficiency) (Powell, et al, 1993). The MicroCog was chosen because of its generalizability to common neuropsychological disorders. It has also been used in studies of Persian Gulf veterans who were diagnosed with Persian Gulf syndrome and in sports applications. The Reaction Time and Information Processing Speed subscales are especially useful for high-performance aircraft pilots in that deficits in these areas can often be lethal.

The Armstrong Laboratory Aviator Personality Survey (ALAPS) is a personality test produced and standardized by the Air Force that yields a profile of flyers in three subareas (Personality, Psychopathology, and Crew Interaction) with 15 factors (confidence, socialness, orderliness, aggressiveness, negativity, anxiety, depression, affective lability, alcohol abuse, impulsivity, risk taking, dogmatism, deference, team orientation, and organization). It takes less than 30 minutes to administer.

The NEO PI-R is a standardized personality test based on the five factors of neuroticism, extraversion, openness, agreeableness, and conscientiousness (Costa, 1992). Portions of this test have long been used as part of AFOQT, as well as in astronaut selection. Using this test, King and Flynn (1995) determined that male pilot applicants, as compared to the general population, were higher on extraversion (83rd percentile) and conscientiousness (70th percentile); in the middle on openness (55th percentile), and lower on neuroticism (39th percentile) and agreeableness (32nd percentile). Retzlaff and Gibertini (1987) reported that there were three types of aviators: (1) the Right Stuff, (2) the Company Man, and (3) the Wrong Stuff. The Right Stuff profile is classically that of fighter pilots, who are aggressive, dominant, exhibitionistic, impulsive, and playful. The Company Man seems to fit transport pilots, who are high in achievement, endurance, affiliation, and orderliness. The Wrong Stuff pilots are marked by low exhibition, understanding, affiliation, and orderliness. Though no definitive study has been made to determine airframe fit to these types, Picano (1991) determined that there was no difference in success in the type of aircraft and the type of personality. Boyd, Patterson, and Thompson (2005) did find that Air Force fighter pilots were higher in intelligence (IQ = 122.99), lower on agreeableness, and higher on conscientiousness than the general aviator. The Aeromedical Consultation Service has determined through their referrals that the pilot who does not fit the “culture” generally does not have high job satisfaction and therefore may not have longevity in that airframe. For example, a skilled F-16 pilot who is very introverted may feel ostracized by his crew and may end up being unhappy in that community, thus reducing career longevity.

At the USAF Aeromedical Consultation Service at Brooks City-Base, San Antonio, Texas, the neuropsychiatry branch typically sees a high per-

centage of pilots with somatization disorders (35.5%), compared with other psychiatric disorders, because of the pilots' high defensiveness and denial of psychological problems. The great majority of pilots are returned to flying status after the initial evaluation (76.9%), with an additional 20.5% returned after brief treatment. This yields an amazingly low 2.6% disqualification rate, which attests to the resiliency of the aviator and the strength of the selection process. The evaluation process is highly regulated by Air Force Instruction (AFI 48-123) and is elaborated on by other guidance (USAFSAM Waiver Guide, Chapter 9 of the Flight Surgeon's Guide). The other services have parallel but disparate guidance. There is also an administrative evaluation by the flight surgeon, the Adaptability Rating for Military Aeronautics (ARMA), that does not involve a mental health diagnosis.

The neuropsychologist aids in the differential diagnosis of individuals. Because pilots tend to be highly active individuals, one of the most common reasons for referral is closed TBI. However, because of the recent understanding of the neurocognitive impact of obstructive sleep apnea (OSA), by far the number of referral cases to neuropsychology has been for this diagnosis. An informal data analysis of a 10-year period (1994–2004) revealed that 68.1% of the cases seen were for OSA and 22.1% for TBI. The remaining referrals were for a wide variety of problems, from transient ischemic attacks to cerebral hemorrhage and seizure disorder.

The armed services highly regulates the screening and testing required for the assessment of individuals on flying status. The USAF standards are listed in AFI 48-123. The Army regulations are listed in AR40-501. The Navy lists its guidelines in NAVMED P-117. So far the Air Force is the only service that requires a standard baseline neuropsychological testing for entry into the flying training program. However, all services require some form of standardized testing in the assessment of pilots for return to flying status after a neurological insult. In the case of head injuries, this testing is highly prescribed by the Air Force. AFI 48-123 indicates the length of loss of consciousness (LOC) and posttraumatic amnesia (PTA) for each of the categories of TBI (mild, moderate, and severe). For severe injury, for instance, the guidance is that the individual has a combined LOC/PTA of greater than 24 hours. The "severe" injury designation is also given to any pilot who has had a brain abscess, surgical or penetrating brain injury, focal signs of hematoma, central nervous system infection, and so on. The observation time is then 5 years for Flying Class II (active pilots), with a required evaluation of neuropsychological testing, as prescribed by the ACS, within 30 days of the injury. The evaluation for return to flying minimally requires the Minnesota Multiphasic Personality Inventory (MMPI-2), WAIS-III, formal memory assessment, and Halstead–Reitan Neuropsychological Battery, in addition to the standard medical evaluation. The Air

Force has allowed individuals to return to duty in 2 years with the MFS premorbid testing and good outcome on the current exam. The Army and Navy tend to be more individualistic in the decision-making process.

AFI 48-123 sets the medical standards for flying duty and delineates the criteria for any disqualifying condition to be considered for a waiver: (1) It must not pose a risk of sudden incapacitation; (2) it must have minimal potential for subtle performance decrement, particularly with regard to the higher senses; (3) it must be resolved or stable and be expected to remain so under the stresses of the aviation environment; (4) if the possibility of progression or recurrence exists, the first symptoms or signs must be easily detectable and not pose a risk to the individual or the safety of others; (5) it cannot require exotic tests, regular invasive procedures, or frequent absences to monitor for stability or progression; (6) it must be compatible with the performance of sustained flying operations in austere environments. These six criteria are the targets of the neuropsychological evaluation and report and are covered by comprehensive batteries.

In making the aeromedical decision to allow the pilot to fly, the consulting neuropsychologist emphasizes to medical staff that one abnormal test does not disqualify the flyer. In the case of highly functioning individuals such as pilots, neuropsychological test performance is rarely in the impaired range, compared to the average person, so the need is to discuss relative or task-specific lowering of functionality for the pilot. The neuropsychologist also emphasizes the need to look at the overall pattern of results and for multiple tests with overlapping measures. The critical elements of any sound neuropsychological assessment of an aviator must minimally include a good evaluation of speed and accuracy; attention and concentration; vigilance; memory and working memory; auditory, spatial, and kinesthetic processing; and new learning, multitasking, cognitive flexibility, and problem solving.

Aerospace neuropsychologists generally work at the major evaluation centers in each of the services, and their reports are reviewed directly by the individual aeromedical consultation services. In the field, however, the aerospace psychologist works through the flight surgeon, who combines all available data and makes a decision locally or prepares an aeromedical report that is then submitted for review for fitness for duty. The psychologists in the field should confer with their specific aeromedical consultation services before attempting evaluations and interventions with flying personnel.

In spite of numerous attempts at analysis, there appears to be no consistent personality profile for successful aviators. As noted, there appears to be a difference between the aptitude to fly and the preference for the specific lifestyle of the different flying cultures. Neuropsychologically, there is also no identifiable pattern of capacities that minimizes attrition and maxi-

mizes safety. The Air Force has found the UPT applicants to be extremely homogeneous in makeup, and this lack of difference and low psychopathology yields small variances in studies and thus low predictive power.

It appears that there is good justification for the establishment of baseline neuropsychological testing for all the services. This could be done in an integrated fashion with the initial flying physical, as the Air Force has done, or sometime soon after selection. Norms for air crews need continued development, as does research into the continued development of better selection processes and variables that affect retention. As the technology of flying becomes more complex, as in the advanced tactical fighters now coming into use or the demands on the operator of the RPAs, the aerospace neuropsychologist must continue to advance the analysis of aviators to maximize performance and safety.

### **Military Forensic Neuropsychological Evaluations**

Military neuropsychologists are frequently requested to render their expert opinion on the insanity defense, a legal (not medical) term that negates the individual's legal responsibility or capacity for a crime. Just as civilian neuropsychologists, military neuropsychologists must also evaluate the efforts of service members who may be motivated to simulate or dissimulate symptoms. This should include an assessment of the individual's motivation not just for participation in the assessment but also for involvement in rehabilitation and continued military retention. Individuals undergoing neuropsychological evaluation may, wittingly or not, provide distorted or erroneous responses for any number of reasons. In addition to secondary financial gain, as seen in disability ratings or insurance claims; implications for continued military service; and accountability for personal actions, as in legal situations, there are indirect social and emotional rewards that can make the denial, exaggeration, or malingering of impairment and symptoms an attractive strategy. Military neuropsychological evaluations must include traditional cognitive, psychological, and symptom validity testing for all individuals.

Boards may be ordered by military judges to help with such issues as the ability to read and understand statements written by intelligence agents, the possibility of a learning or other disorder to mitigate circumstances, or questions of memory impairment in relation to alleged criminal activity. Most frequently, the military courts will ask that the neuropsychologist provide information about an individual's mental status at the time of alleged criminal conduct, diagnoses, the capacity of the individual to appreciate the nature and quality of his or her actions, and the individual's capability to understand the nature of the legal proceedings and to participate intelligently in his or her defense. As with any forensic evaluation, confi-

dentiality is dramatically different from what is required when conducting a clinical neuropsychological evaluation. Military members have limited privileges when undergoing forensic evaluations, pursuant to the Rules of Courts Martial 706, or Military Rules of Evidence 302 (*Manual for Courts-Martial*, 2002).

## Operational Applications

The capacity for neuropsychological assessment to measure effects of various environments, physical states, and medication effects makes it highly applicable to the operational functioning of the military. For example, neuropsychological assessment has been used as a means to guide recompression after deep dives, as well as to study the impact of sleep deprivation on cognitive performance (Fishburn, 1991). Cognitive testing is used regularly to determine the effects of prescription medications (e.g., lovastatin and pravastatin) on the performance of air crews in order to guide medication decisions (Gibellato, Moore, Selby, & Bower, 2001). In similar fashion, various disease processes (e.g., human immunodeficiency virus, HIV) are studied to guide decisions about fitness for jobs that have high cognitive demands (Mapou, Kay, Rundell, & Temoshok, 1993) as are individual characteristics like fatigue vulnerability (Caldwell et al., 2005).

Stimulants have been used in the military since World War II (Bower & Phelan, 2003), and their effects on cognition have been studied in conjunction with military performance, particularly in cases of sustained military operations. Effects on cognition of various substances (e.g., modafinil, caffeine, nicotine, and donepezil) are studied to allow for optimal dosing, as well as to provide guidelines for necessary sleep in such populations as air crews, Navy SEALs, and medical personnel (Buguet, Moroz, & Radomski, 2003; Lieberman, Tharion, Shukitt-Hale, Speckman, & Tulley, 2002; Mumenthaler et al., 2003; Westcott, 2005). Other practical issues have also been studied, such as the effects of nicotine withdrawal in pilots in flight, leading to conclusions that abrupt tobacco cessation in this population is detrimental and unsafe (Giannakoulas, Katramados, Melas, Diamantopoulos, & Chimonas, 2003).

## Gulf War Syndrome

Significant neuropsychological resources were devoted to assessing the cognitive and psychological effects of service in the Persian Gulf, and neuropsychological evaluations were provided regularly as part of the Clinical Comprehensive Evaluation Program for Gulf War veterans. Gulf War syndrome constitutes a wide range of physical (e.g., fatigue, pain, sleep distur-

bance, fever, rashes, tremor, and sexual dysfunction), cognitive (e.g., attention and memory problems), and psychological (e.g., depression and anxiety) symptoms (Hom, Haley, & Kurt, 1997). Theories of the origin of Gulf War syndrome range from the influence of preexisting conditions and/or exposure to toxins or inoculations to psychological problems such as posttraumatic stress disorder or depression.

Neuropsychological findings by various researchers reveal a wide range of findings. Hom, Haley, and Kurt (1997) suggest chronic impairment related to neurotoxic exposure during the Gulf War. Anger et al. (1999) noted a subgroup of individuals with slowed neurobehavioral performance suggestive of possible neurotoxic exposure or premorbid variables; Lange et al. (2001) noted that veterans who were also experiencing unexplained fatigue, did poorly on neuropsychological measures regardless of psychological status, also suggesting environmental exposure as a precursor. Other authors report that affective variables were prominent and likely to account for subjective cognitive complaints (Axelrod & Milner, 1997; Binder, Storzbach, Anger, & Campbell, 1999; David et al., 2002; Lindem et al., 2003; Vasterling, Brailey, Tomlin, Rice, & Sutker, 2003). The most recent studies have concluded that risk factors for Gulf War syndrome were inoculations, exposures to neurotoxins, and psychologically traumatizing events, and the persistence of the syndrome is related to premorbid psychological status and the individual veteran's beliefs about environmental exposure (Stuart, Ursano, Fullerton, Norwood, & Murray, 2003; Hotopf et al., 2004). White (2003) suggests that longitudinal neuropsychological studies of exposed veterans are needed in order to determine if problems persist.

### **Neuropsychology and Telemedicine**

Military neuropsychologists have also been involved in the development of both computerized assessment and the capabilities of telemedicine, a way to provide services to distant locations. The neuropsychology telemedicine clinic at Brooke Army Medical Center, in operation since 1998, allows the clinician to provide both direct patient care and consultation. Screening interviews with the patients, as well as feedback sessions with patients, family members, and supervisors, have been conducted, as have supportive psychotherapy, consultation, and training (Clement, Brooks, Dean, & Galaz, 2001). A pilot project developed through WRAMC also highlighted the long-standing partnership between neuropsychology and aviation. This demonstration utilized computer-automated and Internet-enabled tools in assessing aviators located in various locations around the world. The testing battery focused on several basic abilities felt to be critical to flight

duties—reaction time, memory, attention, and concentration—and was developed to serve as an adjunct in improving medical evaluations and disposition recommendations after events involving neurological compromise. Rather than being relegated to an after-injury inventory, it was thought that this same process could prove beneficial in predicting aviator students' performance in training, offering the opportunity for improved selection and training decisions and serving as a proactive predictive assessment. Results of the preliminary analyses between the neuropsychological variables and flight performance demonstrated that each computerized battery—ANAM, CogScreen, and MicroCog—had select subtests that significantly correlated with flight performance during initial entry rotary wing training.

The DVBIC at WRAMC received funding from the Telemedicine and Advanced Technology Research Center (TATRC) to develop a computerized, web-based screening battery for TBI symptomatology. Using a web-based telemedicine system, this project sought to demonstrate the potential for remote evaluation of TBI symptomatology by establishing the validity of web-based screening to in-person screening measures for standard of care. The TBI symptom measures included postconcussion complaints, depression, and anxiety. To assess neurocognitive changes after TBI, ANAM (Kane & Reeves, 1997) was also included. The results of the DVBIC telemedicine project demonstrated that the web versions of the symptom measures were highly correlated with the paper versions of the same measures, and the mean scores for the two types of measures were not significantly different (Warden et al., 2004). Furthermore, the complex attention portion of ANAM correlated significantly with a standard neuropsychological complex attention measure, the Connor's Continuous Performance Test-II. Specifically, moderate correlations were found between the two tests for the number of errors, response speed, and detectability (speed vs. accuracy). Thus, the validity of this web-based assessment was established. In the second phase of the initiative, the feasibility of actual remote evaluation, using a web-based symptom and cognitive screening battery, will be examined.

## SUMMARY

Military neuropsychology is similar to that of civilian practice in many ways but at the same time offers unique challenges in the assessment of active-duty service members, who must be fit to engage in physically rigorous and life-threatening activities. Neuropsychological assessment practices play a key role in operational readiness and the maintenance of peak performance of military members.

## REFERENCES

Almond, N., Harris, F., & Almond, M. (2005). You're the flight surgeon. *Aviation, Space, and Environmental Medicine*, 76, 601–602.

Anger, W. K., Storzbach, D., Binder, L. M., Campbell, K. A., Rohlman, D. S., McCauley, L., et al. (1999). Neurobehavioral deficits in Persian Gulf veterans: Evidence from a population-based study. *Journal of the International Neuropsychological Society*, 5, 203–212.

Axelrod, B. N., & Milner, I. B. (1997). Neuropsychological findings in a sample of Operation Desert Storm Veterans. *Journal of Neuropsychiatry*, 9, 23–28.

Baggett, M. R., Kelly, M. P., Korenman, L. M., & Ryan, L. M. (2003). Neuropsychological deficits of a U.S. Army pilot following an anoxic event as a function of cardiac arrest. *Military Medicine*, 168, 769–771.

Binder, L. M., Storzbach, D., Anger, W. K., & Campbell, K. A. (1999). Subjective cognitive complaints, affective distress, and objective cognitive performance in Persian Gulf War veterans. *Archives of Clinical Neuropsychology*, 14, 531–536.

Boake, C. (1989). A history of cognitive rehabilitation of head-injured patients, 1915–1980. *Journal of Head Trauma Rehabilitation*, 4, 1–8.

Bower, E. A., & Phelan, J. R. (2003). Use of amphetamines in the military environment. *Lancet*, 362(Suppl.), 18–19.

Boyd, J. E., Patterson, J. C., & Thompson, M. S. (2005). Psychological testing profiles of USAF pilots before training vs. type aircraft flown. *Aviation Space and Environmental Medicine*, 76, 463–468.

Bradley, J. (2003). *Flyboys*. New York: Little, Brown.

Brown, M. (2001). *Wings over San Antonio*. Chicago: Arcadia.

Buguet, A., Moroz, D. E., & Radomski, M. W. (2003). Modafinil—medical considerations for use in sustained operations. *Aviation, Space, and Environmental Medicine*, 74, 659–663.

Caldwell, J. A., Smith, J. K., Caldwell, J. L., Brown, D. L., Mu, Q., Mishory, A., et al. (2005). Are individual differences in fatigue vulnerability related to baseline differences in cortical activation? *Behavioral Neuroscience*, 119, 694–707.

Caretta, T. R., & Ree, M. J. (1993). Pilot candidate selection method (PCSM): What makes it work? *Technical Report* (AL-TP-1993-0063, AD A262 871). Brooks Air Force Base, TX: Armstrong Laboratory, Human Resources Directorate, Manpower and Personnel Research Division.

Centers for Disease Control (CDC). (1999). *Traumatic brain injury in the United States: A report to Congress*, Centers for Disease Control. Washington, DC: Author.

Cernak, I., Savic, J., Ignjatovic, D., & Jevtic, M. (1999). Blast injury from explosive munitions. *Journal of Trauma: Injury, Infection, and Critical Care*, 47, 96–103.

Cernak, I., Wang, Z., Jiang, J., Bian, X., & Savic, J. (2001a). Cognitive deficits following blast injury-induced neurotrauma: Possible involvement of nitric oxide. *Brain Injury*, 15, 593–612.

Cernak, I., Wang, Z., Jiang, J., Bian, X., & Savic, J. (2001b). Ultrastructural and

functional characteristics of blast injury-induced neurotrauma. *Journal of Trauma: Injury, Infection, and Critical Care*, 50, 695–706.

Chant, C. (2001). *Pioneers of aviation*. New York: Barnes & Noble.

Cigrang, J. A., Carbone, E. G., Todd, S., & Fiedler, E. (1998). Mental health attrition from Air Force basic military training. *Military Medicine*, 163, 834–838.

Clement, P. F., Brooks, F. R., Dean, B., & Galaz, A. (2001). A neuropsychology telemedicine clinic. *Military Medicine*, 166, 382–384.

Costa, P. T., & McCrae, R. R. (1992). *Professional manual: Revised NEO Personality Inventory (NEO-PI-R) and Neo Five Factor Inventory (NEO-FFI)*. Odessa, FL: Psychological Assessment Resources.

David, A. S., Farrin, L., Hull, L., Unwin, C., Wessely, S., & Wykes, T. (2002). Cognitive functioning and disturbances of mood in UK veterans of the Persian Gulf War: A comparative study. *Psychological Medicine*, 32, 1357–1370.

Dickerson, F., Boronow, J. J., Stallings, C., Origoni, A. E., Cole, S. K., & Yolken, R. H. (2004). Cognitive functioning in schizophrenia and bipolar disorder: Comparison of performance on the Repeatable Battery for the Assessment of Neuropsychological Status. *Psychiatry Research*, 129, 45–53.

Dikmen, S., & Levin, H. S. (1993). Methodological issues in the study of mild head injury. *Journal of Head Trauma Rehabilitation*, 8, 30–37.

Fann, J. R., Uomoto, J. M., & Katon, W. J. (2000). Sertraline in the treatment of major depression following mild traumatic brain injury. *Journal of Neuropsychiatry & Clinical Neuroscience*, 12, 226–232.

Fishburn, F. J. (1991). Neuropsychological applications in military settings. In R. Gal & A. D. Mangelsdorff (Eds.), *Handbook of military psychology* (pp. 625–633). New York: Wiley.

Flanagan, J. C. (1942). The selection and classification program for aviation cadets (air crew—bombadiers, pilots and navigators). *The Air Surgeon's Bulletin*, 6, 229–239.

Flanagan, J. C., & Fitts, P. M. (1944). Psychological testing program for the selection and classification of air crew officers. *The Air Surgeon's Bulletin*, 1, 1–5.

Frankowski, R. F. (1986). Descriptive epidemiologic studies of head injuries in the United States. *Advances in Psychosomatic Medicine*, 16, 153–172.

Flynn, C. F., Sipes, W. E., Grosenbach, M. J., & Ellsworth, J. (1994). Top Performer Survey: Computerized psychological assessment in aircrew. *Aviation, Space, and Environmental Medicine*, 84, 1148–1150.

Giannakoulas, G., Katramados, A., Melas, N., Diamantopoulos, I., & Chimonas, E. (2003). Acute effects of nicotine withdrawal syndrome in pilots during flight. *Aviation, Space, and Environmental Medicine*, 74, 247–251.

Gibellato, M. G., Moore, J. L., Selby, K., & Bower, E. A. (2001). Effects of lovastatin and pravastatin on cognitive function in military aircrew. *Aviation, Space, and Environmental Medicine*, 72, 805–812.

Gouvier, W. D., Cubic, B., Jones, G., Brantley, P., & Cutlip, Q. (1992). Post-concussion symptoms and daily stress in normal and head-injured college populations. *Archives of Clinical Neuropsychology*, 7, 193–211.

Hom, J., Haley, R. W., & Kurt, T. L. (1997). Neuropsychological correlates of Gulf War syndrome. *Archives of Clinical Neuropsychology*, 12, 531–544.

Hotopf, M., David, A., Hull, L., Nikalaou, V., Unwin, C., & Wessely, S. (2004). Risk factors for continued illness among Gulf War veterans: A cohort study. *Psychological Medicine, 34*, 747-754.

Jackson, D. N. (1984). *Manual for the Multidimensional Aptitude Battery*. London, Ontario, Canada: Research Psychologists Press.

Kane, R. L., & Reeves, D. (1997). Computerized test batteries. In A. Horton (Ed.), *The neuropsychology handbook* (Vol. 2). New York: Springer.

Kay, G. (1995). *CogScreen: Aeromedical edition*. Odessa, FL: Psychological Assessment Resources.

Kay, T., Adams, R., Anderson, T., Berrol, S., Cicerone, K., Dahlberg, C., et al. (1993). Definition of mild traumatic brain injury. *Journal of Head Trauma Rehabilitation, 8*, 86-87.

Kennedy, C. H., Kupke, T., & Smith, R. (2000). A neuropsychological investigation of the Armed Service Vocational Aptitude Battery (ASVAB). *Archives of Clinical Neuropsychology, 15*, 696-697.

King, R. E., & Flynn, C. F. (1995). Defining and measuring the "right stuff": Neuropsychiatrically Enhanced Flight Screening (N-EFS). *Aviation, Space, and Environmental Medicine, 66*, 951-956.

King, R. E., McGlohn, S. E., & Retzlaff, P. D. (1997). Female United States Air Force pilot personality: The new right stuff. *Military Medicine, 162*, 695-697.

Lange, G., Tiersky, L. A., DeLuca, J., Scharer, J. B., Policastro, T., Fiedler, N., et al. (2001). Cognitive functioning in Gulf War illness. *Journal of Clinical and Experimental Neuropsychology, 23*, 240-249.

Larson, E., Kirschner, K., Bode, R., Heinemann, A., & Goodman, R. (2005). Construct and predictive validity of the repeatable battery for the assessment of neuropsychological status in the evaluation of stroke patients. *Journal of Clinical and Experimental Neuropsychology, 27*, 16-32.

Levinson, D. M., & Reeves, D. L. (1997). Monitoring recovery from traumatic brain injury using automated neuropsychological assessment metrics (ANAM V1.0). *Archives of Clinical Neuropsychology, 12*, 155-166.

Lewin, I. (1992). *The cost of disorders of the brain*. Washington, DC: National Foundation for the Brain.

Lezak, M. D., Howieson, D. B., & Loring, D. W. (2004). *Neuropsychological assessment* (4th ed.). New York: Oxford University Press.

Lieberman, H. R., Tharion, W. J., Shukitt-Hale, B., Speckman, K. L., & Tulley, R. (2002). Effects of caffeine, sleep loss, and stress on cognitive performance and mood during U.S. Navy SEAL training. *Psychopharmacology, 164*, 250-261.

Lindem, K., Proctor, S. P., Heeren, T., Krengel, M., Vasterling, J., Sutker, P. B., et al. (2003). Neuropsychological performance in Gulf War era veterans: Neuropsychological symptom reporting. *Journal of Psychopathology and Behavioral Assessment, 25*, 121-127.

*Manual for Courts-Martial*. (2002). Washington, DC: U.S. Government Printing Office.

Mapou, R. L., Kay, G. G., Rundell, J. R., & Temoshok, L. (1993). Measuring performance decrements in aviation personnel infected with the human immunodeficiency virus. *Aviation, Space, and Environmental Medicine, 64*, 158-164.

Mattson, A. J., & Levin, H. S. (1987). Frontal lobe dysfunction following closed

head injury: A review of the literature. *Journal of Nervous and Mental Disease*, 178, 282-291.

Mumenthaler, M. S., Yesavage, J. A., Taylor, J. L., O'Hara, R., Friedman, L., Lee, H., et al. (2003). Psychoactive drugs and pilot performance: A comparison of nicotine, donepezil, and alcohol effects. *Neuropsychopharmacology*, 28, 1366-1373.

Ommaya, A. K., Salazar, A. M., & Schwab, K. (1999). Defense and veterans head injury program: A model injury registry. *Military Medicine: Atlas of Injuries in the U.S. Armed Forces*(Suppl.), 7.1-7.21.

Orme, D. R., & Brehm, W. (2001). Armed forces qualification test as a measure of premorbid intelligence. *Military Psychology*, 13, 187-197.

Orme, D., Ree, M. J., & Rioux, P. (2001). Premorbid IQ estimates from a multiple aptitude test battery: Regression vs. equating. *Archives of Clinical Neuropsychology*, 16, 679-688.

Orme, D. R., Zazeckis, T. M., & Thompson, W. T. (2004). Neuropsychological evaluation of aviators: Need for aviator-specific norms? *Technical Report* (SAM-FE- BR-TR-2004-0001). Brooks City-Base, TX.

Picano, J. J. (1991). Personality types among experienced military pilots. *Aviation Space and Environmental Medicine*, 62, 517-520.

Plenger, P. M., Dixon, C. E., Castillo, R. M., Frankowski, R. F., Yablon, S. A., & Levin H. S. (1996). Subacute methylphenidate treatment for moderate to moderately severe traumatic brain injury: A preliminary double-blind placebo-controlled study. *Archives of Physical Medicine and Rehabilitation*, 77, 536-540.

Powell, D. H., Kaplan, E. F., Whitla, D., Weintraub, S., Catlin, R., & Funkenstein, H. H. (1993). *MicroCog: Assessment of cognitive functioning*. San Antonio, TX: Harcourt, Brace.

Prigatano, G. (1992). Personality disturbances associated with traumatic brain injury. *Journal of Consulting and Clinical Psychology*, 60, 360-368.

Randolph, C., Tierney, M. C., Mohr, E., & Chase, T. N. (1998). The Repeatable Battery for the Assessment of Neuropsychological Status (RBANS): Preliminary clinical validity. *Journal of Clinical and Experimental Neuropsychology*, 20, 310-319.

Reitan, R. M., & Wolfson, D. (1985). *Neuroanatomy and neuropathology: A clinical guide for neuropsychologists*. Tucson, AZ: Neuropsychology Press.

Retzlaff, P., Callister, J., & King, R. (1999). Clinical procedures for the neuropsychological evaluation of U.S. Air Force pilots. *Military Medicine*, 164, 1-6.

Retzlaff, P. D., & Gibertini, M. (1987). Air Force pilot personality: Hard data on the right stuff. *Multivariate Behavioral Research*, 22, 383-389.

Salazar, A. M., Warden, D. L., Schwab, K., Spector, J., Braverman, S., Walter, J., et al. (2000). Cognitive rehabilitation for traumatic brain injury: A randomized trial. *Journal of the American Medical Association*, 283(23), 3075-3081.

Silver, J. M., McAllister, T. W., & Yudofsky, S. C. (2005). *Textbook of traumatic brain injury*. Washington, DC: American Psychiatric Publishing.

Silver, J. M., & Yudofsky, S. C. (1994). Aggressive disorders. In J. M. Silver, S. C. Yudofsky, & R. E. Hales (Eds.), *Neuropsychiatry of traumatic brain injury*. Washington, DC: American Psychiatric Press.

Stokes, A., & Kite, K. (1994). *Flight stress: Stress, fatigue, and performance in aviation*. Brookfield, VT: Ashgate.

Stuart, J. A., Ursano, R. J., Fullerton, C. S., Norwood, A. E., & Murray, K. (2003). Belief in exposure to terrorist agents: Reported exposure to nerve or mustard gas by Gulf War veterans. *Journal of Nervous and Mental Disease*, 191, 431-436.

Trudeau, D. L., Anderson, J., Hansen, L. M., Shagalov, D. N., Schmoller, J., Nugent, S., et al. (1998). Findings of mild traumatic brain injury in combat veterans with PTSD and a history of blast concussion. *Journal of Neuropsychiatry*, 10, 308-313.

U.S. Department of the Air Force. (2001). *Medical examinations and standards*. (AFI 48-123). Washington, DC: Author.

U.S. Department of the Army. (2005). *Standards of medical fitness*. (AR 40-501). Washington, DC: Author.

U.S. Department of Defense. (2004). *Criteria and procedure requirements for physical standards for appointment, enlistment, or induction in the armed forces*. (DoDI 6130.4). Washington, DC: Author.

U.S. Department of Homeland Security. (2004). *Medical manual*. (Commandant, United States Coast Guard Instruction M6000.1). Washington, DC: Author.

U.S. Department of the Navy. (1996). *Manual of the medical department*. (NAVMED P-117). Washington, DC: Author.

Varney, N. R., & Menefee, L. (1993). Psychosocial and executive deficits following closed head injury: Implications for orbitofrontal cortex. *Journal of Head Trauma Rehabilitation*, 8, 32-44.

Vasterling, J. J., Brailey, K., Tomlin, H., Rice, J., & Sutker, P. B. (2003). Olfactory functioning in Gulf War-era veterans: Relationships to war-zone duty, self-reported hazards exposures, and psychological distress. *Journal of the International Neuropsychological Society*, 9, 407-418.

Warden, D. L., Ryan, L. M., Sparling, M. B., Comins, K. S., Mohres, K. T., Roberson, G. E., et al. (2004, May). *Validity of telemedicine assessment of neurobehavioral consequences of traumatic brain injury*. Poster presented at the 9th annual meeting of the American Telemedicine Association, Tampa, FL.

Welsh, J. R., Kucinkas, S. K., & Curran, L. T. (1990). *Armed Services Vocational Battery (ASVAB): Integrative review of reliability studies*. San Antonio, TX: Air Force Systems Command.

Wescott, K. J. (2005). Modafinil, sleep deprivation, and cognitive function in military and medical settings. *Military Medicine*, 170, 333-335.

White, R. F. (2003). Service in the Gulf War and significant health problems: Focus on the central nervous system. *Journal of Psychopathology and Behavioral Assessment*, 25, 77-83.

Whyte, J., Hart, T., Schuster, K., Fleming, M., Polansky, M., & Coslett, H. B. (1997). Effects of methylphenidate on attentional function after traumatic brain injury: A randomized, placebo-controlled trial. *American Journal of Physical Medicine and Rehabilitation*, 76, 440-450.

Whyte, J., Hart, T., Vaccaro, M., Grieb-Neff, P., Risser, A., Polansky, M., et al. (2004). Effects of methylphenidate on attention deficits after traumatic brain

injury: A multidimensional, randomized, controlled trial. *American Journal of Physical Medicine and Rehabilitation*, 83, 401-420.

Wiegmann, D. A., & Shappell, S. A. (1997). Human factors analysis of postaccident data: Applying theoretical taxonomies of human error. *International Journal of Aviation Psychology*, 7, 67-81.

Wolfe, T. (1980). *The right stuff*. New York: Bantam.

Wroblewski, B. A., Joseph, A. B., Kupfer, J., & Kalliel, K. (1997). Effectiveness of valproic acid on destructive and aggressive behaviours in patients with acquired brain injury. *Brain Injury* 11, 37-47.

## CHAPTER 7



# Suicide Prevention in the Military

DAVID E. JONES  
KEVIN R. KENNEDY  
LAUREL L. HOURANI

Suicide ranks behind motor vehicle accidents and illness as the third leading cause of non-battle-related deaths in the U.S. military, accounting for 12% of all deaths (Shaffer, 1997). Given the impact of suicides on families and unit morale, efforts to prevent the loss of life and suffering have long been a part of military counseling, chaplaincy, and medical treatment. A confluence of events in the mid-1990s, however, brought increased attention within the U.S. Department of Defense (DoD) to suicide prevention. The suicide of Admiral Jeremy Boorda in 1996 led the DoD to commission a study to examine suicide prevention policies and programs across the services (Shaffer, 1997). At the same time, the U.S. Air Force was engaged in creating an interdisciplinary team to recommend organizational changes in response to an increase in suicides by airmen during the early 1990s (Knox, Litts, Talcott, Feig, & Caine, 2003; Litts, Moe, Roadman, Janke, & Miller, 1999). This team collaborated with the Centers for Disease Control and Prevention (CDC) to develop a community-wide approach. By the end of the decade, the Air Force received White House recognition for innovations in building community awareness and promoting help-seeking decisions as a means of reducing suicides (U.S. DoD, 1999). By the late 1990s, the Army, Navy, and Marine Corps had also engaged military and civilian experts to revitalize suicide prevention programs in keeping with the dis-

tinct organizational cultures and missions of those services (Army Chief of Public Affairs, 2000; Jones et al., 2001). At the national level, suicide prevention emerged as a major public health priority (U.S. Public Health Service, 1999), and this impetus energized joint service efforts to combat suicide.

In this chapter, we examine suicide prevention in the context of the military by giving attention to epidemiological data, risk and protective factors, and community resources for military members and their families. This chapter focuses on practical matters in assessment, treatment, and consultation with military leaders regarding at-risk personnel (and family members). To keep the discussion grounded on the issues and concerns of leaders and service providers working in the field, we integrate best practice information with our experiences caring for suicidal patients in forward-deployed operational and hospital settings. Our goal is to establish a resource for clinicians and leaders at all levels that provides practical ways to make a difference in preventing suicide and suicidal behavior across the entire military.

## EPIDEMIOLOGICAL ISSUES

### National Profile of Suicide

#### *Prevalence Rates*

As of 2002, suicide was the 11th leading cause of death in the United States and the third among residents 15–24 years old (CDC, 2004). There were approximately 32,000 suicides annually, with 11 of every 100,000 Americans killing themselves (American Association of Suicidology [AAS], 2004). This translates to about 87 suicides per day or 1 suicide every 17 minutes. For comparison, the homicide rate in 2002 was the 14th leading cause of death in the United States and the accidental death rate was more than three times as high.

The rate of suicide in the general population varies with age, gender, and ethnicity. Men die in more than 80% of the suicides in the United States. Men have an early peak in rates in their 20s and a second peak in the elderly years. The overall risk of suicide rises with age because white men over 50, who are 10% of the population, account for 30% of suicides. The age distribution of suicide is changing, however. People 15–24 years old, who once accounted for 5% of suicides, accounted for 14% in 2003 (Harvard Mental Health Letter [HMHL], 2003). Among 20- to 24-year-olds, the rate was 12.2/100,000, accounting for 12.7% of all suicides in 2002 (AAS, 2004).

The risk for suicide among young people is greatest among white males; however, from 1980 through 1995, suicide rates increased most rap-

idly (105%) among young African American males (CDC, 1998). Native Americans have the highest overall suicide rate of any racial or ethnic group. Divorced and widowed men and women have high rates of suicide at all ages, and single people are more likely to commit suicide than are married people.

Nationally, suicide rates have traditionally decreased in times of war and increased in times of economic crisis (AAS, 2004). During 1990–1994, both crude and adjusted suicide rates were significantly higher in the West than in the South, Midwest, and Northeast (CDC, 1997). Firearms are the most often utilized method of suicide by all demographic groups, accounting for almost 60%, and are the leading method in all regions.

Although there are no official statistics on attempted (nonfatal) suicide, it is estimated that there are 8–20 attempts for each death by suicide and that about 10% of people who attempt suicide will succeed within 10 years. The risk of attempted suicide is greatest among women and the young. Women have generally been found to make three to four times as many attempts as males (AAS, 2004). Possibly women tend to use less reliable means of suicide than men (e.g., wrist cutting and drug overdose rather than gunshot), and are more likely to admit to a suicide attempt.

### *Risk Factors*

It has been estimated that up to 90% of people who commit suicide have a psychiatric disorder, with mood disorders such as major depressive disorder and bipolar disorder constituting the most common diagnoses (HMHL, 2003). Other psychiatric disorders associated with suicide are alcohol dependence, personality disorders, schizophrenia, and anxiety disorders. Feelings of hopelessness, however, are found to be more predictive of suicide risk than mental disorder *per se*. Social isolation (e.g., following bereavement, divorce, or unemployment) and social disruption (e.g., in victims of violence or incarcerated persons) are also associated with high risk for suicide (AAS, 2004; HMHL, 2003). In addition, a family history of suicide and suicide attempts greatly increase the risk of suicide, suggesting hereditary vulnerability.

### **Military Rates of Suicide**

Although individual demographic subgroups vary widely, the overall suicide rate in the U.S. military has generally approximated that of the total civilian population (between 10 and 13 deaths per 100,000) across the last 20 years. This rate has remained relatively stable across time and is the third leading cause of death in the military after accidents and illness, both of which have shown decreases in the same period (see Figure 7.1). When

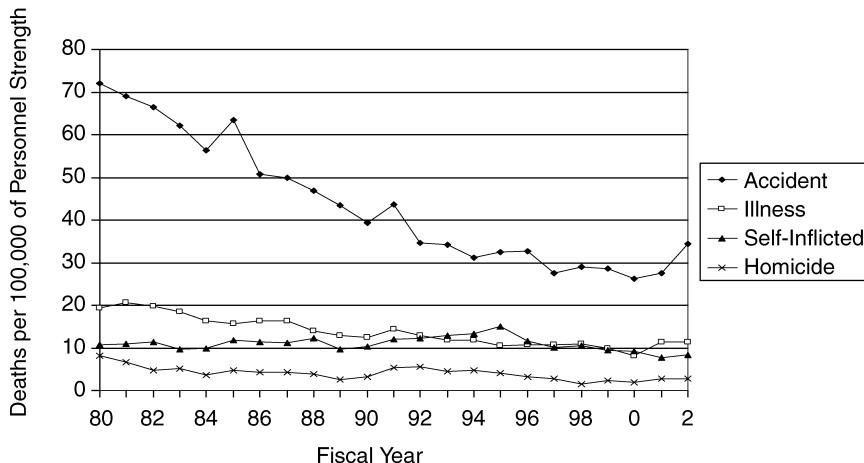


FIGURE 7.1. Worldwide U.S. active-duty military deaths; nonhostile deaths by manner per 100,000 strength. Data from Directorate for Information Operations and Reports.

adjusted for the demographic distribution of the United States, the military suicide rate is generally lower than that of the nation as a whole. This may be at least partially accounted for by the fulltime employment status of military personnel, in contrast to the civilian population, and a lower rate of mental disorder as a result of screening practices and/or available counseling and healthcare services.

#### *Suicide Rates by Service, 1994–2002*

Between 1991 and 2002, the annual rates of suicide in the U.S. Army (USA), U.S. Air Force (USAF), U.S. Navy (USN), and U.S. Marine Corps (USMC) have been between 10 and 21 per 100,000 active-duty members. During the 1990s, these unadjusted rates sometimes exceeded the crude suicide rate for the entire United States. As shown in Figure 7.2, military suicide rates also vary considerably by individual branch of service. The Army and Marine Corps frequently have had higher annual rates than the Navy and Air Force, and as would be expected from the services with primarily ground combat troops, they have also had higher death rates, including self-inflicted deaths during combat. Several studies have examined the demographic distribution of suicide among military populations. Most recently, a study of suicides from 1999–2001 from the joint Navy and Marine Corps suicide database showed that average gender-, age-, and race-specific suicide rates for Marines Corps personnel were higher than

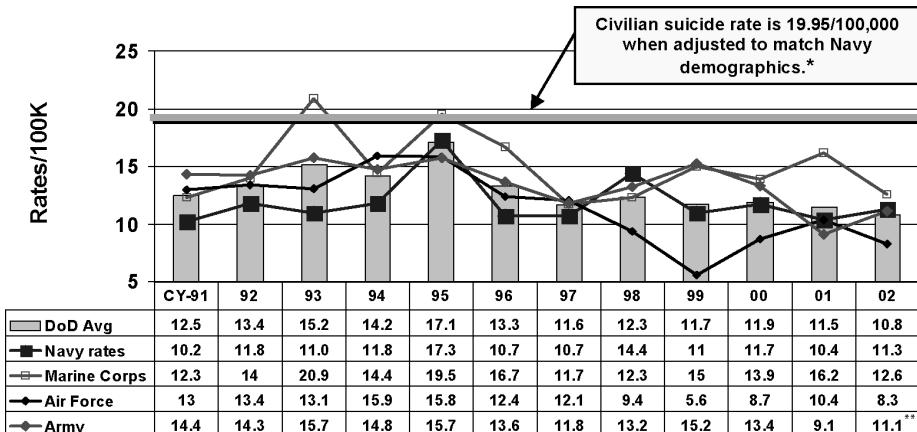


FIGURE 7.2. Military suicide rates/100K (CY-91 to CY-02). \*Data from Naval Health Research Center. Directorate for Information Operations and Reports.

\*\*Army rate is still pending confirmation of one investigation.

those for Navy personnel in almost all demographic groups and were frequently higher than rates for the U.S. population (Stander, Hilton, Kennedy, & Robbins, 2004).

#### *Cross-Service Comparisons*

There are several problems with past and current attempts to compare rates across services. Because the prevalence of suicide is so low in the military, relatively small fluctuations in the annual rate may seem exaggerated when viewed across a limited number of years. As a result, caution must be exercised when making assumptions or drawing conclusions about a new risk factor or measuring the efficacy of suicide prevention efforts based on increases or decreases within a few years' time. One example may be the 2004 news release about the Army suicide rate during the Iraq War (Loeb, 2004). The focus on this discrete time period generated a good deal of both public policy and DoD concern at all levels. Soldiers accounted for 19 of the 22 service members committing suicide in Iraq in 2003, representing a suicide rate of 13.5 per 100,000 troops. Although this is a higher rate than in the previous 2 years, it was about the same rate as in 2000 (13.4) and lower than the rate in 1999.

Other issues that preclude a direct comparison of suicide rates across military services include nonstandardized methods of data collection and different definitions of the data elements collected. These issues include differences among services in investigation procedures and year-to-date extra-

polation procedures to report projected annual rates. Finally, there are differences in the personnel categories that are included in the denominators used to calculate suicide rates. These differences contribute to variations that mitigate the validity of cross-service comparisons.

These comparison problems obscure an ability to consider valid differences among the services. Valid understanding of such differences would begin to help identify what promotes or protects against suicide in the military. There are valid differences among military populations that can be studied both within and across all services. For example, suicide rates for enlisted personnel in all services are double those for officers (Helmkamp, 1995). The proportion of officers in the Air Force is almost twice that of the Marine Corps, which has the highest proportion of enlisted personnel of all branches of service. Therefore, since suicides are more prevalent among the enlisted, the Marine Corps could be expected to have the highest rate, and the Air Force the lowest, based on this factor alone.

## Risk and Protective Factors in the Military

### *Risk Factors*

One of the most important functions of epidemiology is the study of risk factors. To prevent a condition, in this case suicide, it is important to understand the factors that lead to it. General principles focus on targeting risks for which intervention would be expected to have the greatest impact. Some risks are more modifiable than others that are fixed (e.g., alcohol abuse compared to pay grade). Addressing risk factors that are not common in nonsuicidal individuals would have a strong rather than weak effect on the incidence of suicide, as would reducing risk factors present in a large proportion of suicides. Among the most frequently associated risk factors for active-duty personnel are relationship problems; unexplained mood change or depression; alcohol involvement; feelings of disgrace, isolation, hopelessness, or worthlessness; financial and legal problems; previous suicide attempts; job/performance problems; medical/physical evaluation board/administrative discharge processing (Fragala & McCaughey, 1991); work in military security and law enforcement specialties in the Army (Helmkamp, 1996); and apprentice/recruit and blue-collar occupations in the Navy and Air Force (Gaines & Richmond, 1980; Kawahara & Palinkas, 1991).

In a Marine Corps study of 23 completed suicides, 172 attempters, and 384 nonpsychiatric controls, a history of abuse, neglect, or rejection; lower performance evaluation; symptoms of depression; younger age; history of alcohol abuse; and hopelessness differentiated suicide completers and attempters from controls (Holmes, Mateczun, Lall, & Wilcove, 1998).

In studies of Vietnam veterans with symptoms of posttraumatic stress disorder (PTSD) compared to those without such symptoms, those with symptoms were significantly more likely to die by suicide (Bullman & Kang, 1994; Faberow, Kang, & Bullman, 1990). In an uncontrolled study of 723 Air Force suicides between 1983 and 1993, over half of the victims were judged to have been depressed and just under a quarter had received mental health care; 40% of the victims had abused alcohol or substances, two-thirds had difficulties in intimate relationships, 43% had work-related problems, and 16% had legal difficulties (Shaffer, 1997).

### *Protective Factors*

Protective factors are characteristics that are associated with a low risk of suicide. These factors are quite varied and include an individual's attitudinal and behavioral characteristics, as well as attributes of the environment and culture (Plutchik & Van Praag, 1994). Protective factors identified among military personnel include social support; belonging and caring; leadership responsibilities; effective coping and problem-solving skills; policies and culture that approve or encourage help-seeking behavior and protect those who seek help; unit cohesion, camaraderie, and support; access to assistance services; healthy lifestyle promotion; and spiritual support.

Because positive resistance to suicide is not permanent, programs that support and maintain protection against suicide should be ongoing. Several military health-promotion-oriented websites include guidelines and recommendations for building resiliency and hardiness (e.g., Naval Environmental Health Center [NEHC], 2004). Although little research has been conducted that directly links resiliency with reduced suicide risk, there is some evidence that resiliency factors, including family closeness and religiosity, are related to a lower risk of suicidal ideation (O'Donnell, O'Donnell, Warlow, & Steuve, 2004). Promoted as skills that can be used to counter the negative effects of stress, resiliency-building components include such practices as developing stress management skills, viewing setbacks as temporary and/or opportunities for self-discovery, accepting change, and maintaining a sense of humor. Further research is needed on the extent to which such factors can modify suicide risk and be taught as part of a potential intervention program in high-risk individuals.

### **Suicide Clusters**

A suicide cluster is defined as an unexpectedly higher number of suicides occurring within a specified and reasonably small geographic location during a reasonably short time period. To determine if the number is higher than expected, it is necessary first to establish the usual rate in that location

for that time. This is particularly difficult in the military because location-specific rates would need to be maintained, and it is not always clear what the geographic unit of investigation should be—for example, command unit, base, temporarily assigned duty site, or departing or receiving command when changing a permanent duty station. Therefore, few military studies have been conducted. There is limited evidence, however, that clusters do occur in the military. For example, an Air Force study concluded that as many as 20% of suicides occurred in a cluster (Rothberg & McDowell, 1988). Navy studies found evidence for time and space clustering within 2 weeks (Hourani, Warrack, & Coben, 1999a), as well as an imitative phenomenon in a naval “A” school (an entry-level training school) (Grigg, 1988). However, two Marine Corps studies found little or no evidence of clustering (Holmes et al., 1998; Hourani et al., 1999b). Overall, there is more evidence for clustering in civilian than in military populations. Indeed, the CDC (1988) has issued recommendations for the prevention and containment of clusters of suicides, and the AAS (2004) has guidelines for the media to discourage imitative suicides. The civilian literature suggests the following: (1) both suicide and suicide attempts cluster (Gould & Shaffer, 1986), (2) clustering occurs among psychologically disturbed individuals, (3) cluster victims knew about the suicide but did not personally know the other victims, and (4) clustering is most common in the young (ages 15–24).

### **Suicide Attempts, Gestures, and Ideation**

There are no data on DoD-wide suicide attempts or gestures, although some individual service and command data have been collected and examined (see review in Ritchie, Keppler, & Rothberg, 2003). In the first population-based study to identify and analyze nonfatal suicide attempts (parasuicides) in the U.S. Navy and Marine Corps, hospital and personnel records of 4,578 Navy and Marine Corps hospitalized parasuicides from 1989 to 1995 were examined. The ratios of hospitalized parasuicides to completed suicides were an estimated 7:1 in the Navy and 5:1 in the Marine Corps (Trent, 1999). Parasuicide rates for women were two to three times higher than those for men. A psychological disorder was diagnosed in 95% of the cases; the leading diagnosis was personality disorder (53%), followed by substance abuse (36%). The aggregate profile of a parasuicide in this study included the following characteristics: a young (18–21 years old), female Navy E1–E2 with a low level of education and a diagnosable mental disorder, who was hospitalized for 1 week after a self-inflicted drug overdose and then returned to duty (Trent, 1999).

In a subsequent record review of 100 consecutive suicidal cases admitted to the Walter Reed Army Medical Center, 94% were admitted with a

depressed mood, 67% had a history of previous attempts or gestures, and 49% had been treated with psychiatric medications prior to admission (Ritchie et al., 2003). Almost half were returned to full duty status. The following summarizes more research findings on military suicidal behavior.

1. One-hundred seventy-nine instances of suicidal behavior were seen in Army and Air Force personnel psychiatry services during a 6-month period of 1968. Ninety-seven percent of those were diagnosed with personality disorders or acute situational maladjustment; 88% were returned to duty without hospitalization (Sawyer, 1969).
2. The Army's hospitalized self-inflicted injury rates ranged from 49 to 94 per 100,000 during 1975–1985. No correlation was observed with the death rate or troop strength (Rock, 1988).
3. Fifty-four active-duty Army trainees were seen for parasuicidal behavior in a 16-month period in 1989–1991; 100% had a principal diagnosis of adjustment disorder (Koshes & Rothberg, 1992).
4. Several Recruit Temperament Survey items predicted suicide gestures among recruits at the Naval Training Center (Hoiberg & Garfein, 1976).
5. Unlike active-duty personnel, the primary characteristics among older suicidal veterans utilizing a crisis intervention hotline were loneliness, alcoholism, and unemployment (Porter, Astacio, & Sobong, 1997).

Fortunately, population-based estimates of suicidal ideation are available from the DoD Surveys of Health-Related Behaviors administered approximately every 3 years to a representative sample of military personnel worldwide (Bray et al., 2003). In the most recent survey, conducted in 2002, the estimated prevalence of the preceding year's suicidal ideation was 5.1%, compared with an estimated prevalence of 3.8% in 1998 (Vincus et al., 1999). The difference was statistically significant ( $t = 2.5$ ;  $p < .05$ ) and was primarily accounted for by a large increase in the Navy estimate (1.9% in 1998 to 6.4% in 2002). The other services were about the same and/or not significantly increased (Bray et al., 2003). This finding demonstrates the importance of having comparable data across services. Consistent data require uniform definitions for the full range of military suicidal behaviors, including ideation, attempts, and completions.

### **Suicide Assessment and Surveillance**

In recent years, suicide surveillance has become an important focus of the DoD. Its Suicide Prevention and Risk Reduction Committee (SPARRC)

was created to formalize suicide prevention education and to improve the identification of and access to care for high-risk individuals. Representatives of all service branches meet to coordinate suicide prevention and surveillance activities.

Currently, each service branch conducts its own suicide surveillance program and collects a varied range of suicide data with its own instruments from varied sources. The exception is the Department of the Navy (DON), which developed a joint Navy and Marine Corps suicide surveillance system in 1999. This reporting system, based on the DON Suicide Incident Report, or DONSIR (Jones, Hawkes, Gelles, Hourani, & Kennedy, 1999), collects comprehensive risk data in an electronic database (Jones et al., 2001). This database provides quantifiable, standardized, and psychological autopsy-related information on all completed DON suicides on active duty at the time of the event. In addition to the demographic, military, incidental, medical, psychological, support service utilization, and command-specific data covered with the DONSIR, this system also collects valuable narratives on circumstances, risk factors, and the victims' emotional status. Sources for this reporting system include DD Form 1300 (Report of Casualty), death certificates, autopsy reports, medical records, mental health records, family advocacy and other helping services records, local criminal records, financial and credit reports, personnel records, personnel information files, national criminal databases, and SGFI paperwork (Hourani, Hilton, Kennedy, & Robbins, 2001).

Also in 1999, the Air Force instituted the Suicide Event Surveillance System (SESS). This reporting system requires agents from the Office of Special Investigations to enter completed suicide data and the mental health staff to enter records of suicide attempts. The SESS is a web-based tool that allows for direct reporting from any authorized USAF site in the world. Data sources include all those listed above for DONSIR, as well as interviews with military members and their families. The U.S. Army tracks suicide data with psychological autopsy reports (Rothberg, 1998) and uses a data-gathering surveillance worksheet for suicides based on the USAF SESS model. Information from death records is also obtained.

Given these varied programs, a DoD-wide suicide surveillance model would be prudent. SPARRC recommends that each service maintain separate suicide surveillance databases and that program managers provide the DoD with a required combined report. Such a model could improve DoD population health and prevention efforts by allowing each service to collect and analyze pooled demographics and potential risk factors across the DoD. Differences, as well as similarities, between personnel of the various services could also be established. As a result, targeted education and risk reduction could be employed to decrease future suicide events. This could

**TABLE 7.1. Major Domains Recommended for a DoD Suicide Surveillance Model**

Domain	Description
Personal/casualty information	<ul style="list-style-type: none"> <li>Provides basic demographic information about the case.</li> </ul>
Military information	<ul style="list-style-type: none"> <li>Provides military and work information about the case.</li> </ul>
Event information	<ul style="list-style-type: none"> <li>Provides information surrounding the actual suicide event.</li> </ul>
Support services information	<ul style="list-style-type: none"> <li>Provides information about support services rendered to the victim prior to the event.</li> </ul>
Medical information	<ul style="list-style-type: none"> <li>Provides pertinent medical and psychiatric history and symptoms of the victim.</li> </ul>
Situational factors	<ul style="list-style-type: none"> <li>Provides information on other social and environmental risk factors of the victim.</li> </ul>
Narrative information	<ul style="list-style-type: none"> <li>Provides added information about precipitating and risk factors and possibly lessons learned that are not obviously stated in other domains.</li> </ul>

also save the DoD a great deal of money and lost productivity. Table 7.1 exhibits recommended major domains for a combined DoD suicide surveillance report.

### Conclusions and Recommendations

Epidemiological investigations can promote the identification of individuals at risk and evaluate effective prevention and intervention strategies. Suicide surveillance in the military demands the best possible data on a difficult population. To properly compare rates across services, it is important to consider how many cases are pending final determination, to require consistent definitions and criteria for active-duty cases, and to encourage systematic investigations across service branches. Overall, DoD needs comparable base populations, or it must stratify or statistically control for sociodemographic differences. A cross-service suicide database is recommended to ensure consistency in data collection and analysis methods. An important movement in this direction is the combined suicide database of the Navy and Marine Corps since 1999. This joint suicide surveillance program and database have standardized data collection procedures and made it possible to make comparisons across these two services. Having comparable data across all services would help to mitigate the limitations of the low base rate of suicide in the military and better inform the development and improvement of suicide prevention efforts.

## RESOURCE ISSUES IN SUICIDE PREVENTION AND TREATMENT

Approaches to suicide prevention for each of the military services are multi-dimensional in perspective and multimodal in practice. Each military suicide is recognized as a tragic event and occasions a review of preventive procedures at the local level. All services have robust suicide prevention programs that often work in joint service collaboration. These programs integrate multidisciplinary capabilities to assist commanders in implementing local programs that reflect best practices in suicide prevention.

Suicide prevention and awareness programs throughout the DoD take a community approach, according to Dr. David Tornberg (2004), deputy assistant secretary of defense for clinical and program policy, and chief medical officer, TRICARE Management Activity: “While there is a large healthcare component to the suicide prevention program, it is sponsored by the military leadership, and involves the chaplains, family support centers, the chain of command and each individual service member in identifying someone in crisis who needs help.”

### Military One Source

The DoD has coordinated with the military services in launching a toll-free, 24-hour, 7-day-a-week referral and information service available on the Internet and telephone for active-duty members, family members, deployed civilians, and mobilized reserve and National Guard. This service, called the Military One Source Program, provides assistance and information on issues ranging from relocation (e.g., where to find pet care in a new town) to deployment, reintegration, and crisis assistance. Callers who may pose a risk to themselves or others are directly connected with local community assistance resources in what is called a “warm hand-off.” The phone counselor stays on the phone line with the at-risk caller until a live connection is made with a representative of the appropriate local community resource agency. Service members and their families can access One Source through service-specific websites and phone numbers.

- *Army One Source*—Website: [www.armyonesource.com](http://www.armyonesource.com) (user name: army; password: onesource). Phone: U.S. (800) 464-8107. Outside the United States: U.S. access code + (800) 464-8107 (all 11 digits must be dialed). Hearing-impaired: (800) 364-9188. Spanish speakers: (888) 732-9020.
- *Navy One Source*—Website: [www.navyonesource.com](http://www.navyonesource.com) (user name: navy; password: sailor). Phone: (800) 540-4123.

- *Air Force One Source*—Website: [www.airforceonesource.com](http://www.airforceonesource.com) (user name: airforce; password: ready). Phone: (800) 707-5784.
- *USMC One Source*—Website: [www.mccsonesource.com](http://www.mccsonesource.com) (user name: marines; password: semper fi). Phone: (800) 869-0278.

## Service-Level Policy

Because suicide is often associated with problems that may respond to preventive or medical intervention, each service prevention program has emphasized the importance of early identification and intervention with problems that detract from personal and unit readiness. Each service tailors its suicide prevention programs to its own culture and operational requirements. Across the armed forces there is a long history of providing prevention and intervention for suicidal service members in conjunction with long-standing sources of military assistance. This assistance has occurred in the context of the chaplaincy, family support center, and medical intervention.

As a reflection of society, the military in its accession of new recruits grapples with a wide range of psychosocial concerns, including suicide. Help for a distressed service member has long been available through military support systems. But there remains difficulty in getting service members the help they need. Roadblocks to care include the tough-it-out mentality of service members, the fear that looking for help will damage one's career, and the very fact that psychological difficulties themselves often result in the avoidance of any social contact or assistance from others. To ensure access and receipt of mental health support, it became clear that it was a leader's job to be alert to the needs of subordinates, and it was necessary to ensure that all service members recognized their duty to take action in response to their fellow soldiers, sailors, Marines, and airmen.

### *Army*

The Army inaugurated the first formal service-level suicide prevention program in 1984 when the Army chief of staff convened a panel of experts to review existing procedures and interventions and to recommend actions and policy formulation. The culmination of this process occurred in 1988 when Department of the Army Pamphlet 600-24 was released. It stated that "suicide prevention must be the business of every leader, supervisor, soldier, and civilian employee in the Army. To facilitate this effort, a coordinated program for suicide prevention is needed at every Army installation and separate activity" (U.S. Department of the Army, 1988, para. 2-1). Utilizing proactive leadership involvement, the plan mandated command-level policies and actions. Efforts at every installation were coordinated through

a task force that orchestrated installation staff and support agencies. In 2000 the AAS and the U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM; 2000) collaborated to refine the Army program and released *Suicide Prevention: A Resource Manual for the United States Army*. In addition, the Army launched a new suicide prevention campaign focused on five broad strategies: (1) developing positive life-coping skills, (2) encouraging help-seeking behaviors, (3) raising and maintaining vigilance for suicide prevention, (4) focusing on synchronizing and integrating installation programs, and (5) conducting surveillance and analysis (Swanner, 2003; Tornberg, 2004).

### *Navy*

In 1992 the Navy issued suicide prevention guidance for all commands under a Health Promotions instruction (U.S. Department of the Navy, 1992). This mandated both Navy-wide suicide prevention training and crisis support. The Navy is also active in joint service and interagency collaboration to form partnerships for prevention and intervention initiatives. Although the Navy and Marine Corps are separate services, they both fall under the umbrella of the Department of the Navy (DON). The Navy suicide prevention program incorporates initiatives and funding dollars from a variety of agencies within DON. In 1998, DON launched a comprehensive suicide prevention program integrating (1) policy and guidance, (2) epidemiological research, and (3) training. This joint service program integrates these components so that policy, research, and training each complement and refine the others. Through this synergy, training is refined and informed by research and policy, policy statements are updated according to research, awareness of prevention policy is sustained through training, and research provides an empirical basis for program initiatives. The Navy, like the other services, releases on at least an annual basis leadership messages of concern, promoting suicide prevention and early access to professional assistance for personal problems. Epidemiological research is conducted via DONSIR, discussed above. This database provides information on suicide trends and assists leaders in improving local and service-level suicide prevention efforts. In 2001, the Navy and Marine Corps standardized its annual suicide prevention training program for over a half million Navy and Marine personnel. Since that time, the Navy has produced two videos for required, annual all-hands training. In an example of collaboration with a civilian agency, the first video script was adapted by the Los Angeles County Sheriffs Department (2002) for a suicide prevention training video called *Rolling Back-Up*. The second Navy-specific video (U.S. Department of the Navy, 2003) won two prestigious production awards for creative presentation of information on suicide prevention and interven-

tion strategies. In recognition that suicide prevention also involves the promotion of healthy lifestyles, the Navy in 2000 developed 18 public service announcements on this topic for broadcast to the fleet and in 2003 produced a stress resiliency pocket guide for sailors, *Thriving on Stress* (Navy Personnel Command, 2003).

### *Marine Corps*

The Marines augment their partnership with the Navy suicide prevention program with an integrated delivery of mental health resources to deployed units. The Navy medical department and Navy Chaplains Corps provide the Marine Corps with its medical and spiritual support. The Marine Corps is refining its integration of medical and mental health providers into deployed units in the OSCAR (Operational Stress Control and Readiness) program, in which mental health professionals are embedded with Marine divisions. Active-duty Navy psychologists, psychiatrists, and psychiatric technicians are deployed as members of forward Marine units. Specially trained senior noncommissioned Marine officers and Navy chaplains in these units then serve as eyes and ears among deployed units to watch for individuals who may benefit from referral to a mental health professional. This deployment and coordination with enlisted leadership helps reduce stigma and resistance to seeking assistance and increases familiarity with helping professionals. Integration into the unit provides consistent support and early intervention and helps to reduce the risk of suicidal behavior in forward deployed units (Gaskin, 2003).

### *Air Force*

The Air Force suicide prevention program consists of 11 initiatives (Campise, 2003). The consistent theme of this service's initiatives is active leadership involvement in an integrated, multilevel, community-based program consisting of education, access to care, and empirical analysis. These initiatives are described in a U.S. Department of the Air Force (2001) pamphlet:

1. *Leadership involvement:* Designated as an Air Force Chief of Staff Program, this has given the leadership muscle necessary to ensure that the guidance is followed and the program is maintained. The chief of staff in essence says to commanders in the field, "This is important to me; it also needs to be important for you."

2. *Suicide prevention in professional military education (PME):* The program is incorporated into curriculum requirements for PME as Air Force members advance in their careers.

3. *Leaders as gatekeepers*: Leaders are encouraged through program information marketing and community awareness initiatives to perceive themselves as guardians of a unit climate that ensures early access to mental health care.

4. *Community prevention services*: Local Air Force mental health services are encouraged to provide proactive suicide prevention to the community and to count provision of these services as a priority when considering staffing requirements.

5. *Annual suicide prevention training*: This requirement is formalized in Air Force Instruction (AFI) 44-154 (U.S. Department of the Air Force, 2003b), which specifies that annual suicide prevention training shall occur for all active duty, reserve, guards, and civilian personnel.

6. *Investigative interview hand-off policy*: Upon review of the circumstances surrounding Air Force suicides, a significant proportion was found to be associated with recent legal and administrative problems. To ensure that individuals facing charges were assessed for suicide risk, the Air Force Chief of Staff clarified the investigative interview policy to require that investigative agencies directly transfer custody of USAF service members to an individual in the service member's chain of command following any investigative interview. The command would then be responsible for assessing the member for suicide risk.

7. *Critical event stress management*: AFI 44-153 (U.S. Department of the Air Force, 1999) establishes a multidisciplinary team to respond in the aftermath of USAF suicides. This team is responsible for assessment and any required debriefing of coworkers and personnel involved in the circumstances of the suicide. This step is taken to decrease the probability that the suicide will model dangerous behavior for other at-risk personnel and to provide easy access to care and assistance for any affected personnel.

8. *Integrated Delivery System (IDS) and Community Action and Information Board (CAIB)*: The Air Force has established local networks and teams of assistance agencies and personnel to encourage collaborative integration of services at each USAF installation. These teams of helping services are created to increase the level of interagency collaboration in local Air Force communities to better serve their constituents.

9. *Limited patient–psychotherapist privilege*: AFI 44-109 (U.S. Department of the Air Force, 2000) provides guidance consistent with the *Manual for Courts-Martial* (2000), which lists Military Rules of Evidence 513 governing all DoD Services. This ensures that limited psychotherapist–patient privilege exists for cases involving charges under the Uniform Code of Military Justice (UCMJ). This privilege is limited in that no privilege may exist if the patient has died, if there is any evidence of spousal abuse, if the disclosure of the psychotherapist interview is required by law, if there is any likelihood of child abuse or danger to oneself or others, if the interview

involves disclosure of future crimes or fraud, or if disclosure of the interview is necessary for the protection of classified information or military property.

10. *Behavioral Health Survey*: This Air Force survey tool is available for any commander who would like to assess his or her unit's behavioral health climate to ensure that a community culture exists that can support mental health and protect against behavioral problems like suicide.

11. *Suicide Event Surveillance System (SESS)*: This provides the Air Force with a centralized surveillance system for fatal and nonfatal injuries. The resulting epidemiologic database is analyzed to further inform the Air Force suicide prevention program.

This interlocking system of Air Force policies and programs has been lauded by both military and civilian health promotion agencies. The Air Force has launched an interactive web-based training tool called the *Leaders' Guide to Managing Personnel in Emotional Distress*: [afsp3.afms.mil/leadersguide/default.htm](http://afsp3.afms.mil/leadersguide/default.htm) (U.S. Department of the Air Force, 2003a). This guide provides a quick reference for military leaders at all levels, with up-to-date information on service-level policies and procedures for immediate assistance on a multitude of personal problems, including suicide. The Navy and Marine Corps are developing similar products. This is a good example of how the military services are learning from each other's successes and collaborating to provide better prevention services to all military members.

The assistant secretary of defense for health affairs established a joint military service committee for the purpose of promoting consistent suicide prevention and reduction programs, research, and policies. SPARRC has become a forum for comparing lessons learned and generating a consistent framework and paradigm for suicide prevention programs in the military. In general, all military programs include the following elements: leaders' messages of concern, suicide prevention training, integrated community services, life-skills training, leadership training, access to treatment, suicide awareness education, crisis intervention, postsuicide support, postsuicide assessment, and surveillance and analysis.

## CLINICAL MANAGEMENT OF SUICIDAL PATIENTS

In the mental health arena, suicidal patients are the most common emergency cases seen by clinicians. Caring for suicidal patients consistently ranks as the most stressful occupational challenge faced by mental health professionals (see discussion in Berman & Jobes, 1991). Summarizing recent research, Bongar (2002) indicates that trainees had a 1 in 7 chance

of losing a patient to suicide, whereas over the course of their careers psychologists had a 1 in 3 chance and psychiatrists a 1 in 2 chance of experiencing such a loss. He concludes that training programs need to convey that patient suicide is a “real occupational hazard for those clinicians involved in direct patient care” (p. xxi).

If the public health threat of suicide is so real that clinicians need to soberly consider the possibility of losing a patient to suicide, then military providers must heed this warning even more, given the unique challenges they face in conducting their clinical activities in difficult environments such as hostile fire zones, remote duty stations, shipboard operations, and overseas settings. To support the fighting force, military mental health professionals must be expert at integrating clinical care and risk management strategies (for an example of a training initiative to enhance the confidence of Air Force clinicians in dealing with suicidal patients, see Oordt et al., 2005). In the discussion that follows, we examine the referral processes, safety procedures, and intervention strategies that commanders and helping professionals can use to reduce suicide risk and promote healthy resolution of psychiatric emergencies. Specific attention is given here to identifying cases and referrals, gathering critical assessment data through interviews and consultations, formulating a diagnostic picture, estimating risk, and determining the level of care. This section concludes with a discussion of dispositional considerations in consulting with commanders about fitness for duty and suitability for military service.

## **Case Identification and Referral**

The cornerstone of military suicide prevention efforts is training leaders (e.g., supervisors), community gatekeepers (e.g., school leaders and agency personnel), coworkers, and family members to act as first responders. A first responder is someone who recognizes the threat or risk of suicide and acts to decrease the risk by linking the suicidal person to an appropriate source of help. Typically, first responders are people in the family, military unit, or work center who have occasion to observe or interact with someone at risk for suicide. The problem is that when someone is in crisis, no one person has all the pieces of the puzzle at his or her disposal to immediately identify the level of risk. For example, a coworker may know about a colleague’s dissatisfaction with her job but may not know that she had a previous suicide attempt or has a family history of depression and suicide. Given that over 80% of those who attempt suicide provide verbal and behavioral clues prior to the incident (Berman & Jobes, 1991), the key to a proactive response is taking seriously anyone who talks about suicide. The questions asked by first responders and the actions they take play an indispensable role in keeping suicidal people safe. For military populations, sev-

eral tools to educate first responders have been developed. For example, as a metaphor for actions to support individuals deemed at risk for suicide, the Air Force created the acronym LINK, in which L = Look for possible concerns, I = Inquire about those concerns, N = Note the level of risk, and K = Know your referral sources and strategies (Staal, 2001; U.S. Department of the Air Force, 2003b). Similarly, in an example of interservice collaboration, the Navy and Marine Corps adopted the acronym AID LIFE, from the Army's Center for Health Promotion and Preventive Medicine, for video training in the U.S. Department of the Navy (2000):

- **A: Ask.** Don't be afraid to *ask*, "Are you thinking about hurting yourself?" or "Are you thinking about suicide?"
- **I: Intervene immediately.** Take action. Listen and let the person know he or she is not alone.
- **D: Don't keep it a secret.**
- **L: Locate help.** Seek out the officer on duty, chaplain, physician, corpsman, friend, family member, crisis line worker, or emergency room staff.
- **I: Inform the Chain of Command** of the situation. The chain of command can secure necessary assistance for the long term. Suicide risk does not get better with quick solutions. Effective problem solving takes time, and the chain of command can monitor progress to help avert future difficulties.
- **E: Find someone to stay with the person now.** Don't leave the person alone.
- **E: Expedite.** Get help now. An at-risk person needs immediate attention from professional caregivers.

At their heart, the LINK and AID LIFE training strategies emphasize the critical role of first responders in observing problem behaviors and initiating referrals for further assessment to determine the level of risk and intervention options. Another significant aspect of these strategies is to destigmatize help-seeking behaviors for personnel and their families. Once a case is identified, the referral process begins. What may vary is the immediacy of access to specialty consultations and inpatient care for those needing to be in a safe environment. Across a variety of military settings (e.g., hospitals, shipboard operations, field training, and combat operations), the essential features of the referral process are similar: (1) identify the person at risk, (2) link the person to professional support (e.g., chaplains or medical personnel) and inform the chain of command, (3) obtain medical assessment (e.g., triage, emergency room visit, specialty consults, and laboratory panels when indicated), and (4) pursue mental health consultation and

evaluation (e.g., safety assessment, determination of treatment level, and liaison with the command about findings).

## Gathering Critical Assessment Data

Given that an at-risk person has been appropriately identified and referred, what is the most critical information that helping professionals need to determine diagnosis, level of risk, and intervention options (e.g., outpatient management vs. inpatient treatment)? Efforts directed toward answering this question have produced a large, diverse, and sometimes confusing literature on the assessment of suicide risk, including that for military populations. Indeed, Shaffer (1997) criticized military training materials from the 1980s and early 1990s for the use of unweighted lists of risk factors and warning signs that tend to combine without distinction highly predictive risk factors (e.g., suicide statements and previous attempts) with warning signs common for both suicidal and nonsuicidal populations that have relatively low predictive value (e.g., financial and relationship problems). The net effect was to create long lists of difficult-to-remember warning signs that reduced the “visibility and significance” of critical factors such as a history of previous attempts, current suicidal ideation, and a history of depression.

Even with knowledge of the most critical risk factors, it is important to note that “hard and fast actuarial data on the long-term prediction of attempted or completed suicide—predictions that can be directly translated to the emergent clinical moment—do not currently exist” (Bongar, 2002, p. 88). To rephrase the question that opened this section, how do we obtain critical information for risk assessment? The answer, simply put, is to conduct a good diagnostic interview (Rosenberg, 1999; Shea, 1998). The components of such an interview include (1) obtaining identifying information and relevant facts about the presenting problem; (2) gathering information about the history of the problem and other pertinent history (e.g., medical, psychiatric, medication, social, and family data); (3) conducting a mental health screening to assess depression, anxiety, substance use, and psychosis; (4) eliciting specific information about key risk and protective factors; (5) conducting a suicide-specific inquiry about past behavior, present ideation, and intent and access to means for self-harm; (6) formulating a diagnosis and attempting to engage in a safety contract; and (7) estimating the level of risk and making recommendations about the level of care and follow-up (e.g., outpatient vs. inpatient support).

In recent years, input from leading suicidologists has improved education on suicide assessment in the DoD through consultation, training symposia, and research. With respect to policy guidance on risk assessment,

military mental health providers follow the accepted canons of professional governing bodies (e.g., American Psychiatric Association and American Psychological Association) regarding the ethical and legal obligations of clinicians to give reasonable care to patients deemed at risk for harm to themselves or others. DoD policy places mental health evaluations related to imminent danger under the purview of credentialed DoD psychologists, psychiatrists, and doctoral-level social workers. However, in practice, initial assessments are often conducted by a variety of professionals, including general medical officers, alcohol counselors, chaplains, psychiatric technicians, and emergency room personnel. According to the DoD Instruction 6490.4 (U.S. Department of Defense, 1997), mental health evaluations should include a record review, clinical history, mental status examination, assessments for suicide and homicide potential, psychological testing (if applicable), physical examination (if applicable), diagnosis, and recommendations for treatment and administrative management. Specific questions in the DoD instruction related to suicide assessment are discussed later in this section.

With respect to the methodology of risk assessment, the preponderance of literature focuses on guidelines for data to be gathered, risk factor information, and the clinical decision-making process. Relatively little attention has been given to conducting suicide-focused clinical interviews. The task of obtaining interview data requires both compassionate concern and a tenacious pursuit of critical information from the patient and/or collateral sources (e.g., family members, coworkers, and command representatives). Indeed, the first objective in managing a suicidal emergency is establishing a sound working alliance with the patient (Kleespies, Deleppo, Gallagher, & Niles, 1999). Shea (1998) noted that "if ever there were a moment of critical importance in interviewing, it is the moment when one listens for the harbingers of death" (p. 444). Interviewers who are comfortable talking about a subject as difficult as suicide can offer a basis of hope and set the groundwork for patients to make life-affirming choices in dealing with their pain and despair. One practical methodology for eliciting information from patients on the presence and extent of suicidal ideation is the Chronological Assessment of Suicide Events (CASE). The CASE approach (Shea, 1998) offers clinicians an easily learned structure for gathering critical information in four specific regions of inquiry: (1) the presenting concern or suicidal event, (2) recent ideation and incidents over the past 2 months, (3) past suicidal events (2+ months and beyond), and (4) immediate ideation and plans for the future. Interested readers are referred to Shea's (1998) excellent text on psychiatric interviewing for details on employing this valuable strategy. What is useful for the present discussion is the ease with which questions specified in DoD policy related to suicidal

ideation, intent, plan, behaviors, and attempts can be adapted in the CASE approach. The following structured interview links assessment questions from DoD to the natural flow of topics from the CASE approach.

#### Presenting ideation or event

##### *Questions for patients who present with potential suicidal ideation*

- “Do you have any thoughts about suicide or hurting yourself?”
- “How long have you had these thoughts?”
- “Do you wish to die?”
- “Do you have a specific plan or intent to kill yourself? Will you hurt yourself or allow yourself to be hurt ‘accidentally’ or on purpose?”
- “Do you have access to a weapon or other ways to kill yourself?”

##### *Questions for patients who present after a suicide gesture or attempt*

- “What did you do to try to kill/hurt yourself?” (Get specifics about the number of pills, amount of alcohol consumed, type of cuts made, etc.)
- “Was there a particular stressor or set of stressors that prompted your suicide attempt?”
- “Did you intend to die?”
- “How long had you been planning to do this?”
- “How were you found? How did you get to the hospital?”
- “What are your thoughts about being alive now?”

#### Recent suicidal events (past 1–2 months)

- “During this past couple of months, did you think about any ways to commit suicide?”
- “During this time, did you take any action with the intent of killing yourself, but not go through with it?”
- “Over the past month, how much time daily did you think about killing yourself?”
- “As you thought about suicide, was there something you thought would happen or you would achieve through your death?”

#### Past suicidal events (more than 2 months past)

- “Have you ever tried to kill yourself in the past, including when you were a teenager or a child?”
- “If so, what did you do? How many times did this happen? How serious were your injuries? (Were you hospitalized?) Did you want to die?”

- “What about vague suicidal thoughts/feelings in the past? What were the circumstances?”
- “Has a family member or a friend ever made a suicide attempt or died by suicide? (If so, who and when?)”

### Immediate Concerns

- “Right now, are you having thoughts of killing yourself?”
- “If you had suicidal thoughts later today or tomorrow, what would you do?”
- “Are you willing to make a safety contract so you agree not to kill or hurt yourself?” If yes, write patient’s statement (see Bongar, 2003, for a discussion on the risks and benefits of “no suicide” safety contracts). If no, determine the level of risk and if warranted seek consultation regarding psychiatric hospitalization.

With answers to these questions in hand, clinicians can move to the next steps in suicide assessment: formulating diagnoses, estimating risk, and determining level of intervention.

### **Diagnoses, Risk Estimation, and Level of Intervention**

As in the civilian sector, the fourth edition of the American Psychiatric Association’s (2000) *Diagnostic and Statistical Manual of Mental Disorders, Text Revision* (DSM-IV-TR) provides the diagnostic framework for mental health decisions in the military. According to DSM-IV-TR, psychiatric diagnoses fall into two broad categories: clinical disorders and other conditions that may be a focus of clinical attention (Axis I) and personality disorders (Axis II). Axis I disorders commonly seen in the military population are V codes (e.g., partner relationship problems), adjustment disorders, anxiety disorders (including posttraumatic stress disorder), substance-related disorders (primarily alcohol abuse/dependence), mood disorders, and psychotic disorders. Personality disorders are enduring patterns of thinking and behaving that result in significant distress or impairment in social and/or occupational functioning.

Following from the finding that over 90% of adults who died by suicide had a diagnosable mental disorder at the time of death, a number of authors have advocated the use of diagnoses associated with high suicide risk in community-based studies as guides for risk assessment in acute cases. Kleespies et al. (1999) summarized findings from studies of completed suicides in which depression was estimated to be a factor in 50% of suicides, alcohol and drug abuse in approximately 20–25% of cases, and schizophrenia in 10% of suicide deaths. Duberstein and Conwell (1997)

reviewed a number of studies and concluded that 30–40% of all suicides are completed by individuals with Axis II disorders. Of the various types of Axis II disorders, borderline personality disorder and antisocial personality disorder have been most associated with increased suicide risk. Taken together, these risk estimates suggest that a significant overlap exists between high-risk Axis I and Axis II disorders (Kleespies et al., 1999).

Based on current symptoms, previous history of suicidal behavior, other risk factors, and the relative presence or absence of protective factors, Joiner, Walker, Rudd, and Jobes (1999), proposed a graduated 5-point continuum for determining suicide risk that ranged from nonexistent to extreme. This continuum offers differential considerations for patients who present with suicidal ideation (SI), no previous history of suicide attempts (nonmultiple attempters, or NMA), and those with histories of multiple attempts (MA). Additionally, this framework gives weight to the presence of suicidal desire and plans or preparation for suicide. As this framework has practical value for clinicians in not only estimating risk but also suggesting intervention options, it bears some discussion here. Points on the risk continuum include (1) *nonexistent*—no current symptoms, no history of suicidal behavior, and few risk factors present; (2) *mild*—NMA with suicidal ideation of low intensity and short duration or MA with no other risk factors; (3) *moderate*—MA with current risk factors, NMA with moderate to severe symptoms related to suicidal plans or preparation, or NMA with moderate to severe symptoms of SI but no or limited plans; (4) *severe*—NMA with moderate to severe symptoms regarding suicide plans and at least one other significant risk factor or MA with two or more risk factors or notable findings; (5) *extreme*—MA with severe symptoms and specific plans or NMA with plans or preparation for suicide and two or more other risk factors.

As an aid in clinical decision making, these risk estimates are linked to intervention options recommended by Joiner et al. (1999) and are integrated with concerns for military providers. Table 7.2 pairs levels of risk with suggested intervention considerations and options.

### Dispositional Considerations of Fitness and Suitability

In the military, diagnostic decisions, estimates of risk, and intervention options are closely linked to dispositional considerations of fitness for duty (for further information, see Chapter 3, this volume). Although the concept of fitness implies a dichotomous decision (fit vs. unfit), in practice there are gradations that permit some flexibility in making personnel decisions. For example, after a course of treatment (outpatient and/or inpatient), a service member whose suicidal ideation was deemed resolved or who made a suicide gesture without serious intent to die may be returned to his or her unit

**TABLE 7.2. Risk Estimates and Intervention Options**

Level of risk	Intervention considerations and options
Nonexistent/ minimal	<ul style="list-style-type: none"> <li>• Affirm present coping skills.</li> <li>• Encourage use of social support and seeking help.</li> <li>• Reiterate availability of support and access to emergency services; provide phone contact numbers.</li> </ul>
Mild	<ul style="list-style-type: none"> <li>• Bolster coping skills through individual/group counseling/treatment.</li> <li>• Encourage increased social support at home and/or within the unit.</li> <li>• Liaison with command regarding service member's status.</li> <li>• Reiterate contract for safety and options for crisis intervention (e.g., availability of phone contact, walk-in visits, access to emergency services).</li> </ul>
Moderate	<ul style="list-style-type: none"> <li>• Increase frequency/duration of outpatient follow-up (set plans to address current stressors and reduce symptoms).</li> <li>• Encourage active involvement of family and/or supportive friends/coworkers; engage command support; seek input regarding risk factors.</li> <li>• Reevaluate treatment goals and target suicide-specific concerns (e.g., reduce clinical symptoms and reduce suicidal ideation, reduce feelings of hopelessness, improve problem solving and adaptive coping, and mobilize support system and ensure accessibility to such support).</li> <li>• Consider medication evaluation, if not already in use.</li> <li>• Seek consultation for risk assessment and treatment planning, including indications for psychiatric hospitalization.</li> <li>• Encourage telephone contacts for monitoring purposes.</li> <li>• Reiterate contract for safety and provide business card/phone contacts regarding availability of emergency services.</li> <li>• Modify environment to support safety (e.g., patient turns in pills, weapons).</li> <li>• Advise command regarding deployment suitability and availability for assignment to special duty (e.g., shipboard or overseas duty).</li> </ul>
Severe/ extreme	<ul style="list-style-type: none"> <li>• Provide immediate evaluation for mental health hospitalization.</li> <li>• Initiate protocol for involuntary commitment, if warranted.</li> <li>• Ensure patient is escorted to all medical appointments; monitor patient at all times; engage active involvement of family and command (and police if needed).</li> <li>• Monitor patient at appropriate precaution level (e.g., one to one, line of sight).</li> <li>• As many of the items from the "moderate" level also apply here, make adjustments to the treatment plan as warranted, given changes in symptom/risk level.</li> <li>• Consider aeromedical evacuation to a higher echelon of care, if warranted.</li> </ul>

*Note.* Data from Joiner, Walker, Rudd, and Jobes (1999).

as fit for duty. If the severity of the presenting problem requires more extensive treatment with a specialty provider, a service member can be placed on limited-duty status for a set period of time, usually 8 months. In cases in which an individual's diagnosis reflects a severe mental illness (e.g., severe mood disorders and psychotic disorders) and the person has a limited probability of returning to full-duty status, then he or she can be processed for a medical discharge. The responsibility for making diagnostic decisions about a military member's psychiatric fitness for duty rests with the local mental health provider. In most cases, the acuity or chronicity of the presenting problem plays a major role in determining a member's duty status. The ultimate determination rests with the Central Physical Evaluation Board in Washington, DC.

Another concept pertinent to military dispositions is suitability. Whereas fitness refers to Axis I, or clinical syndromes, the idea of suitability generally concerns the Axis II, or personality disorder, dimension of diagnoses. Suitability concerns the personality traits, coping skills, and interpersonal capabilities of service members to perform their duties in a safe and harmonious way in their units. Members deemed unsuitable on the basis of a personality disorder may be recommended for administrative separation from the armed services. A personality disorder diagnosis in and of itself, however, does not mean that a person is unsuitable for the military. Typically, a recommendation for separation is made only if the service member's personality problems have been documented to show interference with his or her performance of duty.

Given the weight accorded mental health recommendations in most military settings, providers can often exercise considerable influence on the lives of service members. This is particularly true in dispositional decisions (e.g., evaluations of fitness for duty and determinations of eligibility for security clearances or special assignments), where concerns about suicide or homicide risk may affect a service member's capacity for retention in the military and/or ability to deploy to operational environments. Clinical management in the military thus requires a decision framework in which three separate but related perspectives must be considered: individual status, command mission, and clinical resources. Table 7.3 summarizes key considerations from each perspective.

Clinicians and command leaders must weigh the factors above in deciding to treat members by using local assets or to move patients to other echelons of care. Ultimately, diagnostic concerns, mission requirements, and clinical capabilities must be factored into decisions about the return of patients to duty or in making recommendations for administrative separation or medical discharge.

If, after weighing diagnostic and risk-level considerations, a clinician decides to manage a patient on an outpatient basis, then the clinician,

**TABLE 7.3.** Case Management Considerations

Individual status	Command mission	Clinical resources
<ul style="list-style-type: none"> <li>Diagnostic concerns (acute vs. chronic symptoms/effect on work performance)</li> <li>Quality of relational support</li> <li>Legal/administrative concerns</li> <li>Responsiveness to treatment</li> </ul>	<ul style="list-style-type: none"> <li>Operational status (type/intensity of work)</li> <li>Theater of service</li> <li>Manning requirements</li> <li>Likelihood of hazardous duty and/or combat deployment</li> </ul>	<ul style="list-style-type: none"> <li>Treatment availability (outpatient vs. inpatient)</li> <li>Healthcare requirements</li> <li>Access to specialty care</li> <li>Aeromedevac capabilities</li> </ul>

patient, and command need to arrange follow-up appointments, discuss level of day-to-day monitoring or establish a predetermined call-in plan, encourage social support (e.g., ensure the person is included in activities or unit functions), and develop a safety plan for emergency contacts if suicidal ideation or behavior reoccurs. In the past, recommendations typically focused on suggestions on “how not to get sued” and emphasized clinical failures derived from litigation scenarios (Bongar, 2002). While such legal concerns are real, some clinical suicidologists are seeking to develop practice recommendations based on clinical and empirical findings. Although only a few conclusions can be drawn to date, some recommendations do appear to have adequate support (Rudd, Joiner, Jobes, & King, 1999) and merit consideration by military clinicians: (1) intensive follow-up is most effective for patients with a high risk (e.g., history of multiple attempts, previous mental health history, and/or diagnostic comorbidity); (2) short-term cognitive-behavioral therapy methods that focus on problem solving have been shown to be effective at reducing suicidal ideation and hopelessness for periods of up to 1 year; (3) efforts to reduce suicide attempts require longer treatments that target skill deficits in regulating emotion, tolerating distress, managing anger, and enhancing interpersonal effectiveness; and (4) suicidal patients deemed at high risk can be treated on an outpatient basis if psychiatric hospitalization is available for acute situations.

In regard to inpatient treatment, Bongar (2002) summarized the goals of psychiatric hospitalization as (1) protecting the life and safety of suicidal patients; (2) reducing or eliminating suicidal ideation by treating underlying mental disorders; and (3) improving the capacities, skills, and psychosocial resources that foster improved coping by patients after discharge. Across the DoD, a dedicated but largely unsung network of professionals is involved in providing outpatient and inpatient care on a daily

basis to military members and their families. When treatments go well, patients get on with their lives and little attention is drawn to the services provided. When bad outcomes such as suicide occur, however, intense scrutiny can be brought to bear on the services and systems in place. In some cases, this scrutiny can engender a culture of fear, and little can be learned from the situation. In other cases, a process can unfold that brings to light service delivery problems that can be improved to prevent future incidents. An example of the latter in a military treatment facility is the Suicide Prevention Advisory Group, which met at Tripler Medical Center in Hawaii after a series of 7 suicides in a 15-month span by patients recently evaluated by hospital staff or in active treatment (Hough, 2000). Each case was analyzed, and a series of 11 recommendations was ultimately presented to the hospital for implementation. Among the key recommendations are the following: (1) provide ongoing education to mental health providers on the assessment and treatment of suicidal patients; (2) increase awareness in the local community about depression and risk factors for depression, as well as awareness about the availability of treatment resources; (3) educate staff on the criteria to be used in making decisions about whether or not to admit patients to the psychiatry ward, including involuntary admissions; and (4) improve communication between the hospital and outlying clinics regarding suicidal patients. Implementation of these recommendations increased awareness of staff and residents about assessment and treatment of suicidal patients. Such awareness contributed to the ending of the suicide cluster, as no suicides occurred in the ensuing 22 months.

Several considerations are important concerning the return of service members to their units after psychiatric hospitalization (F. C. Budd, personal communication, March 2004): (1) clear communication by the attending mental health provider to senior command leaders about the diagnosis and disposition of the patient, including a considered opinion about the patient's prognosis; (2) documentation of a clear follow-up plan, including face-to-face appointments with a mental health provider on at least a weekly basis until the patient's risk level is significantly reduced; and (3) advising patients of their responsibilities for treatment compliance and positive behavioral choices (e.g., commanders cannot overlook misconduct or irresponsible choices such as drinking and driving). Also, mental health providers need to recognize that commanders have an array of nonmedical options to support their troops, such as reassignment of service members to new work centers or supervisors for a "fresh start"; designation of a buddy or mentor to facilitate positive adjustment; and involvement of the service member in social activities, educational pursuits, and special projects to promote competence and skill building. Patients recommended for separation from the service because of personality disorders or chronic adjustment problems need to be informed about the status of their cases. These

patients sometimes generate animosity from others for “not fulfilling their contracts” or “not pulling their weight,” but interest in their well-being can prevent an escalation of distress that could create an additional administrative burden or contribute to readmission for suicidal ideation or behavior.

## SUMMARY

In this chapter, we take a comprehensive look at suicide prevention across the DoD, with emphases on epidemiological concerns, suicide prevention resources, and clinical practices in assessment and treatment. Specific attention has been given to cross-service comparisons, risks and protective factors, population-based research on suicides, and suicidal gestures and attempts. A case was made for the need to develop a DoD-wide suicide surveillance system. Multidisciplinary and community-based suicide prevention programs have been noted for each service. Also, practical strategies for clinical assessment and intervention have been discussed with an eye to the issues and concerns of troop leaders. As the military has been at the forefront of national efforts in suicide prevention, continued collaboration among the services should spur further innovation in addressing suicide as a serious public health problem in the United States.

## REFERENCES

American Association of Suicidology (AAS). (2004). *Some facts about suicide in the U.S.A.* Available at [www.suicidology.org](http://www.suicidology.org).

American Association of Suicidology & U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM). (2000). *Suicide prevention: A resource manual for the United States Army*. Aberdeen Proving Ground, MD: Author.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: Author.

Army Chief of Public Affairs. (2000, Spring). Hot topics: Suicide prevention. *Soldier Magazine*.

Berman, A. L., & Jobes, D. A. (1991). *Adolescent suicide assessment and intervention*. Washington, DC: American Psychological Association.

Bongar, B. (2002). *The suicidal patient: Clinical and legal standards of care* (2nd ed.). Washington, DC: American Psychological Association.

Bray, R. M., Hourani, L. L., Rae, K. L., Dever, J. A., Brown, J. M., Vincus, A. A., et al. (2003, November). *Department of Defense survey of health related behaviors among military personnel*. Raleigh, NC: Research Triangle Institute International.

Bullman, T. A., & Kang, H. K. (1994). Posttraumatic stress disorder and the risk of traumatic deaths among Vietnam veterans. *Journal of Nervous and Mental Disease*, 182, 604-610.

Campise, R. L. (2003, November). *Air Force suicide prevention program*. Presentation at the Annual Department of Defense Suicide Prevention Conference, Quantico, VA.

Centers for Disease Control and Prevention (CDC). (1988). CDC recommendations for a community plan for the prevention and containment of suicide clusters. *Morbidity and Mortality Weekly Reports*, 37(S6), 1-12.

Centers for Disease Control and Prevention (CDC). (1997). National Center for Injury Prevention and Control. Regional variations in suicide rates—United States, 1990–1994. *Morbidity and Mortality Weekly Reports*, 46(34), 789–793.

Centers for Disease Control and Prevention (CDC). (1998). Suicide among black youths—United States, 1980–1995. *Morbidity and Mortality Weekly Reports*, 47(10), 193–196.

Centers for Disease Control and Prevention (CDC). (2004). National Center for Injury Prevention and Control. *Suicide in the United States*. Available at [www.cdc.gov/ncipc/factsheets/suifacts.htm](http://www.cdc.gov/ncipc/factsheets/suifacts.htm).

Duberstein, P. R., & Conwell, Y. (1997). Personality disorders and completed suicide: A methodological and conceptual review. *Clinical Psychology: Science and Practice*, 4(4), 359–376.

Faberow, N. L., Kang, H. K., & Bullman, T. A. (1990). Combat experience and postservice psychosocial status as predictors of suicide in Vietnam veterans. *Journal of Nervous and Mental Disease*, 178, 32–37.

Fragala, M. R., & McCaughey, B. G. (1991). Suicide following medical/physical evaluation boards: A complication unique to military psychiatry. *Military Medicine*, 156, 206–209.

Gaines, T., & Richmond, L. H. (1980). Assessing suicidal behavior in basic military trainees. *Military Medicine*, 145, 263–266.

Gaskin, T. A. (2003, November). *United States Marine Corps suicide prevention program*. Presentation at the Annual Department of Defense Suicide Prevention Conference, Quantico, VA.

Gould, M. S., & Shaffer, D. (1986). The impact of suicide in television movies. Evidence of imitation. *New England Journal of Medicine*, 315, 690–694.

Grigg, J. R. (1988). Imitative suicides in an active duty military population. *Military Medicine*, 153, 79–81.

Harvard Mental Health Letter (HMHL). (2003, May). *Confronting suicide* (Part I). Cambridge, MA: Harvard Medical School.

Helmkamp, J. C. (1995). Suicides in the military: 1980–1992. *Military Medicine*, 160, 45–50.

Helmkamp, J. C. (1996). Occupation and suicide among males in the U.S. armed forces. *Annals of Epidemiology*, 6, 83–88.

Hoiberg, A., & Garfein, A. D. (1976). Predicting suicide gestures in a naval recruit population. *Military Medicine*, 412, 327–331.

Holmes, E. K., Mateczun, J. M., Lall, R., & Wilcove, G. L. (1998). Pilot study of suicide risk factors among personnel in the United States Marine Corps (Pacific forces). *Psychological Reports*, 83, 3–11.

Hough, D. (2000). A suicide prevention advisory group at an academic medical center. *Military Medicine*, 165, 97–100.

Hourani, L. L., Hilton, S., Kennedy, K., & Robbins, D. (2001). *Department of the Navy Suicide Incident Report (DONSIR): Summary of 1999–2000 findings* (Report No. 01-22). San Diego, CA: Naval Health Research Center.

Hourani, L. L., Warrack, A. G., & Coben, P. A. (1999a). A demographic analysis of suicide among U.S. Navy personnel. *Suicide and Life-Threatening Behavior*, 29, 365–375.

Hourani, L. L., Warrack, A. G., & Coben, P. A. (1999b). Suicide in the U.S. Marine Corps: 1990–1996. *Military Medicine*, 164, 551–555.

Joiner, T. E., Walker, R. L., Rudd, M. D., & Jobes, D. A. (1999). Scientizing and routinizing the assessment of suicidality in outpatient practice. *Professional Psychology: Research and Practice*, 30, 447–453.

Jones, D. E., Hawkes, C., Gelles, M., Hourani, L., & Kennedy, K. R. (1999). *Department of the Navy Suicide Incident Report* (NAVMC 11410). Washington, DC: U.S. Department of the Navy.

Jones, D. E., Kennedy, K. R., Hawkes, C., Hourani, L. L., Long, M. A., & Robbins, N. L. (2001). Suicide prevention in the Navy and Marine Corps: Applying the public health model. *Navy Medicine*, 92(6), 31–36.

Kawahara, Y., & Palinkas, L. A. (1991). Suicides in active-duty enlisted Navy personnel. *Suicide and Life-Threatening Behavior*, 21, 279–291.

Kleespies, P. M., Deleppo, J. D., Gallagher, P. L., & Niles, B. L. (1999). Managing suicidal emergencies recommendations for the practitioner. *Professional Psychology: Research and Practice*, 30, 454–463.

Knox, K. L., Litts, D. A., Talcott, G. W., Feig, J. C., & Caine, E. D. (2003). Risk of suicide and related adverse outcomes after exposure to a suicide prevention programme in the U.S. Air Force: Cohort study. *British Medical Journal*, 327, 1376–1378.

Koshes, R. J., & Rothberg, J. M. (1992). Parasuicidal behavior on an active duty Army training post. *Military Medicine*, 157, 350–353.

Litts, D. A., Moe, K., Roadman, C. H., Janke, R., & Miller, J. (1999, November 26). Suicide prevention among active duty Air Force personnel—United States, 1990–1999. *Morbidity and Mortality Weekly Report*, 48(46), 1053–1057.

Loeb, V. (2004, January 15). Military cites elevated rate of suicides in Iraq. *Washington Post*, p. A14.

Los Angeles County Sheriffs Department. (2002). *Rolling back-up* [video]. Los Angeles: Author.

*Manual for Courts-Martial*. (2000). Military rules of evidence 513. Washington, DC: U.S. Government Printing Office.

Naval Environmental Health Center (NEHC). (2004). *Stress management*. Available at [www-nehc.med.navy.mil/hp/stress/Resilience.htm](http://www-nehc.med.navy.mil/hp/stress/Resilience.htm).

Navy Personnel Command. (2003). Behavioral Health Program *Thriving on stress* (NAVPER 60000A Thriving on Stress Stock number 0506LP1019435). Mechanicsburg, PA: Navy Logistics Library.

O'Donnell, L., O'Donnell, C., Warlow, D. M., & Steuve, A. (2004). Risk and resiliency factors influencing suicidality among urban African American and Latino youth. *American Journal of Community Psychology*, 33, 37–49.

Oordt, M. S., Jobes, D. A., Rudd, M. D., Fonseca, V. P., Runyan, C. N., Stea, J. B.,

et al. (2005). Development of a clinical guide to enhance care for suicidal patients. *Professional Psychology: Research and Practice*, 36(2), 208–218.

Plutchik, R., & Van Praag, H. M. (1994). Suicide risk: Amplifiers and attenuators. In M. Hillbrand & N. J. Pollone (Eds.), *The psychobiology of aggression*. Binghamton, NY: Haworth.

Porter, L. S., Astacio, M., & Sobong, L. C. (1997). Telephone hotline assessment and counseling of suicidal military service veterans in the USA. *Journal of Advanced Nursing*, 26, 716–722.

Ritchie, E. C., Keppler, W. C., & Rothberg, J. M. (2003). Suicidal admissions in the United States military. *Military Medicine*, 168, 177–181.

Rock, N. L. (1988). Suicide and suicide attempts in the Army: A 10-year review. *Military Medicine*, 153, 67–69.

Rosenberg, J. I. (1999). Suicide prevention: An integrated training model using affective and action-based interventions. *Professional Psychology: Research and Practice*, 30, 83–87.

Rothberg, J. M. (1998). The Army psychological autopsy: Then and now. *Military Medicine*, 163, 427–433.

Rothberg, J. M., & McDowell, C. P. (1988). Suicide in United States Air Force personnel, 1981–1985. *Military Medicine*, 153, 645–648.

Rudd, M. D., Joiner, T. E., Jobes, D. A., & King, C. A. (1999). The outpatient treatment of suicidality: An integration of science and recognition of its limitations. *Professional Psychology: Research and Practice*, 30, 437–446.

Sawyer, J. B. (1969). An incidence study of military personnel engaging in suicidal behavior. *Military Medicine*, 134, 1440–1444.

Shaffer, D. (1997). *Suicide and suicide prevention in the military forces: Report of a consultation*. New York: Columbia University.

Shea, S. C. (1998). *Psychiatric interviewing: The art of understanding* (2nd ed.). Philadelphia: Saunders.

Staal, M. A. (2001). The assessment and prevention of suicide for the 21st century: The Air Force's community awareness training model. *Military Medicine*, 166, 195–198.

Stander, V. A., Hilton, S. M., Kennedy, K. R., & Robbins, D. L. (2004). Surveillance of completed suicide in the Department of the Navy. *Military Medicine*, 169, 301–306.

Swanner, J. (2003, November). *Army suicide prevention program*. Presentation at the Annual Department of Defense Suicide Prevention Conference, Quantico, VA.

Tornberg, D. N. (2004, March). *Suicide prevention and awareness*. Available at [www.tricare.osd.mil/media/the\\_doctor18.cfm](http://www.tricare.osd.mil/media/the_doctor18.cfm).

Trent, L. K. (1999). *Parasuicides in the Navy and Marine Corps: Hospital admissions, 1989–1995*. (Technical Document 99-4D). San Diego, CA: Naval Health Research Center.

U.S. Department of the Air Force. (1999, January). *Critical incident stress management*. (Air Force Instruction AFI 44-153). Washington, DC: Author.

U.S. Department of the Air Force. (2000, March). *Mental health, confidentiality, and military law*. (Air Force Instruction AFI 44-109). Washington, DC: Author.

U.S. Department of the Air Force. (2001, April). *The Air Force suicide prevention program*. (Air Force Pamphlet AFPAM 44-160). Washington, DC: Author.

U.S. Department of the Air Force. (2003a, December). *Leaders' guide to managing personnel in emotional distress*. Available at <http://afspp.afms.mil>.

U.S. Department of the Air Force. (2003b, January). *Suicide and violence prevention, education, and training*. (Air Force Instruction AFI 44-154). Washington, DC: Author.

U.S. Department of Defense (DoD). (1997, August 28). *Requirements for mental health evaluations of members of the armed forces*. (DoDI 6490.4). Washington, DC: Author.

U.S. Department of Defense (DoD). (1999). *Community approach to suicide prevention program expanded*. (Report No. 283-99). Washington, DC: U.S. Department of Defense, Office of Assistant Secretary of Defense, Public Affairs.

U.S. Department of the Army. (1988, September). *Suicide prevention and psychological autopsy*. (Department of the Army Pamphlet DA PAM 600-24). Washington, DC: Author.

U.S. Department of the Navy. (2000). *Suicide prevention: Taking action, saving lives* [video]. Washington, DC: Naval Media Center.

U.S. Department of the Navy. (2003). *Suicide prevention: Making the critical decision* [video]. Washington, DC: Naval Media Center.

U.S. Department of the Navy, Office of the Chief of Naval Operations. (1992, February). *Health promotion program*. (OPNAV Instruction 6100.2). Washington, DC: Author.

U.S. Public Health Service. (1999). *The surgeon general's call to action to prevent suicide*. Washington, DC: U.S. Government Printing Office.

Vincus, A. A., Ornstein, M. L., Lentine, D. A., Baird, T. U., Chen, J. C., Walker, J. A., et al. (1999, October). *Health status of military females and males in all segments of the U.S. military*. Raleigh, NC: RTI International.

## CHAPTER 8



# Substance Abuse Services and Gambling Treatment in the Military

CARRIE H. KENNEDY  
DAVID E. JONES  
REVONDA GRAYSON

In 1770, Admiral Edward Vernon of the Royal Navy directed that sailors in the West Indies fleet be given a daily ration of grog, rum or whiskey diluted with water (Mateczun, 1995). The Admiral's intent was to minimize the harmful effects of drinking straight liquor on the health of sailors under his charge. The American Navy, patterned after its British predecessors, continued the practice and even formalized it through congressional legislation in 1794, marking the first documented formal substance abuse prevention effort in the U.S. military. The rationing of grog remained in effect until 1862, when it was abolished by a general order, though alcohol on U.S. Navy vessels was not banned entirely until 1914 (Sobocinski, 2004).

Substance use patterns in the military have typically been monitored during periods of conflict. During the Civil War, for example, alcohol abuse and opium use were common (Jones, 1995). In a sample of Civil War veterans from Indiana, 22.4% admitted to alcohol abuse and 5.2% noted

abuse of chloral hydrate, cocaine, morphine, or opium (Dean, 1997). Historically, however, the worst substance problems were evident in the Vietnam War: In 1971, 34% of soldiers admitted to marijuana use and 50% to the use of heroin (Jones, 1995). Toward the end of the war, more service members were medically evacuated for drug use than for war wounds (Reinstein, 1972; Stanton, 1976; Watanabe, Harig, Rock, & Kosches, 1994). In contrast, U.S. forces' exposure to alcohol during the first Persian Gulf War was minimal because Muslim tradition forbids the consumption of alcohol and Saudi Arabia prohibited its importation. Under these environmental conditions, alcohol was more difficult to acquire, and many alcohol-related problems were reduced substantially during this conflict (Watanabe et al., 1994).

In 1980, the U.S. Department of Defense began the first in a series of systematic studies on health-related behaviors of military personnel across periods of peace and war (Bray et al., 1983, 1995, 2003). These studies included surveillance of substance use trends and their impact on military readiness. Overall, the most recent survey results reveal that the military has made a noteworthy improvement in combating illegal drug use. Prevalence rates declined from 27.6% in 1980 to 3.4% in 2002 (Bray et al., 2003) largely attributable to the military's zero tolerance policy for illicit drug use (Mehay & Pacula, 1999). Alcohol abuse levels have proven more variable as indicated by declining abuse rates from 1980 to 1998 but a recent increase noted in the 2002 survey. Service members reported an increase in serious consequences, productivity loss, alcohol dependence symptoms, average alcohol consumption, and heavy alcohol use (Bray et al., 2003).

Alcohol problems affect the mission readiness of personnel across the spectrum of military occupational specialties. For example, in the U.S. Navy aviation community, alcohol abuse and dependence are the 5th-most commonly occurring disqualifying diagnoses and account for 5.7% of disqualified personnel with flight status. Other substance use disorders (SUDs) are the 10th-most commonly occurring disqualifiers, accounting for 2.3% of grounded personnel (Bailey, Gilleran, & Merchant, 1995). Alcohol contributed to 31–58% of all active-duty U.S. Army drowning deaths (352) between the years of 1980 and 1997 (Bell et al., 2001) and to 23% of all active-duty U.S. Air Force deaths in 1990 (Stout, Parkinson, & Wolfe, 1993). Service members who are heavy drinkers (five or more drinks at least once per week) are more likely to be late to work, to leave work early, to exhibit decreased job performance, and to suffer on-the-job injuries than nondrinkers and light drinkers (Fisher, Hoffman, Austin-Lane, & Kao, 2000). Whereas quantifying the negative impact of substance abuse on the military is relatively simple, addressing the problem is complicated.

Military members face a great deal of stress not typically encountered by the civilian population (e.g., loss of personal freedom, deployment to danger zones, and frequent moves and/or absences from family). The military lifestyle itself is considered a contributing factor in abusive levels of alcohol use (Watanabe et al., 1994). In fact, it is estimated that 25% of both military men and women use alcohol as a coping strategy (Bray, Fairbank, & Marsden, 1999). Britt and Adler (1999) noted an approximate 50% increase in alcohol consumption during medical humanitarian assistance missions by individuals who normally consume alcohol and doubled cigarette usage by smokers. In a study of the health outcomes of United Kingdom soldiers following deployment on a peacekeeping mission (Bosnia), there was significantly heavier alcohol consumption than by personnel who did not deploy (Hotopf et al., 2003). Some authors suggest that certain subgroups of military personnel are at increased risk of significant alcohol problems, including U.S. Marines (Schuckit et al., 2001) and U.S. Army Rangers (Sridhar et al., 2003). From a demographic perspective, the military faces particular challenges because a majority of personnel are young, adult males, a population considered at heightened risk for substance abuse problems. One 5-year longitudinal study found that 75% of U.S. Navy recruits used alcohol prior to enlistment and 31% had used illegal drugs (Ames, Cunradi, & Moore, 2002).

Although substance-related problems continue among uniformed personnel, significant attention has been given to reducing their impact across the military community. This chapter addresses the widespread prevention efforts (e.g., zero tolerance, random urinalysis, and mandatory education) underway throughout the military, early intervention services (e.g., alcohol screenings and intense education), the components of a comprehensive evaluation of a possible substance or gambling disorder, and the comorbidity of substance use disorders (SUDs) and posttraumatic stress disorder (PTSD). The final section examines treatment options available for active-duty service members who experience problems with alcohol, drugs, and/or gambling (e.g., outpatient, intensive outpatient, and residential treatment).

## PREVENTION AND EDUCATIONAL SERVICES

Many early prevention efforts in the military focused on punishment for offenses. Alcohol-related incidents were the primary cause for 80% of U.S. Navy floggings until the practice was abolished in 1850 (Mateczun, 1995). Before 1970, chronic alcohol and drug problems were generally met with legal punishment and discharge from the service. In 1970, Congress stipulated that efforts be directed toward treatment and rehabilitation rather than automatic punishment and discharge (Watanabe et al., 1994).

Another significant event in the 1970s was the development of an office to focus on the prevention of drug abuse, which was created in response to significant increases in drug- and alcohol-dependent military personnel in Vietnam. The earliest prevention efforts emphasized education and the detection of drug use (Watanabe et al., 1994). In 1971, the U.S. Army began urine testing for opiates upon the completion of Vietnam tours and quickly added routine, unannounced testing for opiates, barbiturates, and amphetamines. In the 1980s and later, programs were developed that have become increasingly standardized. Military policy mandates prevention training for 100% of new military members, and annual training is required for all troops, in addition to random urine drug testing. Whereas each service manages its own prevention programs, they all retain the same basic objectives of promoting mission readiness and the health and wellness of troops through the prevention of substance abuse. Each branch of the military maintains a comprehensive prevention program. These prevention services include direct contact with all recruits and service members, as well as specialized training for members of the chain of command and prevention specialists, who are assigned to various units.

The Navy's program is an excellent example of using a public website to disseminate best practice information on alcohol abuse prevention to support local commands ([navdweb.spawar.navy.mil](http://navdweb.spawar.navy.mil)). Suggestions include first identifying the target population followed by the evaluation of environmental risk and protective factors inherent in different locales and situations. "Three R's" (relationship, relevance, and responsibility) are identified to form a core program: a positive mentoring relationship; the relevance of everyone's role in the overall success of the mission; and the responsibility of individuals to learn and integrate expectations and policies, as well as leadership's responsibility to provide information and facilitate the prevention program. The website contains recommendations specific to the Navy's environment and lifestyle, including planning ahead for port calls, the most effective use of Drug and Alcohol Program Advisors (DAPA), and preparing sailors for liberty in both U.S. and foreign ports.

In the military system, prevention services and substance abuse counseling fall under the purview of certified prevention specialists, drug demand reduction coordinators, and drug and alcohol abuse counselors. In most situations, the provision of prevention services is not a primary responsibility of military psychologists. Psychology and psychiatry providers across the military, however, are often assigned to lead substance abuse treatment programs as licensed independent practitioners (LIP). This role allows interaction with literally thousands of military members and helps develop local command-sponsored prevention programs. Providers in these roles are encouraged to work in conjunction with prevention specialists and drug demand reduction coordinators to accomplish the following:

1. Take full advantage of opportunities to allow substance abuse counselors to provide prevention education and on-site substance abuse screenings to service members.
2. Utilize the local television (e.g., Armed Forces Network), radio, and newspapers (e.g., *Stars and Stripes*) to disseminate prevention information and program availability.
3. When stationed in areas where specific drugs or unusual alcoholic beverages are available, provide prevention briefs to inbound deployed units and ships to educate the chain of command on the availability of local illegal and/or addictive substances. For example, such briefings in Japan commonly provide warnings to troops about the consequences of testing positive for opiates that are available in over-the-counter cough medicines from Japanese pharmacies and warnings about hallucinogenic mushroom use on Okinawa. Also, service members are warned that alcoholic beverages in Japanese bars can include five shots of liquor per drink.

As with prevention services, each branch of the military offers alcohol education aimed at promoting responsible drinking. These early intervention programs are geared toward personnel at risk for developing more serious problems such as alcohol abuse or dependence. Educational programs are typically recommended at the first sign that an individual is making unwise decisions about alcohol use. The trigger for a referral to an early intervention program is usually an alcohol-related incident (ARI; e.g., arrest for drunk and disorderly conduct, underage drinking, or drunk driving). Generally, a single alcohol-related incident or concerns of the command about an individual's pattern of alcohol use will result in referral to an early intervention program. Courses usually involve 15–20 hours of training and discussion related to improving awareness about the effects of alcohol on the body and brain, identifying risky situations, and making positive choices for responsible drinking. The primary goals are to promote responsible drinking, prevent further alcohol-related incidents, and prevent the development of clinical and psychosocial substance abuse problems.

## REFERRAL AND ASSESSMENT SERVICES

Diagnostic evaluations to determine the presence of substance use disorders generally occur in several stages: referral, screening, and comprehensive evaluation. Although service members are encouraged to self-refer if they think they may have an alcohol problem, the most common referral route for a screening is an ARI or concern of command leadership. Given that various levels of the chain of command are involved in processing documentation

related to an ARI, there is limited confidentiality in drug and alcohol abuse referrals. For the most part, alcohol screening and intervention services are considered “commander’s programs,” or resources that senior leaders can use to ensure that their troops get needed help. Command-level advisors on drug and alcohol issues across the services include DAPA (Navy), Substance Abuse Control Officers (SACO, Marine Corps), Army Substance Abuse Program (ASAP; Army), and the Air Force Alcohol and Drug Abuse Prevention and Treatment program (ADAPT). Table 8.1 provides the various regulations for substance abuse evaluations for each branch of the military.

Primary-care physicians play a key role in the screening and diagnosis of alcohol-related problems. Gold and Aronson (2005) identified a four-step screening process: (1) Inquire about current and past alcohol use with all patients, including any family history of substance-related problems; (2) for individuals identified as “drinkers,” obtain enough detailed information to differentiate between moderate and heavy drinkers; (3) use standard screening questionnaires such as CAGE (e.g., Have you ever felt the need to cut down on drinking? Have you ever felt annoyed by criticism of your drinking? Have you ever had guilty feelings about your drinking? Have you ever taken a morning eye opener?); (4) based on information from steps 1–3, ask more specific questions to determine if criteria are met for an alcohol use disorder and to determine whether or not evidence exists for any medical, psychiatric, or behavioral complications associated with excessive drinking and/or other substance use. Bien, Miller, and Tonigan (1993) reviewed 44 studies and found that general practitioners can help patients alter patterns of harmful drinking with brief interventions, including feedback related to personal risk and impairment; emphasis on personal responsibility for change; clear advice for change, with a menu of change options; and an empathic counseling style.

It is also common for substance problems to be detected by emergency room physicians (e.g., when patients present after fights or accidents while intoxicated), mental health providers (e.g., diagnoses made during outpatient evaluation or while on the mental health unit), and internists (e.g., patients admitted for detoxification). A strong collaboration with these areas of medical treatment facilities is important and can lead to an increase in referrals and earlier detection of problems. Storer (2003) noted significant benefits to inpatient interventions both in preventing second alcohol-related hospitalizations to the Naval Medical Center Portsmouth and in reducing the time of stay of individuals who were readmitted.

Once a referral is obtained, the active-duty member is given an outpatient or inpatient substance abuse screening. Screenings are relatively brief and focus mainly on the extent of the alcohol or drug use. Substance-related diagnoses are based on criteria set by the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV; American Psy-

**TABLE 8.1. Substance-Related Instructions by Branch of Service**

Instruction	Air Force	Army	Coast Guard	Marine Corps	Navy
Alcohol rehabilitation failure	AFI 44-121 AFI 36-3207 AFI 36-3208	AR 600-85	COMDTINST M1000.6 Chapters 12 and 20	MCO P1900.16F	MILPERSMAN article 1910-152
Drug abuse	AFI 44-159 AFI 44-120	AR 600-85 Chapter 1	COMDTINST M1000.6 Chapter 20	MCO P1900.16F SECNAVINST 5300.28C	SECNAVINST 5300.28C MILPERSMAN article 1910-146, 1910-150
Aviation personnel	AFI 44-121 AFI 48-123 Attachments 4-7	AR 600-85 Chapter 7	COMDTINST M6410.3 Chapter 9	BUMEDINST 5300.8	BUMEDINST 5300.8
Submarine and nuclear weapon personnel	AFI 36-2104	AR 50-5	No specific instruction.	SECNAVINST 5510.35A	SECNAVINST 5510.35A OPNAVINST 5355.3B
Substance use and security clearances	AFI 36-2104	AR 380-67	COMDTINST M5520.12B	SECNAVINST 5510.30A	SECNAVINST 5510.30A
Substance abuse prevention and control	AFI 44-121 Section 3B	AR 600-85 Chapter 2	COMDTINST M1000.6 Chapter 20	MCO P1700.24B Chapter 3 SECNAVINST 5300.28C OPNAVINST 5350.4C	SECNAVINST 5300.28C OPNAVINST 5350.4C
Standards for provision of substance-related disorder treatment services	AFI 44-121 Section 3F	AR 600-85 Chapters 3 and 4	COMDTINST M1000.6 Chapter 20	MCO P1700.24B Chapter 5 BUMEDINST 5353.4A	BUMEDINST 5353.4A
Use of disulfiram (Antabuse)	AFI 44-121 Section 3.15.9	AR 600-85 Chapter 4	No specific instruction.	BUMEDINST 5353.3	BUMEDINST 5353.3

*Note.* AFI, Air Force Instruction; AR, Army Regulation; BUMEDINST, Department of the Navy, Bureau of Medicine and Surgery Instruction; COMDTINST, United States Coast Guard, Commandant Instruction; MCO, Marine Corps Order; MILPERSMAN, Navy Military Personnel Manual; OPNAVINST, Chief of Naval Operations Instruction; SECNAVINST, Secretary of the Navy Instruction. Full reference entries for the specific publications noted in this table are listed in the reference list under the “U.S. Department of . . .” entries.

chiatric Association, 1994). If criteria are met for substance abuse or dependence, the individual is referred for a more comprehensive evaluation. The majority of referrals are for one-time ARIs. Many of these one-time incident referrals do not meet diagnostic criteria for a substance use disorder. Although some service members are returned to their commands with recommendations for "no action," most are recommended for early intervention education. For example, from January 2003 to August 2005, a total of 2,982 active-duty patients (primarily Marines) were referred to the Substance Abuse Rehabilitation Program at U.S. Naval Hospital Okinawa. Fifty-three percent of these patients ( $n = 1,527$ ) did not meet criteria for an SUD but did warrant early intervention, a week-long alcohol education class (CDR David Jones, personal communication, September 1, 2005).

A word of caution is offered here about both the overdiagnosis and the underdiagnosis of alcohol abuse among military personnel. Some clinicians strictly adhere to DSM-IV criteria for alcohol abuse and will sometimes make the diagnosis based on two alcohol-related incidents that occur within a 12-month period, regardless of their severity. A common example might involve a 19- or 20-year-old service member who is referred for evaluation because he or she has had two underage drinking incidents (involving 1 or 2 beers) but no accompanying behavioral problem such as fighting or disorderly conduct. This type of individual would probably be best served by an early intervention approach rather than alcohol treatment because this issue is related to rule following rather than bona fide substance abuse. On the other hand, too strict an interpretation of the 12-month criterion may mean that service members with recurrent episodes of abusive drinking that span several years could be underdiagnosed because their incidents do not fall within the stipulated 12-month time frame. The text revision of DSM-IV (DSM-IV-TR; American Psychiatric Association, 2000) offers clinicians a diagnostic modification: "In order for an Abuse criterion to be met, the substance-related problem must have occurred repeatedly during the same 12-month period or been persistent" (p. 198). Thus, a service member with four ARIs at 18-month intervals across several duty stations could meet the criteria for alcohol abuse even though the incidents do not occur within the same 12-month period. These service members often experience "geographic cures," as the documentation of incidents from one command sometimes does not arrive at the next duty station (CAPT Tony McDonald, personal communication, June 28, 2005). Alcohol abuse diagnoses could be made in these cases because maladaptive drinking patterns have been found to persist over significant time periods.

Service members who meet criteria for substance abuse or dependence during a screening are then given a comprehensive evaluation that typically

covers topics addressed in a traditional psychological evaluation, as well as an in-depth exploration of the onset of substance use, changes in use over time, current use, triggers to maladaptive use, availability of a support system, current stressors, and coping strategies. Diagnostic information is integrated with treatment placement criteria from the American Society of Addiction Medicine (ASAM; Mee-Lee, 2001) to determine the requisite level of care (for an evaluation example, see Appendix 8.1). ASAM placement criteria establish guidelines for outpatient treatment, intensive outpatient treatment, residential treatment, and medically managed intensive inpatient treatment (detoxification and/or inpatient mental health). Such placement decisions are based on acute intoxication/withdrawal risk, medical conditions, coexisting psychological diagnoses, treatment acceptance and resistance, relapse potential, and the recovery environment (e.g., see U.S. Department of the Navy, 1999c).

Integration of diagnostic and placement criteria in the treatment of substance abuse problems requires a thorough knowledge of withdrawal symptoms (e.g., Clinical Institute Withdrawal Assessment, or CIWA Scales; Sullivan, Sykora, Schneiderman, Naranjo, & Sellers, 1989), evaluation procedures, and comorbidities of substance abuse problems with other mental health and/or medical problems (dual diagnoses). Of particular concern in today's military environment is the rate of PTSD in individuals returning from deployments to war zones. Given the significant co-occurrence of PTSD with substance abuse problems, the following section provides related epidemiological, assessment, and treatment information.

## **POSTTRAUMATIC STRESS DISORDER AND SUBSTANCE USE DISORDERS**

PTSD and SUDs commonly occur in conjunction with one another (Brown, Recupero, & Stout, 1995) and individuals with these dual diagnoses are known to require much more intensive addiction services than individuals with no PTSD component (Brown, Stout, & Mueller, 1999). As many as 25% (Brown, Recupero, & Stout, 1995) to 50% (Brady, Back, & Coffey, 2004) of civilians seeking substance abuse treatment meet the criteria for PTSD at some point in their lives. Given their exposure to combat and traumatic incidents associated with training exercises, peacekeeping missions, and humanitarian relief, the military population as a group is thought to be at a particularly high risk of developing PTSD. Also, PTSD has been related to increased alcohol consumption in deployed military personnel (Asmundson, Stein, & McCreary, 2002). Veterans report regular use of

substances to manage PTSD symptoms (Ruzek, 2003), and 75% of Vietnam veterans who met the criteria for PTSD following their military service also met the criteria for SUDs (Jacobsen, Southwick, & Kosten, 2001). In a study of 110 deceased veterans who had prior diagnoses of PTSD and were given residential treatment for it between 1990 and 1998, 14.7% of deaths were directly related to chronic substance abuse (e.g., liver disease; Drescher, Rosen, Burling, & Foy, 2003). In addition to increased substance abuse in the PTSD population, suicide risk is also higher. One study of veterans found that almost 70% of those with PTSD also had suicidal thoughts, and 25% had attempted suicide in the preceding 6 months (Butterfield et al., 2005). Drescher et al. (2003) found that 8.3% of veterans' deaths were suicides and suicide risk is known to be compounded by substance-related problems (Suominen, Isometsa, Haukka, & Lonnqvist, 2004; Wilcox, Conner, & Caine, 2004). Individuals with PTSD and SUDs, whose PTSD symptoms are not brought into remission, demonstrate significantly poorer outcomes concerning their substance use (Read, Brown, & Kahler, 2004). Unfortunately, PTSD screening and treatment are not currently standard parts of all military substance abuse programs.

The following is a recommended screening instrument, the PTSD CheckList—Military Version (PCL-M), which can be easily integrated into the existing substance abuse questionnaires that are completed by every military member as a part of the substance use evaluation process. This assessment is in the public domain and may be reproduced (Weathers, Litz, Huska, & Keane, 1994; see Figure 8.1). It may be acquired online at the Deployment Health Clinical Center, [www.pdhealth.mil/guidelines/appendices.asp](http://www.pdhealth.mil/guidelines/appendices.asp).

The need not only for PTSD screenings but also for simultaneous treatment for both disorders has been recognized by some providers, and some military substance abuse programs treat PTSD within that realm; however, this decision is currently up to individual sites. Ouimette, Brown, and Najavits (1998) suggest that all substance abuse patients be routinely screened for PTSD, that they receive more intensive substance abuse treatment than individuals without PTSD, and that they receive concurrent support and treatment for both diagnoses. Given the high rates of trauma reported by veterans of combat operations in Afghanistan and Iraq, these recommendations should be mandatory for today's active-duty population. Early data (Hoge et al., 2004) suggest that after duty in Iraq, 12.2% of Marines and 12.9% of soldiers had PTSD symptoms. PTSD rates were higher for individuals who were wounded in action or who were part of units that engaged in multiple firefights. With soldiers and Marines serving longer tours and seeing more combat and injuries in the global war on terror, it is hypothesized that the percentage of personnel who report PTSD symptoms will continue to rise.

Patient's name: \_\_\_\_\_

Instruction to patient: Below is a list of problems and complaints that veterans sometimes have in response to stressful life experiences. Please read each one carefully; put an X in the box to indicate how much you have been bothered by that problem *in the last month*.

No.	Response	Not at all (1)	A little bit (2)	Moderately (3)	Quite a bit (4)	Extremely (5)
1.	Repeated, disturbing <i>memories, thoughts, or images</i> of a stressful military experience from the past?					
2.	Repeated, disturbing <i>dreams</i> of a stressful military experience from the past?					
3.	Suddenly <i>acting or feeling</i> as if a stressful military experience <i>were happening</i> again (as if you were reliving it)?					
4.	Feeling <i>very upset</i> when <i>something reminded</i> you of a stressful military experience from the past?					
5.	Having <i>physical reactions</i> (e.g., heart pounding, trouble breathing, or sweating) when <i>something reminded</i> you of a stressful military experience from the past?					
6.	Avoid <i>thinking about</i> or <i>talking about</i> a stressful military experience from the past or avoid <i>having feelings</i> related to it?					
7.	Avoid <i>activities</i> or <i>situations</i> because they <i>remind</i> you of a stressful military experience from the past?					
8.	Trouble <i>remembering important parts</i> of a stressful military experience from the past?					
9.	Loss of <i>interest in things that you used to enjoy</i> ?					
10.	Feeling <i>distant</i> or <i>cut off</i> from other people?					
11.	Feeling <i>emotionally numb</i> or being unable to have loving feelings for those close to you?					
12.	Feeling as if your <i>future</i> will somehow be <i>cut short</i> ?					
13.	Trouble <i>falling</i> or <i>staying asleep</i> ?					
14.	Feeling <i>irritable</i> or having <i>angry outbursts</i> ?					
15.	Having <i>difficulty concentrating</i> ?					
16.	Being "super alert" or watchful on guard?					
17.	Feeling <i>jumpy</i> or easily startled?					

FIGURE 8.1. PTSD CheckList—Military Version (PCL-M)

## LEVELS OF TREATMENT

As noted above, the military offers admission to treatment for SUDs based on the ASAM placement criteria (Mee-Lee, 2001). In general, an alcohol abuse diagnosis warrants outpatient treatment (Level I), although an individual considered to be at particular risk (e.g., multiple alcohol-related incidents and severe psychosocial problems) could be placed in a more intensive level of treatment. In the same vein, an alcohol dependence diagnosis generally warrants either intensive outpatient treatment (Level II) or residential treatment (Level III). Exceptions to this rule might be those who previously completed treatment for alcohol dependence and were able to remain sober for a significant period of time but then had a brief relapse. If they want to stay sober and demonstrate singular motivation to follow a recovery plan, they may be best served by a time-limited period of outpatient treatment (OP) or a revision of their after-care plan to include increased attendance in Alcoholics Anonymous (AA) meetings, developing and following a relapse prevention plan, and/or establishing environmental changes that support an abstinence-based lifestyle.

The length of OP differs among the services and can involve weekly meetings for 2–3 months or daily sessions for about 2 weeks. OP typically focuses on substance education, stress management, and boosting coping strategies. It is geared for individuals who are exhibiting problematic alcohol or drug use and who may be developing a more serious substance problem. In some ways, OP is an extension of early intervention in that the emphasis is on education, alternative activities to drinking or other substance use, and the development of more adaptive behaviors and stress management techniques. In OP, however, members attend individual therapy, receive an introduction to AA or comparable self-help programs, and are integrated into group therapy with individuals of varying levels of substance abuse. Military members attending OP in Ausburg, Germany, reported that the intensive education, stress management, and values clarification components of the program were the most helpful aspects of their treatment (Fisher, Helfrich, Niedzialkowski, Colburn, & Kaiser, 1995).

Intensive outpatient treatment (IOP) is for those individuals with significant alcohol or drug problems that can be effectively treated in an outpatient environment. Given the level of military structure, this model is the most frequently used because there are significant command supports in place for abstinence and alternative activities. IOP generally lasts 2–3 weeks and focuses on the same areas as OP, but it provides more in-depth education, increased individual and group therapy, and an emphasis on regular attendance in a 12-step group such as AA. Residential treatment is available for individuals who need that level of structure in order to remain

abstinent during the treatment program or who have comorbid disorders that require additional medical and/or mental health support.

In some IOP and residential programs, the introduction of disulfiram and/or naltrexone may serve as an adjunct to behavioral interventions. Disulfiram is a medication that causes an individual who drinks alcohol while taking the medicine to become nauseous, hypotensive, and flushed (Garbutt, West, Carey, Lohr, & Crews, 1999). Naltrexone is an opioid antagonist that reduces the reinforcing effects of alcohol and, subsequently, alcohol cravings and the amount of alcohol consumed by individuals in relapse (Carmen, Angeles, Ana, & Maria, 2004). Until 2004, these were the only medications approved by the U.S. Food and Drug Administration (FDA) for use in the treatment of alcoholism (Petrakis, Leslie, & Rosenheck, 2003; U.S. Food and Drug Administration, 2004) and are currently the only medications used in military treatment facilities. Decisions to use either of these medications must be based not only on medical indications and contraindications but also on operational realities such as upcoming deployments or time to be spent in the field. Monitoring of these types of medications generally cannot be done in these environments. It should be noted that individuals who require treatment with disulfiram may be prohibited from reentering certain jobs, particularly in aviation.

In July 2004, a third medication, acamprosate calcium, was approved by the FDA for the treatment of alcohol dependence. The mechanism of this medication is not well understood, but it is thought to interact with glutamate and gamma-aminobutyric acid (GABA) neurotransmitter systems in restoring a normal excitatory/inhibitory balance, which is altered in individuals with alcohol dependence (FDA, 2004). It is intended for use in individuals who have already undergone physical withdrawal from alcohol, and it assists in the maintenance of abstinence. This medication is not yet used in the military, and its efficacy and utility in this environment is unknown.

## TREATMENT OF PATHOLOGICAL GAMBLING IN THE MILITARY

In the United States, rates of problem and pathological gambling vary from 1.4% (Petry & Amentano, 1999) to 2.9% (National Research Council, 1999) to 5.4% of the population in specific areas (Volberg, 1996). Although not reaching these proportions, pathological gambling is also no stranger to the military. Prevalence of pathological gambling in the military is estimated at 1.2% overall, with the Air Force at 0.7%, the Army and Marine Corps at 1.4% each, and the Navy at 1.5% (Bray et al., 2003).

Despite these rates, which would indicate that thousands of military members meet the criteria for pathological gambling, there are only three known structured treatment programs. The first is an outpatient program at Nellis Air Force Base in Las Vegas, which treats only local service members because the Las Vegas environment is considered a high risk for gamblers in outpatient treatment. The second is an outpatient program at the United States Naval Hospital in Okinawa, Japan, which because of its location also generally treats only local service members, as well as their adult family members, retirees, and other beneficiaries. The third option is a residential treatment program at the Naval Hospital in Camp Pendleton, California, which treats active-duty members from any service and from any location.

Other disorders often occur in conjunction with a diagnosis of pathological gambling. It is estimated that as many as 50% of pathological gamblers also meet criteria for a substance abuse diagnosis (Petry and Armentano, 1999), 76% meet criteria for a depressive disorder (National Research Council, 1999), 48–70% experience suicidal ideation, and 13–20% attempt suicide (Petry and Amentano, 1999). Suicide is clearly a significant concern in a population with access to firearms and other lethal means of suicide. Military rates of suicidal ideation in compulsive gamblers have been documented to range from 20% (Kennedy, Cook, Poole, Brunson, & Jones, 2005) to 50% (M. Catanzaro, personal communication, October 9, 2003). It should be noted that in a study of all individuals referred for gambling treatment in the first year of the Okinawa program who were experiencing suicidal ideation (i.e., 7/35), none had a recurrence of suicidal thoughts or behavior once treatment had begun (Kennedy et al., 2005).

A profile of the active-duty pathological gambler is offered by Kennedy et al. (2005) after the first year of the Okinawa program, to which 25 active-duty members, 7 spouses, and 3 Department of Defense civilians were referred. The average age was 33.2 years, with the median ranks falling between E4 and E6. The mean reported debt per individual was \$11,407.35, with a standard deviation of \$17,746.26. The average reported financial losses per individual due to gambling were \$24,154.41, with a standard deviation of \$33,125.22. Of the 25 active-duty members referred for treatment, 21 were retained in the military and 4 were court-martialed and subsequently discharged for crimes related to their gambling.

It should be noted that gambling is significantly different from substance abuse in relation to military policy and confidentiality. Whereas substance abuse has to be reported to a command, a gambling problem per se does not. Most pathological gambling cases encountered by military psychologists involve addictive behaviors associated with legal activities such as slot machines and casino games. Unless a service member who seeks help

for pathological gambling presents with suicidality or another issue that requires mandatory reporting, he or she will enjoy a significant degree of confidentiality and can self-refer.

The treatment of gambling has many similarities to that for other addictions, as well as some differences. A discussion of appropriate treatment options and the development of a treatment program are unfortunately beyond the scope of this chapter. It should be noted, however, that mental health and/or addiction providers who are considering the implementation of a gambling treatment option into their program must obtain specific training in order to do so. Besides the tailored individual and group therapy that is provided, treatments must consider the other unique characteristics of this population. For example, the clinic will have to have a consultant available for financial counseling, spousal education, potential marital counseling, and emergent suicide risk assessments. The evaluation of the pathological gambler cannot be a brief screen, such as that for a preliminary substance abuse evaluation. Because of the severity and frequency of suicidality, as well as other comorbid mental health issues and substance use disorders, a full psychological evaluation or, at the minimum, a suicide risk assessment must be provided. For a sample gambling evaluation, see Appendix 8.2.

## SUMMARY

Although SUDs continue to be a problem in the military, each service provides a comprehensive range of services, from prevention programs to intensive levels of treatment. Early intervention is provided at the first indication that there may be a problem, and excellent treatment options exist and are available to any military member who needs them. The military environment provides significant social support to military members with substance problems and state-of-the-art treatment for all members. Although substance abuse and pathological gambling are very difficult to treat in any arena, military members have an array of educational and treatment options that support readiness and recovery.

## REFERENCES

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: Author.

Ames, G. M., Cunradi, C. B., & Moore, R. S. (2002). Alcohol, tobacco, and drug

use among young adults prior to entering the military. *Prevention Science*, 3, 135–144.

Asmundson, G. J. G., Stein, M. B., & McCreary, D. R. (2002). Posttraumatic stress disorder symptoms influence health status of deployed peacekeepers and nondeployed military personnel. *Journal of Nervous and Mental Disease*, 190, 807–815.

Bailey, D. A., Gilleran, L. G., & Merchant, P. G. (1995). Waivers for disqualifying medical conditions and U.S. Naval aviation personnel. *Aviation, Space, and Environmental Medicine*, 66, 401–407.

Bell, N. S., Amoroso, P. J., Yore, M. M., Senier, L., Williams, J. O., Smith, G. S., et al. (2001). Alcohol and other risk factors for drowning among male active duty U.S. Army soldiers. *Aviation, Space, and Environmental Medicine*, 72, 1086–1095.

Bien, T. H., Miller, W. R., & Tonigan, J. S. (1993). Brief interventions for alcohol problems: A review. *Addiction*, 88, 315–335.

Brady, K. T., Back, S. E., & Coffey, S. F. (2004). Substance abuse and posttraumatic stress disorder. *Current Directions in Psychological Science*, 13, 206–209.

Bray, R. M., Fairbank, J. A., & Marsden, M. E. (1999). Stress and substance use among military women and men. *American Journal of Drug and Alcohol Abuse*, 25, 239–256.

Bray, R. M., Guess, L. L., Mason, R. E., Hubbard, R. L., Smith, D. G., Marsden, M. E., et al. (1983). *1982 worldwide survey of alcohol and non-medical drug use among military personnel*. Research Triangle Park, NC: Research Triangle Institute.

Bray, R. M., Hourani, L. L., Rae, K. L., Dever, J. A., Brown, J. M., Vincus, A. A., et al. (2003). *2002 Department of Defense survey of health related behaviors among military personnel*. Report prepared for the Assistant Secretary of Defense (Health Affairs).

Bray, R. M., Kroutil, L. A., Wheless, S. C., Marsden, M. E., Bailey, S. L., Fairbank, J. A., et al. (1995). *1995 Department of Defense survey of health related behaviors among military personnel*. Research Triangle Park, NC: Research Triangle Institute.

Britt, T. W., & Adler, A. B. (1999). Stress and health during medical humanitarian assistance missions. *Military Medicine*, 164, 275–279.

Brown, P. J., Recupero, P. R., & Stout, R. (1995). PTSD substance abuse comorbidity and treatment utilization. *Addictive Behaviors*, 20, 251–254.

Brown, P. J., Stout, R. L., & Mueller, T. (1999). Substance use disorder and post-traumatic stress disorder comorbidity: Addiction and psychiatric treatment rates. *Psychology of Addictive Behaviors*, 13, 115–122.

Butterfield, M. I., Stechuchak, K. M., Connor, K. M., Davidson, J., Wang, C., MacKuen, C. L., et al. (2005). Neuroactive steroids and suicidality in post-traumatic stress disorder. *American Journal of Psychiatry*, 162, 380–382.

Carmen, B., Angeles, M., Ana, M., & Maria, A. (2004). Efficacy and safety of naltrexone and acamprosate in the treatment of alcohol dependence: A systematic review. *Addiction*, 99, 811–828.

Dean, E. T. (1997). *Shook over hell: Post-traumatic stress, Vietnam, and the Civil War*. Cambridge, MA: Harvard University Press.

Drescher, K. D., Rosen, C. S., Burling, T. A., & Foy, D. W. (2003). Causes of death among male veterans who received residential treatment for PTSD. *Journal of Traumatic Stress, 16*, 535-543.

Fisher, C. A., Hoffman, K. J., Austin-Lane, J., & Kao, T. (2000). The relationship between heavy alcohol use and work productivity loss in active duty military personnel: A secondary analysis of the 1995 Department of Defense worldwide survey. *Military Medicine, 165*, 355-361.

Fisher, E. M., Helfrich, J. C., Niedzialekowsky, C., Colburn, J., & Kaiser, J. (1995). A single site treatment evaluation study of a military outservice member drug and alcohol program. *Alcoholism Treatment Quarterly, 12*, 89-95.

Garbutt, J. C., West, S. L., Carey, T. S., Lohr, K. N., & Crews, F. T. (1999). Pharmacological treatment of alcohol dependence: A review of the evidence. *Journal of the American Medical Association, 281*, 1318-1325.

Gold, M. S., & Aronson, M. D. (2005). Screening and diagnosis of patients with alcohol problems. Retrieved August 8, 2005, from [www.uptodate.com](http://www.uptodate.com)

Hoge, C. W., Castro, C. A., Messer, S. C., McGurk, D., Cotting, D. I., & Koffman, R. L. (2004). Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *New England Journal of Medicine, 351*, 13-22.

Hotopf, M., David, A., Hull, L., Ismail, K., Unwin, C., & Wessely, S. (2003). The health effects of peacekeeping (Bosnia, 1992-1996): A cross-sectional study-comparison with nondeployed military personnel. *Military Medicine, 168*, 408-413.

Jacobsen, L. K., Southwick, S. M., & Kosten, T. R. (2001). Substance use disorders in patients with posttraumatic stress disorder: A review of the literature. *American Journal of Psychiatry, 158*, 1184-1190.

Jones, F. D. (1995). Disorders of frustration and loneliness. In R. Zajtchuk & R. F. Bellamy (Eds.), *Textbook of military medicine: War psychiatry* (pp. 63-84). Washington, DC: Office of the Surgeon General, U.S. Department of the Army.

Kennedy, C. H., Cook, J. H., Poole, D. R., Brunson, C. L., & Jones, D. E. (2005). Review of the first year of an overseas military gambling treatment program. *Military Medicine, 170*, 683-687.

Mateczun, J. (1995) U.S. Naval combat psychiatry. In R. Zajtchuk & R. F. Bellamy (Eds.), *Textbook of military medicine, war psychiatry: Warfare, weaponry and the casualty* (pp. 211-242). Washington, DC: Office of the Surgeon General, U.S. Department of the Army.

Mee-Lee, D. (2001). *ASAM service member placement criteria for the treatment of substance-related disorders* (2nd ed., rev.). Chevy Chase, MD: American Society of Addiction Medicine.

Mehay, S. L., & Pacula, R. L. (1999). The effectiveness of workplace drug prevention policies: Does "zero tolerance" work? *Working paper 7383*. Cambridge, MA: National Bureau of Economic Research.

National Research Council. (1999). *Pathological gambling*. Washington, DC: National Academy Press.

Ouimette, P. C., Brown, P. J., & Najavits, L. M. (1998). Course and treatment of service members with both substance use and posttraumatic stress disorders. *Addictive Behaviors, 23*, 785-795.

Petrakis, I. L., Leslie, D., & Rosenheck, R. (2003). Use of naltrexone in the treatment of alcoholism nationally in the Department of Veterans Affairs. *Alcoholism: Clinical and Experimental Research*, 27, 1780–1784.

Petry, N. M., & Amentano, C. (1999). Prevalence, assessment, and treatment of pathological gambling: A review. *Psychiatric Services*, 50, 1021–1027.

Read, J. P., Brown, P. J., & Kahler, C. W. (2004). Substance use and posttraumatic stress disorders: Symptom interplay and effects on outcome. *Addictive Behaviors*, 29, 1665–1672.

Reinstein, M. (1972). Drugs and the military physician. *Military Medicine*, 137, 122–125.

Ruzek, J. I. (2003). Concurrent posttraumatic stress disorder and substance use disorder among veterans: Evidence and treatment issues. In P. Ouimette & P. J. Brown (Eds.), *Trauma and substance abuse* (pp. 191–207). Washington, DC: American Psychological Association.

Schuckit, M. A., Kraft, H. S., Hurtado, S. L., Tschinkel, S. A., Minagawa, R., & Shaffer, R. A. (2001). A measure of the intensity of response to alcohol in a military population. *American Journal of Drug and Alcohol Abuse*, 27, 749–757.

Sobocinski, A. (2004). A few notes on grog. *Navy Medicine*, 95, 9–10.

Sridhar, A., Deuster, P. A., Becker, W. J., Coll, R., O'Brien, K. K., & Bathalon, G. (2003). Health assessment of U.S. Army Rangers. *Military Medicine*, 168, 57–62.

Stanton, M. D. (1976). Drugs, Vietnam, and the Vietnam veteran: An overview. *American Journal of Drug and Alcohol Abuse*, 3, 557–570.

Storer, R. M. (2003). A simple cost-benefit analysis of brief interventions on substance abuse at Naval Medical Center Portsmouth. *Military Medicine*, 168, 765–768.

Stout, R. W., Parkinson, M. D., & Wolfe, W. H. (1993). Alcohol-related mortality in the U.S. Air Force. *American Journal of Preventive Medicine*, 9, 220–223.

Sullivan, J. T., Sykora, K., Schneiderman, J., Naranjo, C. A., & Sellers, E. M. (1989). Assessment of alcohol withdrawal: The revised clinical institute withdrawal assessment for alcohol scale (CIWA-Ar). *British Journal of Addiction*, 84, 1353–1357.

Suominen, K., Isometsa, E., Haukka, J., & Lonnqvist, J. (2004). Substance use and male gender as risk factors for deaths and suicide: A 5-year follow-up study after deliberate self-harm. *Social Psychiatry and Psychiatric Epidemiology*, 39, 720–724.

U.S. Department of the Air Force. (2000a). *Demand reduction program*. (AFI-44-159). Washington, DC: Author.

U.S. Department of the Air Force. (2000b). *Drug abuse testing program*. (AFI-44-120). Washington, DC: Author.

U.S. Department of the Air Force. (2001a). *Alcohol and Drug Abuse Prevention and Treatment (ADAPT) Program*. (AFI 44-121). Washington, DC: Author.

U.S. Department of the Air Force. (2001b). *Medical examinations and standards*. (AFI 48-123). Washington, DC: Author.

U.S. Department of the Air Force. (2004a). *Administrative separation of airmen*. (AFI-36-3208). Washington, DC: Author.

U.S. Department of the Air Force. (2004b). *Nuclear weapons Personnel Reliability Program* (PRP). (AFI 36-2104). Washington, DC: Author.

U.S. Department of the Air Force. (2004c). *Separating commissioned officers*. (AFI-36-3207). Washington, DC: Author.

U.S. Department of the Army. (1988). Personnel security program. (AR 380-67). Washington, DC: Author.

U.S. Department of the Army. (2000). Nuclear surety. (AR 50-5). Washington, DC: Author.

U.S. Department of the Army. (2001). *Army substance abuse program* (ASAP). (AR 600-85). Washington, DC: Author.

U.S. Department of Homeland Security. (2003). *Coast Guard aviation medicine manual*. (COMDTINST M6410.3). Washington, DC: Author.

U.S. Department of Homeland Security. (1988, updated 2003). *Coast Guard personnel manual*. (COMDTINST M1000.6). Washington, DC: Author.

U.S. Department of the Navy. (1990). *Use of disulfiram (Antabuse)*. (BUMEDINST 5353.3). Washington, DC: Author.

U.S. Department of the Navy. (1991). *Submarine and nuclear propulsion program personnel drug/alcohol policy*. (OPNAVINST 5355.3B). Washington, DC: Author.

U.S. Department of the Navy. (1992). *Disposition of rehabilitated alcohol dependent or abuser aircrew, air controllers, hypobaric chamber inside observers and instructors*. (BUMEDINST 5300.8). Washington, DC: Author.

U.S. Department of the Navy. (1999a). *Department of the Navy personnel security program*. (SECNAVINST 5510.30A). Washington, DC: Author.

U.S. Department of the Navy. (1999b). *Military substance abuse prevention and control*. (SECNAV Instruction 5300.28C). Washington, DC: Author.

U.S. Department of the Navy. (1999c). *Standards for provision of substance related disorder treatment services*. (BUMEDINST 5353.4A). Washington, DC: Author.

U.S. Department of the Navy. (2000). *Marine Corps separation and retirement manual*. (MCO P1900.16F). Washington, DC: Author.

U.S. Department of the Navy. (2001). *Marine Corps personal services manual*. (MCO P1700.24B). Washington, DC: Author.

U.S. Department of the Navy. (2002a). Naval military personnel manual. (MILPERSMAN). Washington, DC: Author.

U.S. Department of the Navy. (2002b). *Nuclear weapon personnel reliability program* (PRP). (SECNAVINST 5510.35A). Washington, DC: Author.

U.S. Department of the Navy. (2003). *Drug and alcohol abuse prevention and control*. (OPNAVINST 5350.4C, CH-3). Washington, DC: Author.

U.S. Department of the Navy. (2005, August 23). Navy Alcohol and Drug Abuse Prevention Program (NADAP). Retrieved September 6, 2005, from <http://navdweb.spawar.navy.mil>.

U.S. Department of Transportation. (2001). *Military personnel security program*. (COMDTINST M5520-12B). Washington, DC: Author.

U.S. Food and Drug Administration (FDA). (2004, July 29). *Center for drug evaluation and research approval package for: Application number 21-431*. Retrieved on March 25, 2005, from [www.fda.gov/cder/foi/label/2004/21431lbl.pdf](http://www.fda.gov/cder/foi/label/2004/21431lbl.pdf).

Volberg, R. A. (1996). Prevalence studies of problem gambling in the United States. *Journal of Gambling Studies*, 12, 111-128.

Watanabe, H. K., Harig, P. T., Rock, N. L., & Koshes, R. J. (1994). Alcohol and drug abuse and dependence. In R. Zajtchuk & R. F. Bellamy (Eds.), *Textbook of military medicine: Military psychiatry: Preparing in peace for war* (pp. 61-90). Washington, DC: Office of the Surgeon General, U.S. Department of the Army.

Weathers, F. W., Litz, B. T., Huska, J. A., & Keane, T. M. (1994). *PCL-M for DSM-IV*. National Center for PTSD: Behavioral Science Division. Retrieved on September 6, 2005, from [www.pdhealth.mil/guidelines/appendices.asp](http://www.pdhealth.mil/guidelines/appendices.asp).

Wilcox, H., Conner, K., & Caine, E. D. (2004). Association of alcohol and drug use disorders and completed suicide: An empirical review of cohort studies. *Drug and Alcohol Dependence*, 76S, S11-S19.

## APPENDIX 8.1. Substance Abuse Intake Evaluation

NAME: John Doe

SSN: 000-00-1111

RANK/RATE/SERVICE: PO3/USN

DOB: 01 January 1983

DATE OF EVALUATION: 08 May 2005

*Introduction:* The patient is a 22-year-old, single, Caucasian male, E-4/AD/USN, with approximately 4 years of continuous active duty. He was referred for treatment following a screening on 29 Apr 05 during which he was diagnosed with alcohol dependence. He has been stationed at White Beach Naval Facility for 7 months of a 24-month tour. He was seen on this date for an evaluation to begin treatment. He was advised of the limits of his confidentiality and rights, and consented to participate.

*Chief Complaint:* "I have a drinking problem."

*History of Present Illness (HPI):* The incident leading to the present evaluation occurred on 25 Apr 05 when the patient was involved in an alcohol-related incident (ARI) for being UA (unauthorized absence) to unit physical training. Regarding this event, the patient reported consuming approximately 16 drinks on the previous night and slept through the scheduled training.

The patient reported that his first introduction to alcohol was at age 16, and he began regular drinking when he was 19 years old. During the first year of his regular drinking he consumed 8 drinks per occasion 2 times per week. He stated that he felt the effect of his alcohol use after 5 drinks, and 8 drinks were required before he was intoxicated. He estimated that during the past 12 months he consumed alcohol 3 times per week. He normally consumed 10 drinks per occasion. He reported that he felt the effects of alcohol after 10 drinks, and 15 drinks were required before he was intoxicated. He endorsed a history of monthly blackouts during the last 7 months. The patient denied withdrawal symptoms. He acknowledged a family history of alcoholism (paternal uncle and grandfather). The patient reported that his last consumption of alcohol was on 02 May 05, when he consumed approximately 6 drinks. The patient and records indicated no previous ARIs. The patient denied any previous alcohol treatment/education.

The patient reported a prior history of illicit substance use (marijuana), for which he indicates he has a drug waiver. Regarding the use of tobacco products, he reported that he smokes a pack of cigarettes per day and does not desire to quit at this time. He denied use of oral tobacco.

*Diagnostic Criteria:* The patient's substance abuse file and psychosocial assessment revealed the following information about DSM-IV criteria for alcohol dependence:

- a. The patient endorsed a marked tolerance or markedly diminished effect with continued use of the same amount. The patient noted that initially it took 8 drinks for him to become intoxicated and it now takes 15.
- b. The patient endorsed substance often taken in larger amounts or over a longer period than intended. The patient reported that he is often late to work due to drinking the night before but that he has been unable to limit his intake.
- c. The patient endorsed persistent desire or unsuccessful efforts to cut down or control substance use. The patient reported that he has tried to stop drinking independently on at least 4 occasions but has been unsuccessful.
- d. The patient endorsed continued substance use despite knowledge of having a persistent or recurrent psychological or physical problem that is caused or exacerbated by the use of the substance. The patient noted that he has experienced repetitive alcohol-related blackouts for the past 7 months.

Some symptoms of the disturbance have persisted for at least 1 month or have occurred repeatedly within the past 12-month period.

*Results of Brief Screening Instruments:* The patient was administered the Alcohol Use Disorders Identification Test (AUDIT) questionnaire on 29 Apr 05 with a raw score of 22 on his AUDIT and 3 out of 4 on the CAGE test. A value of 8 or greater on the AUDIT indicates possible alcohol abuse or dependence.

The patient was administered the PTSD Checklist—Military Version. There was no indication of PTSD symptoms. He received a raw score of 0 on the South Oaks Gambling Screen (SOGS), which is not indicative of problem gambling. The patient was administered a nutrition screening. There were no nutritional problems noted.

*Mental Health History:* The patient denied the following: suicidal ideation, gestures, or attempts. The patient denied self-mutilation. The patient denied previous hospitalizations for psychiatric treatment. The patient denied having difficulty concentrating, dysphoria, and anxiety. The patient also denied disturbances in sleep and disturbances in appetite. In the past year, he acknowledged some work-related difficulties and increased conflict or arguments with significant others. The patient denied anger control problems.

*Past Developmental/Social History:* The patient reported being the eldest of 3 siblings. He denied a history of emotional, physical, and sexual abuse. He graduated from high school on time. The patient reported having several friends and typically maintained good relations with his peers. He reported that he is single and has no children. The patient noted no religious affiliation. The patient reported that he enjoys rock climbing. He denied financial problems. His upbringing included middle-class European American cultural/ethnic influences.

*Psychological and Social Stressors:* The patient denied significant psychosocial stressors. He rated his current ability to cope with stressors as fair. The following characteristic was chosen as being self-descriptive: "active." The patient endorsed

“upbeat” as a descriptor of his mood. He was arrested for possession of alcohol and DUI (prior to his entering the service) for which he did community service.

**Medical History:** The patient acknowledged a family history of alcohol problems but denied a family history of illicit substance abuse. He denied a significant medical history and rated his general level of health as good. Currently he is not under the care of a physician or taking any medication. The patient denied experiencing any current pain (0/10) or having a condition that frequently results in pain. He denied use of nutritional supplements.

*The patient meets ASAM criteria for admission to IOP.* The following dimensional criteria apply:

Dimension 1: Withdrawal Risk

Severity of condition was rated: High      Moderate      Minimal      None

Current withdrawal problems: Yes      No

Stated goal(s) in this dimension:

Progress toward goal: Worse      No Change      Improved      Resolved      N/A

See recommendations below: Pt report his last drink was 02 MAY 05.

Dimension 2: Biomedical Conditions and Complications

Severity of condition was rated: High      Moderate      Minimal      None

Current medical conditions: Yes      No

Stated goal(s) in this dimension:

Progress toward goal: Worse      No Change      Improved      Resolved      N/A

See recommendations below:

Dimension 3: Emotional/Behavioral/Cognitive Conditions and Complications

Severity of condition was rated: High      Moderate      Minimal      None

Based on: Stress Mgt      Anger Mgt      Unresolved Grief      Suicide      History  
PD Dx

Other Specify:

Stated goal(s) in this dimension:

Progress toward goal: Worse      No Change      Improved      Resolved      N/A

See recommendations below:

Dimension 4: Resistance to Change

Severity of condition was rated: High      Moderate      Minimal      None

Based on: Screening Evaluation      Completion of Goals      Attendance  
Group Behavior      Other Specify:

Stated goal(s) in this dimension: To educate the patient on the effects of alcohol and the disease of alcoholism.

Progress toward goal: Worse    No Change    Improved    Resolved    N/A

See recommendations below:

Dimension 5: Relapse/Continued Use/Continued Problem Potential

Severity of condition was rated: High    Moderate    Minimal    None

Based on: BAC Group Interaction    Urge to Use    Prior Relapse

Other Specify:

Stated goal(s) in this dimension: To identify and apply coping skills for relapse triggers and high-risk situations.

Progress toward goal: Worse    No Change    Improved    Resolved    N/A

See recommendations below:

Dimension 6: Recovery Environment

Severity of condition was rated: High    Moderate    Minimal    None

Based on: Barracks Environment    AA Involvement    Spouse Support

Other Specify:

Stated goal(s) in this dimension: To identify a support network, drink refusal skills, and alternatives to drinking.

Progress toward goal: Worse    No Change    Improved    Resolved    N/A

See recommendations below:

Dimension 7: Operational

Severity of condition was rated: High    Moderate    Minimal    None

Based on: Command Support

Stated goal(s) in this dimension:

Progress toward goal: Worse    No Change    Improved    Resolved

See recommendations below:

*Mental Status Examination (MSE):* The patient arrived for the present evaluation appropriately groomed and properly dressed in the uniform of the day. Rapport was easily established and maintained. The patient did not appear defensive or anxious. The patient did not demonstrate psychomotor abnormalities. Attention and concentration were adequate during the present evaluation. Observation of the patient did not reveal evidence of memory, thought, or speech difficulties. Affect was broad and mood congruent. The patient denied hallucinations and delusions. The patient denied current suicidal or homicidal ideation, plan, or intent. He convincingly contracted for safety.

*Diagnostic Impressions:*

Axis I: 303.90 Alcohol Dependence, with Physiological Dependence  
Axis II: 799.90 Diagnosis Deferred on Axis II  
Axis III: No Diagnosis as per Physical Examination  
Axis IV: Routine Military Duties

*Stage of Change:* Contemplation*Recommendations:*

1. Attend IOP classes Monday through Friday 0730–1130.
2. Attend at least 2 AA meetings per week.
3. Attend individual and group counseling sessions as scheduled.
4. Write in your journal daily.
5. Follow your treatment plan.
6. Abstain from alcohol.
7. Abstain from all establishments whose primary purpose is to sell alcohol.
8. The patient understands that he may page the Duty Counselor at 555-1000 if he is at risk of relapse.
9. Patient was assessed not to have any learning needs or barriers. The patient was educated about the diagnosis and rationale for treatment, and the patient expressed understanding.

J. A. Smith, GSM2 USN  
*Navy Drug & Alcohol Counselor*  
*(Intern)*

D. E. Jones, PhD, ABPP  
CDR, MSC, USN  
*Clinical Psychologist*

## APPENDIX 8.2. Psychological Evaluation

NAME: A. B. Jones

SSN: 123-45-6789

RANK/RATE/SERVICE: LCPL/USMC

DOB: 01 January 1983

DATE OF EVALUATION: 24 February 2005

*Identifying Data:* The service member is a 22-year-old, married male with 1 year 5 months CADU. He was encouraged to self-refer for gambling problems by an individual in his chain of command who is also a gambler in treatment.

*History:* The history of the present problem was taken from the service member and was considered reliable. He noted that he started gambling approximately 3 years ago and immediately developed a problem. He reported that at first he was betting on dogs, horses, and slot machines, but when transferring overseas he began gambling solely on slot machines. He reported that in the past 9 months he has gambled \$14,000, some of which was family savings, and that he is \$3,800 in debt. The service member reported preoccupation with gambling, chasing his losses, gambling more than he intended to, felt that he was unable to stop, lied to his wife about his gambling, and that this weekend she notified him that she wanted to file for marital separation after discovering loans that she was unaware of. The service member reported that after his wife told him about the separation he started drinking. He reported that he drank 3–4 beers and 8 mixed drinks. He noted that he became suicidal and attempted to hang himself in his bathroom with a belt. He reported that his roommate heard the shower bar crash in the bathroom, forced his way in, and stopped him from trying again. Despite the suicide attempt this weekend, the service member denied symptoms of a mood, anxiety, psychotic, eating, and/or somatization disorder.

*Psychological History:* The service member noted that he sought help for his gambling in October 2004 and was prescribed Zoloft to address the problem. He noted that he took the Zoloft for a week and did not return to treatment. He denied a history of suicidal ideation or suicide attempts prior to this weekend.

*Medical History:* The service member denied a significant medical or surgical history. He denied current pain (0/10). He denied a history of head injuries and seizures.

*Substance History:* The service member denied a history of substance abuse and illegal drug use. He noted that he drinks 3–4 caffeinated sodas per day and smokes a pack of cigarettes daily.

*Family Mental Health/Substance Abuse History:* The service member denied a family history of mental health problems, pathological gambling, or substance abuse.

*Personal History:* The service member is the oldest of 2 siblings raised in an intact Arizona home. He denied a childhood history of emotional, physical, and sexual abuse. He noted some discipline/behavioral problems in grade school, but he graduated on time with a C average.

The service member noted that he has been married for 1 year 8 months and they have one child. The service member reported serious marital conflict related to the lies that he has been telling about finances and gambling. He noted that if he cannot successfully get treatment for his gambling problem he will lose his wife and child.

*Psychological Testing:* The service member was administered the South Oaks Gambling Screen. He scored a 15, which is considered indicative of a significant gambling problem. He was also administered the Beck Depression Inventory-II, on which he received a 6. This was not considered indicative of a clinical depression.

*Mental Status Examination:* Mental status examination at the time of the evaluation revealed an appropriately groomed male dressed in the uniform of the day. He was alert and oriented to person, place, time, and situation. He was cooperative, and eye contact was direct. There were no atypical behaviors or psychomotor disturbances noted. Speech was normal in range, rate, and intensity, though he often paused when answering questions or answered minimally when embarrassed. Cognitive functioning, judgment, insight, and impulse control appeared intact in the clinical interview. Thought processes appeared clear and goal-directed. Auditory and visual hallucinations were denied. His affect was restricted and congruent with his nervous mood. He adamantly denied current suicidal/homicidal ideation, plan, and intent and convincingly contracted for safety.

*Diagnostic Impressions (DSM-IV):*

Axis I: 312.31 Pathological Gambling  
V61.10 Partner Relational Problem

Axis II: No Diagnosis

Axis III: No Diagnosis

Axis IV: Routine Military Duties, Economic Problems

*Plan:*

1. The service member is recommended to attend the Gambling Treatment Program at the Substance Abuse Rehabilitation Program. His first group therapy appointment is at 1730 on 25 Feb 05.
2. The service member was referred to a financial counselor. He was accepted as a walk-in appointment as soon as he leaves SARP today.
3. The service member was instructed not to drink until this crisis stage has passed. He noted that he understood this rationale and would not have a problem abstaining from alcohol indefinitely.
4. The service member was encouraged to attend the weekly Gambler's Anonymous meeting (Thursdays at 1800).

5. The service member understands that he may call for an earlier appointment at any time (555-1234) or call the after hours counselor at 555-0000 if at risk for relapse.
6. The service member adamantly denied suicidal ideation and readily and convincingly contracted for safety. He was able to articulate a thorough plan for safety.
7. These findings were discussed with the service member, who agreed with the results of the evaluation and the current plan.
8. Clinic POC is SSGT Smith or Dr. Kennedy at 555-1234.

C. H. Kennedy  
LT/MSC/USNR

*Head, Substance Abuse  
Rehabilitation Program*

J. A. Smith  
SSGT/USMC

*Substance Abuse Counselor*

PART II



## Operational Psychology

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## CHAPTER 9

★ ★ ★

# Introduction to Operational Psychology

THOMAS J. WILLIAMS  
JAMES J. PICANO  
ROBERT R. ROLAND  
L. MORGAN BANKS

The global war on terrorism (GWOT) offers military psychology a tremendous challenge and opportunity to demonstrate the significant contributions of operational psychologists. Similar to the military organizations currently transforming to remain responsive and relevant to the changing circumstances and requirements, threats, and opportunities, so, too, must military psychologists adapt—and in many cases, develop entirely new methods—to ensure that they provide meaningful and relevant support to operational and strategic military commanders.

This highlights the changing nature of what has been referred to as asymmetric warfare and the challenge it poses for the commander and those that will be led into combat (Williams, 2003). It is within this changing realm that *operational psychologists* can offer their expertise and understanding of human behavior to help commanders “get inside the enemy’s decision loop” (Adams, 2001). This becomes even more evident in asymmetric warfare, in which military decision making and operational psychology activities might just as likely occur hundreds of miles away,

similar in some respects to how our armed forces currently direct remotely piloted vehicles to carry out their missions.

This chapter provides an overview and definition for the new and emerging roles of operational psychologists in providing this support while linking and introducing the chapters that follow in this section on operational psychology. Each chapter is briefly introduced by highlighting how it fosters and reinforces this important and timely opportunity.

Operational psychology offers a significant paradigm shift for many military psychologists, who may have envisaged their delivery of services as being limited to military treatment facilities or medical centers. However, in an asymmetric war, the distinctions between battlefield and home-based buildings are blurred or nonexistent, as we painfully learned with the September 11, 2001, attack on the Pentagon and World Trade Center.

To date, only a few sources have identified operational psychology as their focus, none of which addresses the use proposed here. One is a study completed by a National Aeronautics and Space Administration (NASA) psychologist on the operational psychology aspects of preparing for space travel (Holland & Curtis, 1998). Holland and Curtis focus on the psychological activities associated with crew member assessment, composition, training, preparation, interventions, well-being, family issues, and repatriation activities. Another use of the term “operational psychology” is found in the support provided by Naval Operational Medicine, involving human factors and performance, biostatistics, psychometrics, selection, testing, and training to promote operational effectiveness and safety in Navy Fleet and Fleet Marine Force activities (Naval Operational Medicine Institute, 2002). A third reference occurs in a description of Russia’s Federal Security Service (FSB) Academy, where an operational psychology department apparently provides training in antiterrorist techniques, counterintelligence, and assessment and selection for antiterrorist units (British Broadcasting Corporation, 2003). Although these perspectives provide some background for the current view of operational psychology, primarily in assessment and selection, none captures the richness and full potential of what operational psychology offers the military commander.

## OPERATIONAL PSYCHOLOGY DEFINED

For the purposes of this book, operational psychology is defined as the actions by military psychologists that support the employment and/or sustainment of military forces (in particular, military commanders) to attain strategic goals in a theater of war or theater of operations by leveraging and applying their psychological expertise in helping to identify enemy capabilities, personalities, and intentions; facilitating and supporting intelli-

gence operations; designing and implementing assessment and selection programs in support of special populations and high-risk missions; and providing an operationally focused level of mental health support.

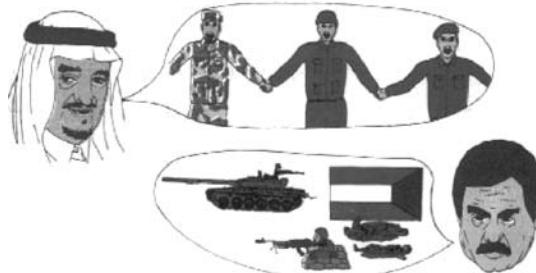
Implied in this definition is the need for operational psychologists to maintain both mental agility and flexibility in understanding and applying the tools of their profession to support the operational and strategic art of warfare. It also implies the need to maintain the ability to anticipate the strategic objectives and the relationship of the ends, ways, and means (see, e.g., JP 3-0, 2001, p. II-3); the demands of supported commanders; and the anticipation of how to apply psychological expertise to those demands to either enhance combat effectiveness or mitigate risks. Reduced to its essentials, like a commander's operational art, an operational psychologist must answer three important questions:

1. How might an operational psychologist leverage his or her psychological expertise to contribute to the commander's intended military condition that he seeks to produce to achieve the strategic goal (ends)?
2. Of the identified sequence of actions that is most likely to produce the condition, what psychological resources or products might be brought to bear to support that condition (ways)?
3. How might the operational psychologist help the commander use the psychological resources (e.g., psychological profiles and enemy forces capitulation assessments) that can be applied to help accomplish the desired sequence of actions (means)? (see, e.g., U.S. Department of the Army, 1986, FM 100-5, p. 10).

It is an accepted dictum that “all military operations have a psychological effect on all parties concerned—friendly, neutral, and hostile” (JP 3-0, 2001, p. III-24). Recognizing this, commanders will integrate psychological operations (PSYOP) campaigns into their joint force planning at all levels, with the intent to influence the emotions, motives, decision making, and ultimately the behavior of adversaries (JP 1-02, 2001, p. 430; see also JP 3-0, 2001). Thus, PSYOPs campaigns are used to either reinforce or induce favorable foreign attitudes and behavior. Consequently, operational psychologists must maintain situational awareness of the focus and intent of PSYOP campaigns since both depend on insights into the attitudes and behaviors of specific targets or potential adversaries within the psychological domain.

An operational psychologist provides operational support to commanders by primarily focusing on an adversary's emotions, motives, decision making, and behaviors in order to support the Joint Force commander's strategy, operational design, and tactical action. The effectiveness

**Live Together In Peace Not War**



*"We are all brothers . . .  
 neighbor Arabs . . .  
 we want peace."*

In this illustrated Gulf War PSYOP leaflet, King Fahd of Saudi Arabia wants all Arabs to live together in peace as brothers, whereas Saddam Hussein thinks of Kuwait, war, and death. From 4th Psychological Operations Battalion, Fort Bragg, NC.

of these products will often depend on the individual's experience, expertise in developing these products, the situational awareness of the enemy's dispositions, and perhaps most important, how these products will support the commander's concept of operations.

Planning for the provision of operational psychology support requires several important considerations in order to remain responsive and relevant to operational military commanders. When planned for and accepted, the products of an operational psychologist can serve as a powerful force multiplier.

### AREAS OF SPECIAL APPLICATIONS

To become most effective as that force multiplier, operational psychologists must carefully attend to five main areas related to understanding and contributing to intelligence operations. First, they must develop an understanding of strategic level military intelligence assets and resources and how to leverage their psychological expertise in applying information developed from the intelligence cycle to support the commander's intent. Implied is that the operational psychologist will have the appropriate security clearances (i.e., Top Secret), along with access and necessary "read-ons" to Sensitive Compartmented Information (SCI) programs that would allow that access (see, e.g., DCID, 6/4, 1998). Second, the operational psychologist must become integrated early into the intelligence and operational planning

cells and understand how to integrate operational psychology processes and procedures into national-level intelligence assets supporting military operations (see, e.g., Jones, 2001). As noted, this will require the appropriate security clearances and understanding of the operational cycle in campaign planning (see, e.g., JP 1-02, 2001, and U.S. Department of the Army, 1995, especially pp. 5-17-5-19). Third, operational psychologists must serve as a primary asset of the J2, or Intelligence section, to ensure, where applicable, integration of operational psychology products and processes with ongoing intelligence initiatives and access to classified information so necessary to fulfill the requirements identified above. In sum, they must ensure they remain accessible and integrated into the various elements of the intelligence operations. Fourth, the operational psychologist must maintain situational awareness of the campaign planning to ensure optimal responsiveness in providing information in a timely manner on those personalities or issues most critical for success. Therefore, it is important for the operational psychologist to attend the operational updates provided to a commander in order to maintain appropriate situational awareness of the commander's priorities.

The fifth area of special applications for an operational psychologist involves the need to develop expertise in completing "indirect" assessments. In this area, the operational psychologist can assist the commander by helping to sift through intelligence reports to identify vulnerabilities or tendencies in the personalities and idiosyncrasies of enemy commanders. During World War II, William Langer, head of Research and Analysis for the Office of Strategic Services (OSS), employed the services of both his brother, OSS psychologist Walter Langer (1972), and psychiatrist Henry Murray (1943), of the Harvard Psychological Clinic, to develop a psychological profile of Adolph Hitler. It is interesting to note that Murray's profile predicted that Hitler would commit suicide at the war's end.

One need only explore several other open source documents to begin to understand what potential the operational psychologist can offer in this area. For example, in former President Jimmy Carter's (1982) book *Keeping Faith*, he praises the intelligence community for providing "psychological analyses" of Egyptian President Anwar al-Sadat and Israeli Prime Minister Menachem Begin as he began the negotiations for the Camp David Accords:

I was poring over psychological analyses of two of the protagonists which had been prepared by a team of experts within our intelligence community. This team could write definitive biographies of any important world leader, using information derived from a detailed scrutiny of events, public statements, writings, known medical histories, and interviews with personal acquaintances of the leaders under study. . . . What made them national leaders? What was the root of their ambition? What events during past years had helped to shape

their characters? . . . Likely reaction to intense pressure in a time of crisis? Strengths and weaknesses? . . . Whom did they really trust? . . . I was certain they were preparing for our summit conference in a similar manner. (p. 320)

In reality, indirect assessments of individuals have long been used. For an example of how biographical data obtained about Al Qaeda terrorists from the Internet are used, see Chapter 13 (this volume). Several valuable sources provide samples of both techniques and approaches (e.g., see Freud's [1910/1964] seminal study of Leonardo da Vinci). Post (2004) reveals the details behind the indirect psychological profiles described by Jimmy Carter and how they were instrumental in helping the president and other U.S. government leaders anticipate and predict the next moves of those with whom they negotiated. There are several other sources for this approach, but most are directed at political leaders as opposed to military leaders (see, e.g., Alexander, 1988, 1990; Brickfield, 2001; Elms, 1988, 1994; Feldman & Valenty, 2001). This technique is similar to the commonly accepted indirect assessments that allow law enforcement profilers to discern offenders' behavioral and personality characteristics (Ault & Reese, 1980; Douglas, Ressler, Burgess, & Hartman, 1986; Jackson & Bekerian, 1997; Jackson, van den Eshof, & DeKleuver, 1997; Silke, 2001), as well as other psychological studies that focus on the personality, character, and leadership of presidents (Rubenzer & Faschingbauer, 2004). However, the use of profiling techniques has not been without controversy, and Alison, West, and Goodwill (2004) have proposed a strategy to pragmatically address some of the concerns.

Another related technique for indirect assessments that offers some promise is one recently described by Ritzler and Singer (1998). They used self-statements culled from the autobiography of Nazi war criminal Rudolph Hoess (1959) to illustrate a method of "MMPI by proxy," which was integrated and compared to a Rorschach Inkblot Test completed with Hoess when he was being tried in Nuremburg for war crimes shortly after World War II. Ritzler and Singer demonstrate good reliability in completing personality assessments by proxy, using a technique of "self-expression" (the Rorschach) with one of self-report (the MMPI), and noting that such techniques offer a reliable way to "deepen one's understanding of personality functioning."

Other sources highlight how psychological factors are considered in counterespionage activities. Marbes (1986) and Olson (2001) provide an overview of the considerations for how an increased understanding of human nature, needs, and motives can prove valuable in determining who is vulnerable for recruitment or betrayal in counterintelligence operations.

By extrapolating from these techniques, an operational psychologist might also assess reports of enemy morale and provide an evaluation of likely capitulation or surrender probabilities using an understanding of

both cultural and psychological characteristics of enemy forces and their “will to fight” (see, e.g., Kecskemeti, 1958; Watson, 1997; Wong, Kolditz, Millen, & Potter, 2003).

As military psychologists, we must remain aware that in war, our opponents will be thinking, creative, and adaptive. This is even more the case with asymmetric approaches to war since our opponents must find indirect ways to counter our strengths. An operational psychologist might extrapolate from these techniques to assess how the enemy’s reported or observed patterns of behavior or conduct does or does not adhere to its known doctrine, as well as assess any cultural influences on the psychology of enemy commanders or forces and their known alliances. In using this information, the operational psychologist could then facilitate the commander’s probing of the enemy commander’s mind, using that information to help identify the enemy’s all-important psychological balance and “center of gravity,” along with likely enemy courses of action. Thus, operational psychologists play an important role in helping commanders understand both their adversary’s and their own way of thinking (cf. Williams, 2003).

## SUPPORT TO OPERATIONS

The history of warfare is replete with examples of how effectively opposing commanders use their understanding of human nature and personalities to mount effective deception plans, playing off the psychological advantage to gain a military outcome (Latimer, 2001; Smith, 1995; Strosnider, 2002; Sun Tzu, 1971). Therefore, another important focus for the operational psychologist involves remaining cognizant of how deception plans might facilitate assessments of the most likely reactions of an opponent commander’s personality that are identified and assessed in support of the campaign plan. These assessments might then facilitate the development of either “divisive” deception plans to undermine or compromise the efficiencies of enemy commanders or “consolidative” deception plans to then promote and facilitate military operations—but in an area where their expenditure of force and resources will have less effect. For example, an enemy commander’s “boldness” or “cautiousness” may help determine which type of deception plan is optimal.

The operational psychologist may also help identify operationally relevant aspects of enemy commanders’ personalities across the spectrum of tactical, operational, and strategic levels of war, alerting the commander to any identified vulnerabilities or likely reactions to requests for surrender, the will to fight if only certain units or positions are targeted, and the centers of gravity for leadership and morale (see, e.g., JP 3-0, p. III-30; Wong et al., 2003). In a very real sense, an operational psychologist can contrib-

ute to “effects-based” operations, helping commanders sift through various enemy commander intentions in response to selected actions to then counter those intentions (see, e.g., Fayette, 2001). Indeed, the human mind has been described as the “last dimension of future battlefields” (Hall, 1998).

Certainly one of the most famous instances of applying the science and practice of psychology to support a nation at war is described in the now classic *The Assessment of Men* (OSS Assessment Staff, 1948; see Handler, 2001 for an excellent overview). During World War II, a group of academic psychologists were brought together to develop a method for personnel assessment and selection to carry out counterintelligence, spying, and espionage operations in support of military operations (OSS Assessment Staff, 1948). Certainly there are numerous contemporary examples of how military psychologists either develop and/or provide assistance to assessment and selection programs for high-risk missions or entry into Special Forces (Harrell, 1945; Maranto & Ernesto, 2002; Picano, Roland, Rollins, & Williams, 2002).

### PARADIGM SHIFT OR FULL EXPRESSION OF MILITARY PSYCHOLOGY?

At first appearance, this may seem to dramatically shift the skills necessary for military psychologists. However, in reality what it suggests is that in attending military education programs (e.g., the intermediate-level military education such as the Command and General Staff College for the Army and the Air Command and Staff College for the Air Force), military psychologists have a responsibility to learn and understand the military organization they operate within and the likely enemies they may face. It is exactly the comprehensive understanding of human behavior that psychologists possess that makes them most valuable as operational psychologists.

The subsequent chapters in this section expand on and provide insight into a number of critical skills and competencies that will greatly facilitate the success of an operational psychologist. The first chapter addresses combat stress, a key and increasingly critical element for both operational and clinically focused psychologists, as well as the warrior commanders they support.

The roles of operational psychologists and commanders interface at a critical juncture, often referred to as the “human dimension” of warfare. As such, it involves leadership, the individuals who are led, and their morale. The morale of the force is considered the most important intangible element of the human dimension (U.S. Department of the Army, 1983, p. 3). To the operational psychologist, it serves as the domain in which strong emotions serve as the wellspring for battlefield courage, resiliency,

and hardness to face the terror and hardship of the battlefield. Effective commanders understand that morale is the essential human element and seek to find ways to promote it in their forces while denying or undermining it in the enemy. It is within this realm of the human dimension that one faces the great physical, emotional, and mental strain of war and where combat stress reactions occur.

Whereas in the past military psychologists would have focused primarily on what actions would promote high morale and resilience for allied troops, an operational psychologist will also need expertise in identifying what factors will contribute to the lessening or demise of morale in enemy forces or adversaries who engage our forces. Therefore, operational psychologists will leverage battlefield stress information to understand how various attributes will affect morale and the will to fight, both ours and the enemy's.

Numerous studies provide glimpses into the stresses and emotional strains of war. Some explore the behavior of combatants (see, e.g., Flynn, 1991; Gabriel, 1986, 1987, 1988; Holmes, 1985; Keagan, 1976; Kellet, 1982; Langham, 1937; Marshall, 1947, 1970; Richardson, 1978; Spiller, 1988), and others provide accounts of personal experiences, along with an early description of posttraumatic stress disorder (PTSD) in the Civil War (see, e.g., Dean, 1991; Frank & Reaves, 1989). Shay (1995) has written an insightful and persuasive account of how Homer's *Iliad* and Shakespeare's *Henry IV* contain descriptions of combat stress reactions and some reasons for their genesis. Moran (1966) also offers an intriguing observation of men experiencing combat stress in World War II (see also Coop & McAndrew, 1990; Fussell, 1989). Another study analyzes the questionnaires of 300 combatants from the Abraham Lincoln Brigade of the Spanish American War (Dollard, 1943). All of these studies share one important quality: insight into the human dimension of war and its terrible toll on a significant number of those individuals who experience it.

Some authors (Hoge et al., 2004; see also Friedman, 2004) have helped us understand the toll wrought by the stress of warfare. The study by Hoge et al. assesses the extent to which combat operations in Iraq and Afghanistan contributed to an increased risk of mental health problems in members of the armed forces, and it identifies some of the perceived barriers to receiving care. Psychologists serving in and supporting these operations should understand and appreciate the need to operationalize their mental health services as they also provide support to intelligence operations. Chapter 10 (this volume) provides an overview of the incidence of combat stress in the various wars and conflicts through history, the identification of combat stress, and state-of-the art intervening principles or combat stress reactions. The chapter emphasizes the end-state goal of the operational psychologist's intervention—return to duty of service members with

manageable combat stress reactions—and provides an in-depth analysis of those variables that contribute to the development of combat stress.

There are other valuable resources for the operational psychologist to turn to in addressing some of the issues raised by Hoge et al. (2004). Pincus, House, Christenson, and Adler (2001) discuss the emotional trauma that families experience. Lehman, Hansen, and Munsinger (1992) address the impact and some the unique demands on military families serving overseas after the deployment of a father or mother. Knapp and Newman (1993) also focus on the stresses that military spouses experience during extended separations and how they relate to overall psychological well-being.

## CAPTIVITY, INTERROGATIONS, AND DEBRIEFINGS

War . . . has no power to transform, it merely exaggerates the good and evil that are in us. —LORD MORAN, *Anatomy of Courage*

Few who saw them will ever forget the vivid images—released to the public in April and May 2004—of various abuses inflicted on Iraqi prisoners of war at Abu Ghraib prison. Many were quick to point out the parallel between Zimbardo's (1971) famous prison study with college students in a basement at Stanford University (Haney, Banks, & Zimbardo, 1973; Zimbardo, Haney, Banks, & Jaffe, 1975). However, what is important for operational psychologists is to recognize the psychological dynamics of captivity, for both captors and those held captive, and the various interrogation techniques that are employed (see, e.g., Stanton, 1969, for an important overview), along with ethical and legal boundaries for participation in these activities. This is an area where operational psychologists will draw heavily from their background in social psychological processes, including diffusion of responsibility, the interplay between personal accountability and moral disengagement for one's actions, dehumanization of enemy combatants, and social modeling and group conformity. Other important areas for operational psychologists to understand include the clinical issues and professional responsibilities for clinical interventions with victims of torture (see, e.g., Pope & Garcia-Peltoniemi, 1991), working through interpreters (Miller, Martell, Pazdirek, Caruth, & Lopez, 2005), and increasing one's understanding of cross-cultural issues (see, e.g., Betancourt, 2004; Hong, Morris, Chiu, & Benet-Martinez, 2000; Stuart, 2004).

Using the Department of the Army's investigation report (Taguba, 2004), Bartone (2004) provides a cogent analysis of some of the contextual and situational factors that he believes influenced behavior in Abu Ghraib. Bartone identifies these factors as ambiguity with the chain of command

and leadership, *laissez-faire* attitude of leaders concerning the events in the prison, a lack of training of the prison guards, lack of discipline, and the psychological stress of being in constant danger over an extended period of time, with reduced quality of life.

The recent controversies surrounding interrogations highlight the importance for operational psychologists to familiarize themselves with the Law of Land Warfare and provisions of the Geneva Convention (see, e.g., U.S. Department of the Army, 1956), as well as regulations governing the handling of prisoners of war or detainees (see, e.g., U.S. Department of the Army 1987, especially chap. 6, and 1997). Operational psychologists could help to develop unit training for support in interrogations and interrogation processes that might include instruction on the psychological processes and motivations activated during detention, increasing awareness of possible resistance techniques (see, e.g., FM 34-52), as well as recognizing and making evident their ethical and professional responsibilities (as both psychologist and professional military officer) to help provide supervision and accountability to the command for activities they observe or suspect are occurring (see also Wedgwood, 2004).

Both Taylor (1991; see especially pp. 494–496) and Hunter (1991) have also addressed several issues of relevance for operational psychologists. In particular, Taylor points out that few individuals are resilient enough to resist an intensive and prolonged interrogation, noting that the state of health, strength of purpose, psychological hardiness, and understanding of strategy being used by the interrogators all contribute to one's state of mind. Thus, operational psychologists make a valuable contribution by helping train unit members about the stress and strain of captivity, thereby increasing their resilience and likelihood of surviving the terrible ordeal a prisoner of war may face.

As terrorist organizations expand their net of potential captives, many of whom are nonmilitary, there is an increasing need for operational psychologists to be prepared for and to understand the dynamics of captivity, the psychological processes that occur within it, and what preventive measures can promote captives' hardiness and resiliency. For example, Hunter (1991) provides an excellent overview of the common psychological and psychosocial sequelae and difficulties, postcaptivity, on former captives and their families. In addition, military psychologists have long played a vital role in survival, evasion, resistance, and escape (SERE) training and in the development of appropriate education and assessment programs.

Chapter 11 (this volume) addresses this important area both for the operational psychologist and for the medical treatment facility-based mental health provider who may have occasion to interact with recovered personnel at some point in their careers. The Joint Personnel Recovery Agency (JPRA) is the Department of Defense proponent for repatriation activities. Opera-

tional psychologists should familiarize themselves with several Department of Defense directives (DoDD) and joint publications that are particularly relevant. These include DoD (2000d), “Repatriation of Prisoners of War (POW), Hostages, Peacetime Government Detainees, and Other Missing or Isolated Personnel”; DoD (1994), “DoD Program for Enemy Prisoners of War (EPOW) and Other Detainees”; DoD (2000e), “Training and Education to Support the Code of Conduct”; DoD (1993), “Defense Prisoner of War/Missing in Action Office (DPMO)”; DoD (2000a), “Accounting for Missing Persons”; DoD (2000c), “Non-Conventional Assisted Recovery in the Department of Defense”; DoD (2000b), “Code of Conduct Training and Education”; and JP 3-50.3 (especially app. A). Hayes (2003) provides a helpful overview of Joint-SERE training issues, noting the 17 subjects taught by all DoD-approved SERE courses and addressing the Level-C SERE policy differences among the three military services.

The *911 Commission Report* (National Commission on Terrorist Attacks upon the United States, 2004) helped bring greater awareness to the multifaceted dangers and challenges posed by Al Qaeda and other terrorists. Chapters 12 and 13 (this volume) discuss the psychology of terrorists in general and specifically, the psychology of Al Qaeda. These chapters explore the psychological vulnerabilities of those who are recruited into terrorist groups and offer valuable explanations for why certain individuals (or groups) are vulnerable to terrorist recruitment. Using historical accounts of state-sponsored, political, and nationalistic terrorism, Chapter 12 provides a comprehensive review of how certain psychological and biographical attributes—especially loyalty, indoctrination, and disillusionment—play such an important role in the recruitment of terrorists. Chapter 13 then traces the evolution of the Global Salafi jihad, providing important information that will assist in the profiling of Al Qaeda terrorists. Both of these chapters also highlight the complex interplay of the personality, situational, and ideological dynamics of terrorist groups, as well as how these psychological processes mix together to form a dangerous elixir of hate, purpose, and action that demands our vigilance and action around the world.

There is growing concern that Al Qaeda terrorists or other nations seeking world recognition will finally achieve their goal of obtaining and using weapons of mass destruction (WMD), nuclear materials and/or biological or chemical agents (Gunaratna, 2002). This threat has been a focus for psychologists for many years (see, e.g., White, 1986, especially pp. 9–33, which discuss the toll it poses on our feelings and those of our children). Chapter 14 (this volume) brings to light the potential psychological effects of an attack with nuclear, biological, or chemical agents and discusses the many roles of the psychologist in this realm in managing community reactions (see also Mickley & Bogo, 1991).

Crisis negotiation can create natural tension between the mental health and operational roles important to an operational psychologist. On the one hand, as Chapter 15 (this volume), on crisis and hostage negotiation, reveals, very few psychologists receive any training in formal negotiation or mediation, although success could mean life or death for a hostage. In asymmetric warfare, decisions about how to handle any given situation on a tactical level often have strategic implications. Several sources are worth considering as background for this topic. For example, Fuselier (1988, 1991) discusses the support that mental health professionals can provide to a police hostage negotiation team. An operational psychologist should become familiar with several negotiation or mediation models to ensure adaptability and readiness for different challenges they may confront in hostage negotiations (see, e.g., Fisher & Ury, 1981; Pruitt, 1986, pp. 35–50; Rubin, 1986). The goal for operational psychologists is to counter the criticism, too often leveled, that “mental health professionals may have something to offer in the hostage situation, but probably less than the field commanders might hope for” (Poythress, 1980, p. 32).

S. L. A. Marshall (1947) was a military officer who served as the chief military historian for the Army in World War II; he traversed the war zone, interviewing surviving members of units in the aftermath of intense battles. He keenly observed the benefits derived from allowing soldiers to recount their actions and those of their fallen comrades, sharing the pain, sacrifice, and glory of their battlefield experiences. A similar process, but for a different reason, is addressed in Chapter 16 (this volume), which focuses on the important contributions of psychologists in the aftermath of disaster, particularly the actions taken at the Pentagon after the 9/11 attack. This chapter addresses critical incident stress debriefing, a process that is increasingly being questioned for its efficacy (see, e.g., McNally, Bryant, & Ehlers, 2003).

In addition to the determination of routine fitness for duty, operational military psychologists are asked to address assessment and selection processes for special populations. Assessment centers have a long history of success in assessing and selecting military members who volunteer for non-standard, high-risk assignments. Military psychologists, working with operational populations, are usually instrumental in setting up and running these programs and processes. In doing so, they ensure that the right attributes are assessed in a manner that is both predictive of success and of value to those military members completing the assessment and selection process. They also ensure that these processes provide valuable self-assessment opportunities to promote increased self-awareness, hardiness, and resiliency in those who are successful. Chapter 17 (this volume) discusses various traits that military psychologists look for in this population, as well as the essential attributes possessed by these specialized service members.

## ETHICAL AND LEGAL CONSIDERATIONS FOR OPERATIONAL PSYCHOLOGISTS

The varied and innovative roles and responsibilities of operational psychologists prompt ethical and legal considerations that are best addressed in the realm of professional competencies (American Psychological Association, 2002). Kaslow (2004) offers a valuable model for clinically based professional competency that is easily adapted to a legal and ethical competency-based practice model for operational psychologists. For example, competence is defined as “an individual’s capability and demonstrated ability to understand and do certain tasks in an appropriate and effective manner consistent with expectations for a person qualified by education and training in a particular profession or specialty thereof” (p. 775).

It is also important for operational psychologists to understand and develop competence in multicultural assessments. Dana (2002) has identified several considerations: (1) recognition that it is a multifaceted construct; (2) respect for how cultural differences are predicated on increased self-awareness, personal experiences, and knowledge of the other cultures; (3) ability to offer simultaneous interpretations of standard and multicultural assessments that strengthen both approaches; (4) increased need for awareness of possible bias in research methods (e.g., comparative research studies and assessment methods); (5) increased need to understand cross-cultural equivalence and psychometric issues in testing; and (6) a recommendation for initial supervision of multicultural assessments.

Since many operational psychologists may find themselves providing support in new operational areas without clearly delineated ethical or legal parameters, a foundation for a competency-based ethical and legal decision-making model is imperative. Toward that end, operational psychologists will often have to use their professional judgment to assess situations and make decisions about what to do or not to do; maintain self-awareness of their role and responsibilities by using self-reflective practices to modify their decisions as appropriate; and carry out their actions in accord with the ethical principles, standards, guidelines, and values of the profession, with the understanding that competency is context-dependent, with the execution of that competency varying with the setting and environment (Epstein & Hundert, 2002; Kaslow, 2004).

The GWOT is certain to offer operational psychologists many different settings in which to exercise their ethical and legal decision making. There is growing recognition and increased awareness of the need for an expanded view of ethical principles that recognizes the complex interplay of cultural, belief, religious, and political systems (Fisher, 2004; Pettifor, 2004). In this complex and uncertain world, operational psychologists

must consider how to resolve ethical dilemmas across diverse cultural and political contexts (Fisher, 2004).

These settings are likely to place psychologists into roles at odds with their more traditional, practice-based ethics. Such is the opinion expressed in a recent editorial in the *New England Journal of Medicine* in light of the highly publicized account of medical professionals' participation in intelligence-gathering activities at Abu Ghraib in Iraq and Guantanamo Bay, Cuba. According to Bloche and Marks (2005), when medical professionals use their knowledge for military ends (as might be the case in assisting in interrogations), they are acting against their patient-oriented ethics and perhaps, depending on circumstances, in violation of the laws of war. Although acknowledging that military medical professionals sometimes serve purposes at odds with patients' welfare, the authors argue strenuously that there is now an urgent moral challenge to develop explicit guidelines to manage the conflict between a medical professional's therapeutic and operational roles. In doing so, the differing roles and responsibilities that psychologists confront in completing forensic assessments versus patient care seemingly offer a basis for the resolution of this conflict (see, e.g., Alison, West, & Goodwill, 2004).

It is fair to say that what is proposed as a scope of practice for an operational psychologist does not fall readily or neatly within the realm of our currently established ethics code. This increases the responsibility and need for operational psychologists to promote optimal behavior and regulate their own professional behavior within a reflective, decision-making model with a moral framework (see, e.g., Pack-Brown & Williams, 2003; Pettifor, 2004).

In February 2005, the American Psychological Association (APA) initiated a Presidential Task Force on Psychological Ethics and National Security (PENS) in order to respond to the increased involvement of psychologists in operational roles and to recognize the ethical complexity these psychologists face in these roles. The PENS task force was asked to more clearly define the application of the APA ethics code (American Psychological Association, 2002) to the emerging roles of psychologists in national security-related investigations (American Psychological Association, 2005). The task force's report provides 12 statements intended to both affirm the ethical responsibilities for psychologists and govern their involvement in national security-related activities. The report notes in clear and unambiguous language that "psychologists do not engage in, direct, support, facilitate, or offer training in torture or other cruel, inhuman, or degrading treatment" and that psychologists have an ethical responsibility to be "alert to and report any such acts to appropriate authorities" (p. 5). The task force also affirmed that engaging in consultative and advisory roles involving

interrogation and information-gathering processes for national security-related purposes “entails a delicate balance of ethical considerations” and requires that the activities of psychologists remain consistent with the APA Ethics Code (American Psychological Association, 2002). In light of these developments, and as affirmed by the PENS Task Force, operational psychologists are often in a unique position to assist in ensuring that these processes are safe and ethical for all participants.

As an initial step in approaching this complex issue, Ewing and Gelles (2003) provide several examples of ethical dilemmas in the nontraditional roles in which psychologists increasingly find themselves in providing professional consultations. In light of these new challenges and opportunities, this chapter on operational psychology is intended to initiate the identification and articulation of the needed competencies for success, to include the knowledge, skills, and attitudes necessary for the ethical and legal professional practice in this increasingly important domain for military psychologists.

## REFERENCES

Adams, T. K. (2001, Winter). Human warfare and the decline of human decision making. *Parameters*, pp. 57–71.

Alexander, I. E. (1988). Personality, psychological assessment, and psychobiography. *Journal of Personality*, 56, 265–294.

Alexander, I. E. (1990). *Personology: Method and content in personality assessment and psychobiography*. Durham, NC: Duke University Press.

Alison, L., West, A., & Goodwill, A. (2004). The academic and the practitioner: Pragmatists' views of offender profiling. *Psychology, Public Policy, and Law*, 10(1/2), 71–101.

American Psychological Association (APA). (2002). Ethical principles of psychologists and code of conduct. *American Psychologist*, 57, 1060–1073.

American Psychological Association (APA). (2005, June). *Report of the American Psychological Association presidential task force on psychological ethics and national security*. Washington, DC: Author.

Ault, R. L., Jr., & Reese, J. T. (1980, March). A psychological assessment of crime profiling. *FBI Law Enforcement Bulletin*, pp. 1–4.

Bartone, P. T. (2004). Understanding prisoner abuse at Abu Ghraib: Psychological considerations and leadership implications. *The Military Psychologist*, 20(2), 12–16.

Betancourt, J. R. (2004). Cultural competence—Marginal or mainstream movement? *New England Journal of Medicine*, 351(10), 953–955.

Bloche, M. G., & Marks, M. A. (2005). When doctors go to war. *New England Journal of Medicine*, 352(1), 3–6.

Brickfield, F. X. (2001). The impact of stroke on world leaders. *Military Medicine*, 166(3), 231–232.

British Broadcasting Corporation. (2003). Russian security service criteria very strict, says top official. Retrieved January 28, 2003, from [www.nexis.com](http://www.nexis.com).

Carter, J. (1982). *Keeping faith*. New York: Bantam.

Coop, T., & McAndrew, B. (1990). *Battle exhaustion: Soldiers and psychiatrists in the Canadian army, 1939–1945*. Buffalo, NY: McGill–Queen's University Press.

Dana, R. H. (2002). Introduction Special Series: Multicultural Assessment: Teaching methods and competence evaluations. *Journal of Personality Assessment*, 79(2), 195–199.

Dean, E. T., Jr. (1991). We will all be lost and destroyed: Post-traumatic stress disorder and the Civil War. *Civil War History*, 37, 138–153.

Director of Central Intelligence Directive (DCID). (1998, July 2). No. 6/4, *Personnel security standards and procedures governing eligibility for access to sensitive compartmented information*.

Dollard, J. (1943). *Fear in battle*. New Haven, CT: Institute of Human Relations, Yale University.

Douglas, J. E., Ressler, R. K., Burgess, A. W., & Hartman, C. R. (1986). Criminal profiling from crime scene analysis. *Behavioral Sciences and the Law*, 4(4), 401–421.

Elms, A. C. (1988). Freud as Leonardo: Why the first psychobiography went wrong. *Journal of Personality*, 56, 19–40.

Elms, A. C. (1994). *Uncovering lives: The uneasy alliance of biography and psychology*. New York: Oxford University Press.

Epstein, R. M., & Hundert, E. M. (2002). Defining and assessing professional competence. *Journal of the American Medical Association*, 287, 226–235.

Ewing, C. P., & Gelles, M. G. (2003). Ethical concerns in forensic consultation regarding national safety and security. *Journal of Threat Assessment*, 2(3), 95–107.

Fayette, D. F. (2001). *Effects-based operations*. Retrieved November 8, 2004, from [www.afflhorizons.com/briefs/june01/IF00015.html](http://www.afflhorizons.com/briefs/june01/IF00015.html).

Feldman, O., & Valenty, L. O. (2001). *Profiling political leaders: Cross-cultural studies of personality and behavior*. Westport, CT: Praeger.

Fisher, C. B. (2004). Challenges in constructing a cross-national ethics code for psychologists. *European Psychologist*, 9(4), 273–277.

Fisher, R., & Ury, W. (1981). *Getting to yes: How to negotiate agreement without giving in*. Boston: Houghton Mifflin.

Flynn, F. V., Jr. (1991, August). Preparing self for combat. *Military Review*, pp. 77–87.

Frank, J. A., & Reaves, G. A. (1989). *Seeing the elephant: Raw recruits at the battle of Shiloh*. New York: Greenwood Press.

Freud, S. (1964). *Leonardo da Vinci and a memory of his childhood* (A. Tyson, Trans.). New York: Norton. (Original work published 1910)

Friedman, M. J. (2004). Acknowledging the psychiatric cost of war. *New England Journal of Medicine*, 351(1), 75–77.

Fuselier, G. D. (1988). Hostage negotiation consultant: Emerging role for the clinical psychologist. *Professional Psychology: Research and Practice*, 19(2), 175–179.

Fuselier, G. D. (1991). Hostage negotiation: Issues and applications. In R. Gal & A. D. Mangelsdorff (Eds.), *Handbook of military psychology* (pp. 711–723). Chichester, UK: Wiley.

Fussell, P. (1989). *Wartime: Understanding and behavior in the Second World War*. New York: Oxford University Press.

Gabriel, R. A. (Ed.). (1986). *Military psychiatry: A comparative perspective*. New York: Greenwood Press.

Gabriel, R. A. (1987). *No more heroes: Madness and psychiatry in war*. New York: Hill & Wang.

Gabriel, R. A. (1988). *The painful field: The psychiatric dimension of modern war*. New York: Greenwood Press.

Gunaratna, R. (2002). *Inside Al Qaeda: Global network of terror*. New York: Columbia University Press.

Hall, W. M. (1998). *Thinking and planning: Vision 2010* (No. 98-6). Arlington, VA: Institute of Land Warfare.

Handler, L. (2001). Assessment of men: Personality assessment goes to war by the office of strategic services assessment staff. *Journal of Personality Assessment*, 76(3), 558–578.

Haney, C., Banks, W. C., & Zimbardo, P. G. (1973). Interpersonal dynamics in a simulated prison. *International Journal of Criminology and Penology*, 1, 69–97.

Harrell, T. W. (1945). Applications of psychology in the American Army. *Psychological Bulletin*, 42(1), 453–460.

Hayes, M. W. (2003, April 7). *A joint level-C survival, evasion, resistance, and escape (SERE) program for the armed forces*. Strategy Research Project, U.S. Army War College.

Hoess, R. (1959). *Commandant of Auschwitz: The autobiography of Rudolf Hoess*. New York: World.

Hoge, C. W., Castro, C. A., Messer, S. C., McGuirk, D., Cotting, D. I., & Koffman, R. L. (2004). Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *New England Journal of Medicine*, 351(1), 13–22.

Holland, A. W., & Curtis, K. (1998). Operational psychology countermeasures during the Lunar-Mars life support test project. *Life Support Biosphere Science: Journal of Earth Space*, 5(4), 445–452.

Holmes, R. (1985). *Acts of war: The behavior of men in battle*. New York: Free Press.

Hong, Y., Morris, M. W., Chiu, C., & Benet-Martinez, V. (2000). Multicultural minds: A dynamic constructivist approach to culture and cognition. *American Psychologist*, 55, 709–720.

Hunter, E. J. (1991). Prisoners of war: Readjustment and rehabilitation. In R. Gal & A. D. Mangelsdorff (Eds.), *Handbook of military psychology* (pp. 741–757). Chichester, UK: Wiley.

Jackson, J., & Bekerian, D. (Eds.). (1997). *Offender profiling: Theory, research, and practice*. Chichester, UK: Wiley.

Jackson, J., van den Eshof, P., & De Kleuver, E. (1997). A research approach to offender profiling. In J. Jackson & D. Bekerian (Eds.), *Offender profiling: Theory, research, and practice* (pp. 107–132). Chichester, UK: Wiley.

Joint Pub (JP). 3-50.3. (1996, September 6). *Appendix A, Administrative processing of DoD individuals who have returned from isolated territory*.

Joint Pub (JP) 1-02. (2001, April 12). *DoD dictionary of military and associated terms*.

Joint Pub (JP) 3-0. (2001, September 10). *Doctrine for joint operations*.

Jones, G. (2001). Working with the CIA. *Parameters*, 31(4), 28–39.

Kaslow, N. J. (2004). Competencies in professional psychology. *American Psychologist*, 59(8), 774–781.

Keagan, J. (1976). *The face of battle*. New York: Viking Press.

Kecskemeti, P. (1958). *Strategic surrender: The politics of victory and defeat*. Stanford, CA: Stanford University Press.

Kellet, A. (1982). *Combat motivation: The behavior of soldiers in battle*. Boston: Kluwer-Nijhoff.

Knapp, T. S., & Newman, S. J. (1993). Variables related to the psychological well-being of army wives during the stress of an extended military separation. *Military Medicine*, 158, 77–80.

Langer, W. C. (1972). *The mind of Adolph Hitler: The secret wartime report*. New York: Basic Books.

Langham, C. T. (1937). Panic. *Coast Artillery Journal*, 80, 308–315.

Latimer, J. (2001). *Deception in war: The art of the bluff, the value of deceit, and the most thrilling episodes of cunning in military history, from the Trojan horse to the Gulf War*. Woodstock, NY: Overlook.

Lehman, R., Hansen, J. E., & Munsinger, H. L. (1992, March/April). Crisis management of children during Desert Storm. *Journal of the Army Medical Department*, PB 8-92-3/4, pp. 39–41.

Maranto, D., & Ernesto, M. (2002). *Developing effective selection procedures for screening security personnel*. Washington, DC: American Psychological Association.

Marbes, W. (1986, Summer). Psychology of treason. *Studies in Intelligence*, 30(2), 1–11.

Marshall, S. L. A. (1947). *Men against fire: The problem of battle command in future war*. New York: Morrow.

Marshall, S. L. A. (1970). Individual motivation in combat. *Infantry*, 60, 30–35.

McNally, R. J., Bryant, R. A., & Ehlers, A. (2003). Does early psychological intervention promote recovery from posttraumatic stress? *Psychological Science in the Public Interest*, 4(2), 45–79.

Mickley, G. A., & Bogo, V. (1991). Radiological factors and their effects on military performance. In R. Gal & A. D. Mangelsdorff (Eds.), *Handbook of military psychology* (pp. 365–385). Chichester, UK: Wiley.

Miller, K. E., Martell, Z. L., Pazdirek, L., Caruth, M., & Lopez, D. (2005). The role of interpreters in psychotherapy with refugees: An exploratory model. *American Journal of Orthopsychiatry*, 75(1), 27–39.

Moran, C. (1966). *The anatomy of courage* (2nd ed.). London: Constable.

Murray, H. A. (1943, October). *Analysis of the personality of Adolph Hitler: With predictions of his future behavior and suggestions for dealing with him now and after Germany's surrender*. Office of Strategic Studies Confidential Report, copy 11 of 30.

National Commission on Terrorist Attacks upon the United States. (2004). *The 9/11 commission report*. New York: Norton.

Naval Operational Medicine Institute. (2002). *Operational psychology—Code 41*. Retrieved May 28, 2004, from [www.nomi.med.navy.mil/text/directories/41page.thm](http://www.nomi.med.navy.mil/text/directories/41page.thm).

Olson, J. M. (2001). *The ten commandants of counterintelligence: Studies in intelligence*. Retrieved February 20, 2002, from [www.cia.gov/csi/studies/fall\\_winter\\_2001/articles08html](http://www.cia.gov/csi/studies/fall_winter_2001/articles08html).

OSS Assessment Staff. (1948). *Assessment of men*. New York: Rinehart.

Pack-Brown, S., & Williams, S. (2003). *Ethics in a multicultural context*. Thousand Oaks, CA: Sage.

Pettifor, J. L. (2004). Professional ethics across national boundaries. *European Psychologist*, 9(4), 264–272.

Picano, J. J., Roland, R. R., Rollins, K. D., & Williams, T. J. (2002). Personality correlates of staff and peer ratings in operational assessment. *The International Military Testing Association Conference Proceedings*, pp. 191–195.

Pincus, S. H., House, R., Christenson, J., & Adler, L. E. (2001). *The emotional cycle of deployment: A military family perspective*. Retrieved December 3, 2002, from [call.army.smil.mil/products/trngqtr/tq2-02/pincus.htm](http://call.army.smil.mil/products/trngqtr/tq2-02/pincus.htm).

Pope, K. S., & Garcia-Peltoniemi, R. E. (1991). Responding to victims of torture: Clinical issues, professional responsibilities, and useful resources. *Professional Psychology: Research and Practice*, 22(4), 269–276.

Post, J. (2004). *Leaders and their followers in a dangerous world: The psychology of political behavior*. Ithaca, NY: Cornell University Press.

Poythress, N. G., Jr. (1980). Optimizing the use and misuse of psychologists in a hostage situation. *Police Chief*, 47(8), 30–32.

Pruitt, D. G. (1986). Achieving integrative agreements in negotiation. In R. K. White (Ed.), *Psychology and the prevention of nuclear war* (pp. 463–489). New York: New York University Press.

Richardson, F. M. (1978). *Fighting spirit: A study of psychological factors in war*. New York: Crane & Russack.

Ritzler, B., & Singer, M. (1998). MMPI-2 by proxy and the Rorschach: A demonstration assessment of the commandant of Auschwitz. *Journal of Personality Assessment*, 71(2), 212–227.

Rubenzer, S. J., & Faschingbauer, T. R. (2004). *Personality, character, and leadership in the White House: Psychologists assess the presidents*. Washington, DC: Brassey's.

Rubin, J. Z. (1986). Some roles and functions of a mediator. In R. K. White (Ed.), *Psychology and the prevention of nuclear war* (pp. 490–510). New York: New York University Press.

Shay, J. (1995). *Achilles in Vietnam: Combat trauma and the undoing of character*. New York: Simon & Shuster.

Silke, A. (2001). Chasing ghosts: Offender profiling and terrorism. In D. P. Farrington, C. R. Hollin, & M. McMurran (Eds.), *Sex and violence: The psychology of crime and risk assessment* (pp. 242–258). New York: Routledge.

Smith, J. D. D. (1995). *Stopping wars: Defining the obstacles to cease-fire*. Boulder, CO: Westview.

Spiller, R. J. (1988). Isen's run: Human dimensions of warfare in the 20th century. *Military Review*, 68, 2-13.

Stanton, G. (1969, Fall). Defense against communist interrogation organizations. *Studies in Intelligence*, 13(4), 49-74.

Strosnider, W. R. (2002, April 9). *Deception and the future battlefield—Information superiority at risk*. Carlisle Barracks, PA: U.S. Army War College, Strategy Research Project.

Stuart, R. B. (2004). Twelve practical suggestions for achieving multicultural competence. *Professional Psychology: Research and Practice*, 35(1), 3-9.

Sun Tzu. (1971). *The art of war* (S. B. Griffith, Trans.). New York: Oxford University Press.

Taguba, A. M. (2004). *Article 15-6 investigation of the 800th military police brigade report*. Retrieved May 17, 2004, from [www.agonist.org/annex/taguba.html](http://www.agonist.org/annex/taguba.html).

Taylor, A. J. W. (1991). Individual and group behaviour in extreme situations and environments. In R. Gal & A. D. Mangelsdorff (Eds.), *Handbook of military psychology* (pp. 491-506). Chichester, UK: Wiley.

U.S. Department of the Army. (1956, July 18). FM 27-10, *Law of land warfare*.

U.S. Department of the Army. (1983, October 31). FM 22-100, *Military leadership*.

U.S. Department of the Army. (1986, May 5). FM 100-5, *Operations*.

U.S. Department of the Army. (1987, May, 8). FM 34-52, *Intelligence interrogation*.

U.S. Department of the Army. (1995, May 31). FM 100-7, *Decisive force: The Army in theater operations*.

U.S. Department of the Army. (1997, October 1). AR 190-8, *Enemy prisoners of war, retained personnel, civilian internees and other detainees*. Also U.S. Departments of the Navy (OPNAVINST 346.6), Air Force (AFJI 31-304), and Marine Corps (MCO 3461.1).

U.S. Department of Defense (DoD). (1993). DoDD 5110.10, *Defense Prisoner of War/Missing in Action Office (DPMO)*.

U.S. Department of Defense (DoD). (1994). DoDD 2310.1, *DoD program for enemy prisoners of war (EPOW) and other detainees*.

U.S. Department of Defense (DoD). (2000a). DoDI 2310.5, *Accounting for missing persons*.

U.S. Department of Defense (DoD). (2000b). DoDI 1300.21, *Code of conduct (CoC) training and education*.

U.S. Department of Defense (DoD). (2000c). DoDI 2310.6, *Nonconventional assisted recovery in the Department of Defense*.

U.S. Department of Defense (DoD). (2000d). DoDD 2310.4, *Repatriation of prisoners of war (POW), hostages, peacetime government detainees, and other missing or isolated personnel*.

U.S. Department of Defense (DoD). (2000e). DoDD 1300.7, *Training and education to support the code of conduct*.

Watson, B. A. (1997). *When soldiers quit: Studies in military disintegration*. Westport, CT: Praeger.

Wedgewood, R. (2004, May 23). The steps we can take to prevent another Abu Ghraib. *Washington Post*, p. B5.

White, R. K. (Ed.). (1986). *Psychology and the prevention of nuclear war*. New York: New York University Press.

Williams, T. J. (2003). Strategic leader readiness and competencies for asymmetric warfare. *Parameters*, 33(2), 19–35.

Wong, L., Kolditz, T. A., Millen, R. A., & Potter, T. M. (2003). *Why they fight: Combat motivation in the Iraq War*. Carlisle Barracks, PA: U.S. Army War College, Strategic Studies Institute.

Zimbardo, P. G. (1971). *The psychological power and pathology of imprisonment*. A statement prepared for the U.S. House of Representatives Committee on the Judiciary (Subcommittee No. 3. Robert Kastenmeyer, Chairman: Hearings on the prison reform).

Zimbardo, P. G., Haney, C., Banks, W. C., & Jaffe, D. (1975). The psychology of imprisonment: Privation, power, and pathology. In D. Rosenhan & P. London (Eds.), *Theory and research in abnormal psychology* (2nd ed., pp. 270–287). New York: Holt, Rinehart & Winston.

## CHAPTER 10

★ ★ ★

# Combat Stress

RICK L. CAMPISE  
SCHUYLER K. GELLER  
MARY E. CAMPISE

The term “combat stress” has undergone a variety of name changes over the course of time (Jones, 1995; U.S. Department of the Army, 1994a). During the American Civil War, combat stress was identified as nostalgia and homesickness. In World War I (WWI), this experience was referred to as shell shock, effort syndrome, war neurosis, gas hysteria, Da Costa’s syndrome, irritable heart syndrome, and not-yet-diagnosed nervous. The terms psycho-neurosis, effort syndrome, combat exhaustion, battle fatigue, and operational fatigue were used in World War II (WWII). During the Korean War, this package of symptoms was identified as battle fatigue and combat exhaustion. In the Vietnam War, the terms combat stress and posttraumatic stress syndrome were applied and posttraumatic stress disorder (PTSD) was used after the war. During the Gulf War (Operation Desert Storm), this symptom package became commonly identified as “combat stress reaction.” At this time, some use the term “combat operational stress” as well as “combat operational stress reaction.”

### DEFINING COMBAT STRESS

The U.S. Department of Defense (DoD) currently utilizes the term combat stress reactions (CSRs) to describe this set of symptoms. DoD Directive (DoDD) 6490.5 (1999) defines CSR as the “expected, predictable, emo-

tional, intellectual, physical, and/or behavioral reactions of service members who have been exposed to stressful events in combat or military operations other than war" (p. 8).

Field Manual (FM) 8-51, *Combat Stress Control in a Theater of Operations* (U.S. Department of the Army, 1994a) states, "The focus of CSC [Combat Stress Control] is on the prevention and treatment of stress-induced disability in otherwise normal soldiers" (p. 1-8). But does this include individuals with standard *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition (DSM-IV), diagnoses such as disorders of personality, mood, anxiety, schizophrenia and psychosis, somatization, substance misuse, and dissociation? The answer is no; psychiatric casualties caused by something other than the intense psychological or physiological stress of combat are not counted under CSR. Are military members who engage in misconduct that violates regulations and laws included? No; misconduct is commonly excluded from consideration as combat stress, but at the same time it is recognized that combat exposure can lead to misconduct.

## INCIDENCE OF COMBAT STRESS

Unfortunately, there is great variation in how combat stress is tracked. It has been reported in the context of the percentage or ratio of those wounded in action (WIA), of those evacuated, casualties in a battle, casualties per 1,000 military troops in a year, those killed in action (KIA), and those battle injury and wounded (BI&W) per 1,000 troops per year. For simplicity's sake, it may be most useful to state that on average there will be one stress casualty per five wounded in action (1:5), but rates have been reported as high as 1:1 and as low as 1:12 (U.S. Department of the Army, 1994a).

Tiffany and Allerton (1967) found that at one point during WWII, more men were being discharged from the military for psychiatric reasons than were being drafted. Heavy fighting in some divisions produced CSR ratios as high as one for every two (1:2) WIA or as low as one for every five (1:5) WIA (U.S. Department of the Army, 1994a). In the Pacific Theater, the ratio was almost one CSR for every wounded (1:1) throughout the war (Noy, 1991).

Fortunately, far fewer psychiatric evacuations occurred during the Korean War. Whereas they accounted for 23% of evacuations in WWII, during Korea only 6% of all medical evacuations fell into this category (Bourne, 1970).

From 1964 to 1973, almost 1 million service members saw active combat or were exposed to hostile life-threatening situations, resulting in 58,000 KIA, 300,000 WIA, and 75,000 seriously disabled individuals

(Meichenbaum, 1994). Mental health professionals rarely evaluated traditional cases of combat stress, most being handled within the unit (U.S. Department of the Army, 1994a). Camp and Carney (1987) surveyed 50 psychiatrists who served in Vietnam and found that only 12.6% of their patient load was combat stress whereas 27% was for substance abuse.

During Vietnam, the psychiatric evacuation rate was below 5% of all evacuations before 1971 but then increased to 30% in late 1971; by late 1972, psychiatric evacuations accounted for 61% of all evacuations (Jones & Johnson, 1975). These figures could easily be misunderstood (and have been misused) without the additional information that the increased evacuations resulted from large-scale drug screening and that most of the evacuations were for heroin dependency. Unlike most wars, in which the incidence of psychiatric evacuations correlates with the intensity of fighting as measured by the WIA rate, in Vietnam the WIA rate peaked in 1968 and then decreased whereas psychiatric evacuations increased (Jones & Johnson, 1975).

In light of the increase in urban warfare, the incidence of combat stress in Israeli Defense Forces (IDF) is particularly relevant. During the 1967 Arab-Israeli Six Day War, the IDF had 30 CSR patients for every 100 wounded (3:10), and in the 1973 Arab-Israeli War, the same 3:10 rate occurred (Belenky, Solomon, & Noy, 1985). In the 1982 Lebanon Invasion, similar results were produced, with 23 psychiatric casualties for every 100 WIA (2.3:10) for the IDF (Belenky, 1987).

In contrast, the 1982 Falklands War lasted 73 days, with 45 days of significant combat, in which the British had 250 KIA and 750 WIA; only 2% were mental health casualties (Fisher, 1983).

In 1983, during Operation Urgent Fury (Grenada), involving 3,000 American troops, there were 19 KIA, 73 WIA, and 3 mental health casualties (Adkins, 1989). During Operations Desert Shield and Desert Storm (ODS) (August 7, 1990–January 17, 1991, and January 17, 1991–February 28, 1991) 704,000 Americans were deployed, resulting in 148 KIA, 467 WIA, and few mental health casualties in the 39-day air war and 4-day ground war (Gunby, 1991; Morgan, 1993). Few CSR were seen during ODS because the ground offensive was rapid and highly victorious, lasting only 100 hours (U.S. Department of the Army, 1994a).

A neglected area of study is the comorbidity of combat stress/PTSD and physical injury. Belenky (1987) found that 10% of the IDF wounded in the 1982 Lebanon War also had CSR. Malt (1994) found that of those wounded in Vietnam, 20% had a history of PTSD and those not wounded had a PTSD rate of 3.5%, findings very similar to those of Helzer, Robins, and McEvoy (1987). A study on U.S. Army soldiers and Marines in Operation Enduring Freedom (OEF), and Operation Iraqi Freedom (OIF) found that those injured or wounded in Iraq were three times as likely to exhibit PTSD after the deployment while those wounded in Afghanistan were two

and a half times as likely to develop PTSD (Hoge et al., 2004). Hoge, Auchterlonie, and Milliken (2006) found that service members hospitalized during OIF were twice as likely to endorse a mental health concern on their Post Deployment Health Assessment (PDHA) than nonhospitalized OIF veterans (35% vs 18%).

## RECOGNIZING COMBAT STRESS

There is a “psychiatric cost to sending young men and women to war” (Friedman, 2004, p. 75). War is an abnormal event that occurs with horrific frequency throughout the course of human events. All military leaders struggle with recognizing when a military member’s reaction to war has strayed outside the “normal” range.

Symptoms of combat stress can be roughly grouped into six categories: physical, cognitive, behavioral, emotional, misconduct, and adaptive. There is no one specific symptom to which a commander or mental health staff member can point and say, “This is combat stress.” Nor is there a magic number of symptoms, so that a commander can conclude, “My troop member is displaying 11 of 18 symptoms; therefore he or she has combat stress.” Recognizing combat stress is a function of the duration, frequency, and intensity of the symptoms—one must closely examine an individual’s behavior: Is the behavior typical for the person, has there been improvement after a good rest, and what was the response when the commander shared his or her concerns with the individual? One of the most important questions is whether the person is currently a productive member of the unit.

The following list of symptoms by category is not exhaustive, nor are they the only symptoms indicative of combat stress. Their presence may also be manifestations of something else, such as physical injury, misconduct, or the reemergence of a previous mental health disorder.

Physical symptoms may be manifested by those experiencing combat stress (U.S. Department of the Army, 2000). Service members may report or exhibit problems across a wide physical spectrum: respiratory (shortness of breath, dizziness, sensation of something heavy sitting on one’s chest), cardiovascular (pounding heart, accelerated pulse, rising blood pressure), digestive (nausea, cramping, vomiting, constipation, diarrhea, loss of appetite), elimination system (increased frequency of bowel and urinary activity, wetting or soiling oneself), musculoskeletal (trembling, shaking), sleep disturbances (insomnia, nightmares), headaches, backaches, vertigo, exhaustion, constant agitated movement, or blurred vision.

Cognitive symptoms cover the range from mild to severely disrupting. The person may report or exhibit hyperalertness; an exaggerated or delayed

startle reaction (to sound, movement, light, etc.); inattention; short attention span; concentration problems; difficulty in reasoning or problem solving; faulty judgment; loss of confidence, hope, or faith; perception of oneself as a failure; memory loss; recurrent intrusive thoughts; flashbacks; delusions; or hallucinations (visual, auditory, tactile, olfactory, or taste).

Behavioral symptoms may be the most readily apparent symptoms of combat stress (U.S. Department of the Army, 2000). The person may exhibit carelessness (results in danger to oneself and others), impulsivity, freezing, panic, withdrawal from friends, an inability to relax, a low energy level, immobility, erratic behavior, impaired duty performance, a loss of skills, a failure to maintain equipment, rapid speech, deterioration in personal care (bathing, preventive medication, immunizations, or skin protection), loss of or impairment in senses (speech, hearing, vision, touch, and smell), stuttering, paralysis or inability to use a specific body part, self-medication, or the infamous 1,000-yard stare.

Combat stress symptoms can also be manifested in the emotional arena (Canadian Army Lessons Learned Centre, 2004). The range of emotions may include fear, terror, anxiety, irritability, argumentativeness, resentment, anger, rage, grief, guilt, shame, loneliness, depression, helplessness, apathy, detachment, numbness, emotional exhaustion, or hysterical outbursts.

Though misconduct disorders are not the same as CSR, some misconduct can be traced to combat stress (Canadian Army Lessons Learned Centre, 2004). Some of these behaviors may be observed in individuals with a personality disorder acting out their psychopathology, whereas other misconduct may reflect a breakdown in coping when faced with the horrors of war. Only careful examination can reveal the etiology of misconduct, ranging from "minor breaches of unit orders or regulations to serious violations of the Uniform Code of Military Justice and the Law of Land Warfare" (U.S. Department of the Army, 1994a, p.1-4). Examples of severe misconduct include mutilating enemy dead, killing enemy soldiers, killing non-combatants, torture, brutality, killing animals, fighting with allies, alcohol and drug abuse, neglecting discipline, going absent without leave, deserting, looting, pillaging, rape, negligent disease or injury, shirking, malinger ing, self-inflicted wounds, combat refusal, or fragging (threatening or killing one's own leaders). Each behavior must be considered in its context to discern if it is a function of combat stress or a manifestation of previous psychopathology. Regardless of the source from which misconduct is derived, combat stress does not justify criminal behavior (U.S. Department of the Army, 1994a).

Some cases that initially present as combat stress may actually be misconduct due to substance abuse (U.S. Department of the Army, 1994a). Symptoms of intoxication from alcohol, barbiturates, tranquilizers, stimu-

lants, and hallucinogens may closely mimic combat stress. Likewise, individuals may initially display what appears to be combat stress but in reality are experiencing symptoms of withdrawal from abused substances. In other cases, the individual may have surreptitiously been on medication prescribed outside the military medical system and has run out, producing a return of the mental health problems (Morgan, 1993).

Not all responses to combat stress are negative; some are adaptive and bring out the best in humanity (U.S. Department of the Army, 1994b). Exposure to combat can produce unit cohesion, loyalty to peers, loyalty to leaders, identification with unit tradition, sense of eliteness, sense of mission, alertness, vigilance, exceptional strength and endurance, increased tolerance (hardship, discomfort, pain, and injury), sense of purpose, increased faith, and heroic acts of courage and self-sacrifice (U.S. Department of the Army, 1994a).

The list above is so extensive that many commanders, overwhelmed or confused, may resort to one of two extremes: referring everyone or referring no one. As stated earlier, a decision to refer for CSR should be based on the duration, frequency and intensity of the symptoms. Is the behavior typical for the person? Has he or she improved after a good rest? What was his/her response to the commander's concerns? Is the person a productive member of the unit? The best advice is "Know your soldiers!" (Canadian Army Lessons Learned Centre, 2004) and "be alert for any sudden, persistent or progressive change in their behavior that threatens the functioning and safety of your unit" (U.S. Department of the Army, 2000, p. 3).

## SYMPTOM AND INCIDENCE COURSE

The manifestation of combat stress follows a U-shaped course. The incidence rate is higher in the first few days of conflict, drops as adaptation occurs, and climbs again as fatigue increases and stress accumulates. During the first week of combat, service members become aware of the dangers of death and injury to both themselves and their unit members, and they become acutely aware of their lack of experience (Shaw, 1987). With experience they are able to realistically evaluate their situation and the dangers of combat, with increased group identity and cohesion mitigating the "loneliness of the battlefield" (Shaw, 1987, p. 51). Continued exposure to the battlefield increases the number of traumatic episodes and the cumulative effect of fatigue and other factors, resulting in a definite decline in performance after 30 days of continuous combat (Swank & Marchand, 1946), with noneffectiveness typically manifesting itself after 90 days of combat (Appel & Beebe, 1946). Unfortunately, the aftermath of combat stress continues long after the fighting stops.

One of the most commonly studied postcombat disorders is PTSD: “The story of PTSD is the tale of the indomitable and indefatigable human spirit to survive and adapt” (Meichenbaum, 1994, p. 14). According to the American Psychiatric Association (2000), PTSD involves exposure to a trauma that is persistently reexperienced, attempts to avoid stimuli associated with the trauma, persistent increased arousal, and significant distress or impairment in social, occupational, or other important areas of functioning that has lasted at least 1 month. Estimates for PTSD prevalence rates in the civilian community range from a low of 1% to a high of 14% (American Psychiatric Association, 2000). Hoge et al. (2004) found that 5% of 2,530 soldiers surveyed prior to deployment to Iraq in 2003 already met the strict criteria for PTSD.

The Vietnam War raised the nation’s awareness of PTSD and the decades that followed taught the country that “PTSD is not a constant or static condition, but a disorder that may actually wax and wane throughout a lifetime” (Falk, Hersen, & Van Hasselt, 1994, p. 395). Keane and Wolfe (1990) state that 15% of Vietnam Veterans currently have PTSD, with a lifetime occurrence of 30%. Some authors (e.g., Meichenbaum, 1994) have noted that the lifetime PTSD rate for female Vietnam War veterans who served in theater is almost as high (26%) as that of male Vietnam veterans (30%).

It is equally important to acknowledge that PTSD is not solely a Vietnam War phenomenon. Many WWII and Korean War veterans continue to suffer from PTSD decades after combat. In fact the term “reactivated post-traumatic stress disorder” is increasingly used in reference to veterans of WWII and the Korean War who led productive lives until they were in their 60s and 70s, when their ability to function became impaired by a return of their PTSD.

In studying Israel’s participation in the 1982 Lebanon War, Belenky (1987) reports that the bulk of mental health patients did not emerge during the fighting (intense periods of fighting occurred on June 6–12 and June 22–24). When the fighting started in June 1982, 25% of the cases came to treatment. After the fighting stopped, 41% of the cases presented in July, August, and September. During the next 14 months, 34% of those with mental health needs came for treatment. The important point is that two-thirds of those who came forward for mental health assistance did so after combat ended. This fact has enormous implications for the need to provide postcombat services.

Solomon, Weisenberg, Schwarzwald, and Mikulincer (1987) studied the course of PTSD in Israeli soldiers 1 year after their participation in the 1982 Lebanon War. Soldiers who received aid for the immediate stage of CSR during the war and returned to duty at that time had a PTSD rate of 38%. Those not returned to duty had a PTSD rate of 74%. Those who

fought in the same battles but had not sought treatment for CSR had a PTSD rate of 16%. Solomon (1987) surveyed IDF members 2 years after their participation in the 1982 Lebanon War, and found that of those originally diagnosed with CSR, 56% met the criteria for PTSD 2 years later, and 17% of soldiers in the same front-line combat units who were not diagnosed with CSR during the conflict now met the criteria for PTSD.

Though there were few reports of CSR during ODS, postcombat follow-ups reveal a significant incidence of PTSD. Nine percent of 4,500 National Guard and Reserve units scored in the PTSD range (Rosenheck, 1993). Friedman, Schnurr, and McDonagh-Coyle (1994) found that a few days after their return, the PTSD rate was 3.2% in men and 9.6% in women, but 18 months later it was 9.4% and 19.8%. In a survey of 11,441 Gulf War veterans and 9,476 non-Gulf War veterans, Kang, Natelson, Mahan, Lee, and Murphy (2003) found a PTSD prevalence rate of 10.1% for veterans experiencing combat and 4.2% for those who had not seen combat. Even more telling, a 1999 study found that the prevalence rate of PTSD in veterans assessed immediately following a return to the United States after participating in the Gulf War more than doubled when assessed 2 years later, with a rise from 3% to 8% for men and 7% to 16% for women (Wolfe, Erickson, Sharkansky, King, & King, 1999).

Similar PTSD rates were found for those who served in Somalia and Bosnia. Almost 3,500 troops stationed in Somalia from 1992–1994 as part of Operation Restore Hope were interviewed, and an 8% PTSD prevalence rate was found (Litz, Orsillo, Friedman, Ehlich, & Batres, 1997). Over 1,000 soldiers were surveyed 6 months into a 12-month deployment to Bosnia, and 8% showed a pattern of symptoms consistent with PTSD (Bartone, 1998).

In 2003, Hoge et al. (2004) surveyed Army and Marine Corps personnel following their return from Iraq or Afghanistan: 1,962 from an Army infantry brigade of the 82nd Airborne Division after a 6-month deployment to Afghanistan, 894 from an Army infantry brigade of the 3rd Infantry Division after an 8-month deployment to Iraq, and 815 Marines from two battalions in the 1st Marine Expeditionary Force after a 6-month deployment to Iraq. When a strict definition of PTSD (score of at least 50 on a scale of 17–85 on the National Center for PTSD Checklist of the Department of Veteran Affairs) was used, 12.9% of Army personnel and 12.2% of the Marines deployed to Iraq met the criteria for PTSD upon their return, and 6.2% of the Army members deployed to Afghanistan met the criteria upon their return. When reviewing postdeployment health assessments completed from May 1, 2003 to April 30, 2004, for Army and Marine personnel who participated in OIF, Hoge et al. (2006) found that 5% endorsed two of four PTSD items on the assessment, 2.8% endorsed three of four, and 2% endorsed four of four questions for a total of 9.8% who endorsed at least two of four PTSD items.

Finally, one subpopulation for which PTSD is a significant problem is prisoners of war (POWs). In reviewing the literature, Ursano and Rundell (1995) found in some instances that 85% of POWs may have PTSD. For further information on POWs, see Chapter 11 (this volume).

## ASSISTING THOSE REFERRED FOR COMBAT STRESS

When service members are referred for signs of combat stress, these symptoms are not “treated” in the traditional medical model. These individuals are not medical or mental health patients. Reactions to combat stress are the normal responses of normal people to abnormal events, with recovery expected to occur in days with appropriate intervention. All interactions between service members and those assisting them are intended to convey this important message. Service members wear their battle fatigues, not hospital gowns; are housed separately from hospital patients; and are expected to conform to military courtesies.

Several elemental aims underscore interactions with those presenting with combat stress. The goal is to transform the persons’ view of themselves as helpless to persons able to cope despite their symptoms: “Instead of considering symptoms exclusively as harbingers of disease or bodily damage, and responding with alarm, patients can learn to interpret and respond to symptoms as somatic signals indicating a need for self-care” (Hunt, Richardson, & Engel, 2002, p. 417). The focus is on coping strategies.

Four basic principles drive the assistance provided to those with combat stress: promptly resuming normal and adaptive functioning, even if symptoms and disturbances are still present; relying on natural social support or, in its absence, creating alternative support, especially given that social support mitigates the intensity of a perceived threat and enhances the individual’s and group’s evaluation of self-efficacy in coping with the threat; helping the individual to regain the perception of oneself as healthy and coping while rejecting the illness label; and normalizing reactions. Individuals are told that the CSR is a “normal response to extremely abnormal conditions and that rapid recovery is normal” (U.S. Department of the Army, 1994a, p. 8-2). The temporary and transitory nature of the experience is emphasized (Canadian Army Lessons Learned Centre, 2004). Reexperiencing the trauma in dreams, thoughts, images, and sensations is discussed as a typical aspect of the healing process.

The basic ingredients of this assistance are rest, safety, food, reassurance, group support, a reinforcement of military identity (wears uniform, maintains a schedule, engages in productive work, performs duties, and adheres to military discipline), and a focus on crisis intervention and return to duty.

Early work in combat stress was based on the PIE concept (Artiss, 1963; Salmon, 1919). *P* stood for proximity—provide care close to the unit; *I* represented immediacy—offer early and quick care; *E* stood for expectancy—convey in the strongest terms the expectation of a return to duty.

Current DoD management of CSR is based on BICEPS (DoDD 6490.5, 1999; Morgan, 1993). *B* (brevity): Treatment will be 12 to 72 hours. In WWI, WWII, and Korea, 80% of soldiers with combat stress were returned to duty within 72 hours (Belenky, 1987). *I* (immediacy): Intervene immediately on recognition of the symptoms. *C* (centrality): Locate treatment away from the wounded. *E* (expectancy): Give positive expectation of rapid recovery and return to duty. Salmon (1919) in WWI made official the belief that return to the unit was the essence of treatment. *P* (proximity): Treat in or close to the unit or combat situation. When treated near their units, 65–85% of CSRs return to their units in 1 to 3 days, 15–20% more return within 1 to 2 weeks, and only 5–10% are sent home (U.S. Department of the Army, 2000). In Korea, when soldiers were treated in theater, the return to duty rates were 85% within 3 days and 10% within several weeks; only 5% were evacuated to the United States (U.S. Department of the Army, 1994a). Out of concern for the high number of IDF psychiatric casualties during the 1973 Arab–Israeli War who became chronically disabled, policy was changed to conduct brief treatment at the front, with a quick return to duty rather than evacuation to the rear and treatment in civilian psychiatric hospitals (Belenky, 1987). As Hales, Borus, and Privitera (1987, p. 41) have observed, failure to apply proximity and immediacy often results in “lifetime patienthood status.” *S* (simplicity): Provide straightforward, nonmysterious interventions and focus on simple measures such as rest, food, hygiene, and reassurance.

## SORTING CSR CASES AND NEUROPSYCHIATRIC CASES

How do mental health professionals sort out true CSR from those with pre-existing DSM-IV disorders? “In combat NP [neuropsychiatric] triage, diagnostic knowledge, experience, and sound judgment are important at the front end of the process and the most forward feasible echelon” (U.S. Department of the Army, 1994a, p. 6-1). While dealing with CSR, diagnoses are deferred, but the decision of whether simple treatment can be provided safely at the front or moved to a more appropriate level of care rearward is carefully made: “Medical and mental health personnel must be alert to the fact that many physical or psychiatric illnesses may resemble BF (battle fatigue), yet require specific and even emergency treatment that may be a matter of life and death” (U.S. Department of the Army, 1994a, p. 6-4).

For cases that can be managed safely near the front, the response to care frequently provides information about the presence of mental health disorders. As indicated before, 85% of CSR will respond to rest and return to duty within 3 days (U.S. Department of the Army, 1994a; 2000). Those identified during triage as more appropriate for care elsewhere and those not responding to the care described previously for combat stress are transported to a setting where more appropriate services can be provided.

## SIGNS OF IMPROVEMENT

Full resolution of all combat symptoms is not required prior to return to duty; the expectation is for the service members to function with sufficient confidence to do their job (U.S. Department of the Army, 1994a). Positive signs of improvement are a show of interest by the individuals in contacting their unit and family members, assumption of responsibility for coping, no longer seeing themselves as helpless, and seeing symptoms as the result of a temporary situation rather than some personal or moral shortcoming.

## RETURN TO DUTY

Being returned to duty conveys a significant message about the temporary versus the permanent nature of the problem. As discussed earlier, those returned to duty have a lower PTSD rate than those not returned to duty (Solomon et al., 1987). The unit as a whole may be less safe when the removal of a member leaves it short-handed since many positions are now only one to two persons deep. Unit replacements are less familiar with the wartime environment and the functioning of the unit, thus posing a potential danger to themselves and others. Finally, returning members to duty conveys a strong message to the entire unit that a safety net exists and reassures unit members that they will also be able to perform their duties.

## FACTORS CONTRIBUTING TO COMBAT STRESS

Battles and wars are won more by controlling the will to fight than by killing all of the enemy. —U.S. Department of the Army (1994a, p. 1-1)

Due to the nature of war, there will always be combat stress, but there is a great deal that can be done to decrease its risk. Prevention begins with recognizing the factors whose presence or absence can contribute to combat stress. These factors fall into a number of categories: environmental, physi-

cal, cognitive, behavioral, emotional, interpersonal/unit, cultural, and operational.

Environmental factors can significantly affect a military member's functioning (U.S. Department of the Army, 1994b). Consider the impact of weather, with its extremes of temperature and conditions (e.g., rain, wind, or dust storms). To cope with weather conditions, uniform requirements may be such that clothes are uncomfortably tight or loose or that freedom of movement is severely restricted. Biochemical protective gear may hinder one's water intake and ability to urinate and defecate. Constant vibration from the work environment (planes, tanks, or machinery) may interfere with concentration or sleep. The alteration of visibility is a significant factor, especially in the modern era, when fighting occurs with great frequency at night.

Considering the following questions helps to assess the impact of the environment on the military member's ability to function. Is shelter available? Does it provide escape from the elements and protection from insect and animal life? Does it allow one to sleep uninterrupted? Early photos from Afghanistan during OEF showed military members sleeping in huge muddy holes. Is the appropriate quantity and quality of food available, and is it hot or cold? Is water available? Does it taste and smell okay? Is its safety to be trusted? Is the air free of contaminants—both biological agents as well as pollutants from damaged infrastructure such as burning oil wells? Are working, living, and sleeping conditions crowded? Are there adequate opportunities to take care of hygiene (toilet needs, hand washing, and bathing)? Any and all of these factors can seriously affect resistance to combat stress.

Physical factors alone can be significant contributors to combat stress. How long can one sustain operations when hungry or, of more immediate importance, thirsty? In Grenada in 1983, the 82nd Airborne Division had dehydration casualties because water was not properly consumed (Belenky, 1987). What is the effectiveness of those who are not physically fit because of poor conditioning, illness, or wounds? How effective is a fatigued individual or unit? During combat the load carried by light infantry service members may be twice the recommended weight, rapidly tiring them and increasing recovery times (U.S. Department of the Army, 2000). There are numerous examples of service members in various conflicts who load themselves down with so much gear they quickly exhaust themselves when entering combat (Belenky, 1987).

Sleep disturbance alone can cause combat stress. Individuals require at least 4 hours of uninterrupted sleep per 24-hour period when in combat (Belenky, 1987): "Information gained from the Army Unit Resiliency Analysis Model shows that even healthy young service members who eat and drink properly experience a 25 percent loss in mental performance for each

successive 24-hour period without sleep" (U.S. Department of the Army, 2000, p. 59). After 48 to 72 hours without sleep, personnel become militarily ineffective. A reduction in decision making, reasoning, attention, mental speed, problem solving, and memory is dangerous in a life-threatening environment. Sleep-deprived members lose the ability to plan, to improvise, to shift targets, and to concentrate on more than one assignment simultaneously, all critical aspects of surviving combat. "After 5 to 7 days of partial sleep deprivation, alertness and performance decline to the same low levels as those following 2 days of total sleep deprivation" (U.S. Department of the Army, 2000, p. 62).

Cultural differences among coalition partners and the culture in which the combat occurs can add to frustration and stress. With growing frequency, combat operations involve participation in coalitions with other countries where differences may exist in the relationship between officers and enlisted, women and ethnic minorities in the ranks, and the civilian population (Morgan, 1993), as well as differences in the rules of engagement for the enemy and the local population. There may be additional stressors in dealing with the civilian population when the mission changes from that of war-fighting liberation to that of counterinsurgency, as seen in OIF. A similar example is Operation Restore Hope when the mission changed from humanitarian peacekeeping into a military operation to subdue Somali warlords, resulting in a hostile civilian population who went from cheering to attacking those there to help.

Cognitive factors can prevent or contribute to combat stress (Canadian Army Lessons Learned Centre, 2004; U.S. Department of Army, 1994b). Information processing can be taxing in normal times and especially so in the context of a life-threatening situation. Technology has improved to the point where receiving more information than can be processed is not uncommon. In the context of surviving, individuals are asked to engage in rapid-fire decision making with lethal consequences. In the air, seconds may make the difference in missile evasion (Morgan, 1993), and on the ground the body that turns the corner in the dark may be a foe, neutral, or ally. Information overload is compounded by the sensory overload and distortion produced by battlefield sights, sounds, and smells filtered through night-vision goggles, noise-inhibiting helmets, and chemical defense gear.

Behavioral factors can contribute to combat stress and reflect stress in response to the enemy. Is the enemy treated with a measure of humanity? Are bodies of the dead treated with respect? Has the civilian community become a target of anger?

A key experience that may contribute to the development of combat stress is the psychological impact of killing the enemy. Grossman (1996), in his book on the psychology of killing, describes five basic phases often seen

in response to killing in combat. The first phase is the concern about being able to kill. Integral to this phase is the fear of letting fellow unit members down or freezing when required to fire. The second phase is the actual killing experience, which is often done reflexively and without conscious thought. This reflexive action can be followed by a sense of exhilaration, the third phase, in which the service member feels an intense satisfaction from putting months or years of training into successful action. This exhilaration, fueled by the release of large amounts of adrenaline, can create a high or rush, which in some cases can give rise to combat addiction. Remorse and nausea, the fourth phase, follows the exhilaration and is often associated with a close-range kill. A sense of identification and empathy for the victim gives rise to intense sorrow, pain, and revulsion. Even when veterans have denied these emotions, the feelings almost always persist in some form or another, and the service member may wrestle with them for a lifetime. The last phase, rationalization and acceptance, is often a lifelong process. However, traversing it is absolutely essential to the emotional and psychological health of the military member. The service member's ability to successfully navigate this phase is strongly linked to the support and understanding of those on the home front, communicating that killing in combat was just and necessary.

According to Grossman, the interaction between the exhilaration and remorse stages is the most powerful for veterans. After the high of the exhilaration phase, the remorse stage sets in and is associated with the belief that there is something terribly wrong with the service member for having initially enjoyed the experience: "It is vital that future soldiers understand that this is a normal and very common response to the abnormal circumstances of combat, and they need to understand that their feelings of satisfaction at killing are a natural and fairly common aspect of combat" (Grossman, 1996, p. 243).

Grossman's (1996) psychology of killing has increased relevance for today's service members. Hoge et al. (2004) reported that of those service members deployed to Iraq in 2003, 77% of Army personnel and 87% of Marines reported shooting or directing fire at the enemy, 48% of Army soldiers and 65% of Marines reported being responsible for the death of an enemy combatant, and 14% of Army soldiers and 28% of Marines reported being responsible for the death of a noncombatant. Hoge et al. added that of those Army soldiers deployed to Afghanistan in 2003, 27% reported shooting or directing fire at the enemy, 12% reported being responsible for the death of an enemy combatant, and 1% reported being responsible for the death of a noncombatant. Between 1995 and 1997, Kang et al. (2003) surveyed Gulf War Reserve and National Guard unit members who had been in direct combat and had witnessed deaths; the researchers found that 22.6% currently met the criteria for PTSD.

Emotional factors are contributory (U.S. Department of Army, 1994b) and there are several important questions to explore. What was the person's precombat mental fitness? Anxiety can be motivating if experienced in small to moderate amounts but incapacitating if too intense. Fear in battle is a bell-shaped curve, with an initial high level of fear of death, of letting others down, and of how one will respond when under fire (Shaw, 1987). Fear tends to lessen with combat exposure and then gain in a cumulative fashion with increased combat exposure as resources are depleted (Swank & Marchand, 1946). The witnessing of the deaths and wounding of squadron members complicate one's emotions. Unit losses represent more than numbers. Each member lost to injury or death is someone's friend or role model. Disillusionment may set in when those viewed as indestructible or especially competent are lost, producing the realization that even those with the greatest fighting skills can die. Survivor guilt can also arise and decrease one's ability to function. Accidental killings can have a detrimental effect, especially if they are the deaths of civilians and children. During combat, allies are accidentally killed by friendly fire; weapons accidentally discharge, killing or wounding unit members; machinery malfunctions cause death; and vehicle accidents take lives.

Transportation can significantly contribute to combat stress. Does one feel safe when being transported, or is there a feeling of increased vulnerability? Is the mode of transportation reliable or will it break down, resulting in injury or exposure to a hostile environment? Are aircraft (fixed wing or helicopters) susceptible to ground fire? Does the ground transportation provide protection against weapons and roadside bombs, or does it translate into certain injury or death if attacked? Are there demoralizing rumors that certain types of vehicles tolerate improvised explosive devices (IEDs) poorly and will result in injuries to the drivers and passengers?

Interpersonal and unit factors, such as communication, training, and morale, are viewed by many as offering the most significant protection from or contribution to combat stress. "History shows that highly trained and small cohesive units with good leadership have less than 1 such casualty [CSR] for every 10 to 15 WIA, even in very heavy fighting" (U.S. Department of Army, 2000, p. 55). How does communication occur, within the unit both from a technical and personal level? Is the technology reliable? Does leadership address rumors? Is information shared on a regular basis? Do unit members believe the organization has their best interest at heart?

Another important contributor to the prevention of CSR is morale, which consists of many factors; probably the most significant being unit cohesion (Canadian Army Lessons Learned Centre, 2004), confidence in commanders, confidence in equipment and oneself as a user of it, and perceived legitimacy of the mission. Stouffer (1949) reported, "In WWII, the

morale of American soldiers before the invasion of Normandy (determined on a company-by-company basis) predicted the incidence of CRSD [combat reaction spectrum disorder] and nonbattle injuries during the invasion" (p. 72).

Unit cohesion exerts a powerful influence on combat effectiveness and the prevention of combat stress (Belenky, 1987; Steiner & Neumann, 1978). In a cohesive unit, soldiers fight to protect the lives of their unit members more than to kill the enemy. During WWII, highly trained and cohesive units rarely had more than one CSR for every 10 WIA (U.S. Department of Army, 1994b). Shaw (1987) noted, "The commonly shared dangers and hardships also impel individuals closer together, promoting group identification. As they become a band of brothers united against adversity, soldiers forge emotional relationships that mitigate against the loneliness of the battlefield" (p. 51). A belief develops that membership in the group will endow its members with special protection as individuals and as a group (Shaw, 1987). Cohesion can be created from the tent to base level by building a sense of team identity through overcoming obstacles in joint efforts or sports competitions, but caution must be exercised because individual competitions within the unit tend to produce friction and divisiveness rather than unity (Morgan, 1993).

A second dimension of morale, confidence in commanders, can affect the occurrence of combat stress (Canadian Army Lessons Learned Centre, 2004). Confidence is earned when leaders demonstrate they that "know what should be done, how it should be done, who should do it, and how long the task should take" (U.S. Department of Army, 2000, p. 28). Leaders who keep troops informed about their intentions and the objectives of the operation and war are seen as a protective factor against combat stress (U.S. Department of Army, 1994b), commanders who withhold information or worse, provide misinformation reduce morale (Morgan, 1993). "The soldier often turns to his officers as omnipotent leaders who will in some magical way, assure his survival" (Shaw, 1987, p. 55). Stouffer (1949) found a inverse relationship between the level of morale and confidence in leadership before the battle and later combat stress. Sausen, Bourne, Kaufman, and Caruso (1998) found lower initial Beck Depression Inventory scores in Marines deployed to Bosnia who had confidence in their leaders.

A third dimension of morale that has an impact on combat stress is confidence in equipment and oneself as a user of this equipment (Canadian Army Lessons Learned Centre, 2004). Confidence in operating and maintaining assigned equipment raises overall confidence in fighting ability (U.S. Department of Army, 2000). Does the military member believe that the equipment is appropriate, dependable, and easily repairable? These are not academic questions. If a tank ceases to move, the occupants are sitting

ducks. If ammunition clips jam, the enemy may enter hand-to-hand combat range unopposed. Faith in the equipment is half the equation; the other half is how well trained the member is to use and repair it (Belenky, 1987).

The last dimension of morale is perceived legitimacy of mission or justness of the war (Canadian Army Lessons Learned Centre, 2004). A lack of belief in the mission raises serious questions about the worth of suffering or producing suffering on behalf of the cause. Unit leaders must “ensure that the goals of a particular military operation are well communicated and are legitimate and moral. Soldiers and their families must be convinced that the goals are worthy of the risk to their lives” (Canadian Army Lessons Learned Centre, 2004, p. 16). Sausen et al. (1998) found lower Beck Depression Inventory scores in Marines deployed to Bosnia with a greater level of confidence in the mission. Missions can start with a high-perceived legitimacy, but service members may begin to experience doubts in situations such as Operation Restore Hope and OIF when the previously cheering civilian population became hostile and began attacking military members.

Some of the operational factors that contribute to combat stress are types of weapons, number of KIA/WIA, intensity of conflict, and stress. Preparation for coping with and surviving enemy weaponry is important. Cluster bombs; 2,000-pound conventional bombs; a B-52 payload that carpet-bombs a square mile; and nuclear, biological, or chemical (NBC) weapons all require different tactics for survival. Other factors include the duration of continuous operations (the number of days in action without respite, especially with little opportunity for sleep); cumulative combat duration in which they have suffered casualties; sudden transitions to the horrors of war (new troops being confronted with surprise attacks); new weapons of mass destruction; the extent of exposure to artillery and air attack; casualties from friendly fire; a high NBC threat requiring biochemical suits; casualties from the unseen (e.g., mines, booby traps); failure of expected fire support; and/or taking part in the last operation before units rotate (U.S. Department of Army, 1994b).

One of the most significant operational factors is battle intensity. There appears to be a direct correlation between the number of combat stress casualties and KIA/WIA. Whether it was WWI, WWII, the Korean War, the 1973 Arab-Israeli War, 1982 Lebanon War, or some other conflict, battle intensity (rate of KIA and WIA per hour or day out of total troops engaged) was directly related to combat stress (Belenky et al., 1985). During more intense periods of combat, the CSR rate increases; if the WIA rate doubles, there will be four times as many CSR cases requiring treatment (U.S. Department of Army, 1994b). Kang et al. (2003) surveyed 11,441 Gulf War veterans and found that the rates of PTSD rose across the six stressor intensities, ranging from a low of 3.3% in the least stressful

experience to 22.6% for those who had participated in combat and witnessed deaths. Hoge et al. (2004) found a linear relationship between PTSD and the number of firefights during deployment. The incidence of PTSD for those deployed to Iraq was 4.5% with zero firefights, 9.3% with one to two firefights, 12.7% with three to five firefights, and 19.3% with more than five firefights. The incidence of PTSD for those deployed to Afghanistan was similar at 4.5%, 8.2%, 8.3%, and 18.9% respectively. The authors conclusion is that the number of battle engagements was more important than the deployment location.

Operational stress is also present when military members participate in military operations other than war, such as peacekeeping operations, show of force, peace enforcement, and humanitarian assistance (Wright, Huffman, Adler, & Castro, 2002). The rules of engagement in such actions may differ a great deal from those in combat. In addition, the quality of training for participating in such operations may vary a great deal among units and individuals. Challenges are variable. Service members must struggle with the political restraints that govern how they defend themselves when attacked or, worse, the rules that prevent them from responding when the local population is attacked (Canadian Army Lessons Learned Centre, 2004). In some instances, factions in the population may engage in deliberate actions to provoke the service members to engage in misconduct. Fortunately, the incidence of CSR is relatively rare in operations other than war, but that of misconduct stress behaviors is relatively more frequent (U.S. Department of Army, 1994b).

### PREVENTING COMBAT STRESS DURING THE DEPLOYMENT CYCLE

“Horrific combat experiences were among the defining phenomena of the 20th century” (Prigerson, Maciejewski, & Rosenheck, 2002, p. 59). To address this increase in combat stress, during the past 10 years, DoD has increased its emphasis on combat stress prevention for service members throughout the deployment cycle (e.g., DoD Instruction 6490.3 [1997]; DoD Inspector General Report No. 96-079 [1996]).

In spite of DoD’s progress during the past decade, however, a great deal still remains to be accomplished. Though a step in the right direction, it is not enough to codify deployment concerns in directives and instructions. Implicit in each of the combat stress policies is the idea that more than one agency is responsible for deployment concerns. It is time now that DoD treated these deployment/combat stress concerns as a community issue, owned by all agencies and individuals within DoD. Ideal candidates



LT Carrie H. Kennedy gives a brief to the 3rd Field Service Support Group Surgical Company on triaging and intervening in cases of combat stress. Combat stress interventions are a regular part of training for all medical personnel in the Navy who may deploy to support Marines.

for championing a community response to deployment issues are military mental health professionals who can serve as catalysts for change.

Effective efforts to prevent combat stress start at home. In combat, commanders and their troops are unlikely to burden themselves with new educational requirements. Troops and all levels of leadership should be exposed to the principles of combat stress; factors contributing to CSR, with a special emphasis on morale issues; and recognition of and referrals for combat stress and their expected outcome long before troops are ever notified of possible deployment. This education should be a part of annual training that is not rushed through superficially just to meet a requirement but rather designed to ensure that the response to combat stress comes naturally, as a product of repeated training. Also as troops complete professional military education (PME) appropriate to their rank, advanced combat stress training should be included to match the increase in supervisory responsibilities. All base exercises should simulate combat conditions, including the loss of one combat casualty per three or four wounded; and as part of the exercise, the combat casualties should be returned to duty to reinforce the expectation in troops and leaders that combat stress is a tem-

porary situation, resulting in a full return to duty. Mental health professionals must lead the way to changing stereotypical exercise scenarios that depict out-of-control mental health patients who are sedated and forgotten.

Communication is also important, especially during predeployment, when there are many questions or rumors about when and if the deployment will take place. Morgan (1993) found that prior to ODS, commanders who held frequent briefings to communicate current information maintained better unit and family morale. Morale suffered when commanders withheld information, and the worst impact on morale came from commanders who speculated aloud about what was going to happen but were repeatedly proven wrong (Morgan, 1993).

During deployments, mental health professionals should encourage those in leadership positions, from headquarters to front-line supervisors, to keep in mind the contributory factors to combat stress: environmental, physical, cognitive, behavioral, emotional, interpersonal/unit, operational, cultural, and especially morale. Although there are many battlefield conditions leaders cannot control, there are a large number that they can positively affect. Emphasis and process improvement should focus on the four dimensions of morale, and efforts should be made to build confidence in leaders, enhance unit cohesion, instill confidence in equipment and oneself as a user of the equipment, and reinforce the legitimacy of the mission. Leaders, from front-line supervisors and higher, should know how to assess and respond to morale issues. Like combat stress, morale should be addressed long before deployment.

During deployments, the most successful mental health providers get away from their clinics and proactively engage troops at the unit level (Morgan, 1993). At least one-third of any mental health provider's time should be spent outside the clinic interacting formally or informally with units in the field. This out-of-clinic contact helps convince unit leaders to see mental health staff members as resources; in previous conflicts, units in which the command element was most hostile to mental health efforts were typically those with the greatest mental health needs (Bacon & Staudenmeier, 2003; Hall, Cipriano, & Bicknell, 1997).

The Army, Air Force, Navy, and Marine Corps have each identified the need to improve education throughout the deployment cycle and have begun developing programs to do so. It is agreed everyone should receive a postdeployment briefing before leaving the combat zone. Units should set aside time for an "end of tour debriefing in which they start at pre-deployment and talk about whatever stands out in their memories, good or bad, as they recount the operation up to its end" (U.S. Department of the Army, 2000, pp. 45–46). Where possible, troops should return as units; many service members who returned individually from ODS heard about the parade-like atmosphere when other individual service members returned

home and were bewildered by the absence of such events for themselves (Morgan, 1993).

Upon returning to their home base, service members and their families should receive a reintegration briefing, preparing them for changes in themselves and loved ones (Canadian Army Lessons Learned Centre, 2004). During ODS, it was difficult to get returning troops to consider the possibility that reunion might pose a problem (Morgan, 1993). Community resources should be reviewed, barriers to pursuing help addressed, and telephone numbers provided. Service members should also be briefed on the normalcy of their reactions to combat experiences (Morgan, 1993). These veterans need to understand that "startle reactions to sudden noise or movement, combat dreams and nightmares and occasional problems with sleeping, and feeling bored, frustrated and out of place are common when first returning from combat to a peace-time, civilian setting" (U.S. Department of the Army, 2000, p. 46).

In a promising development, attempts by the DoD to better track the impact of deployment and combat led to a new requirement that all deployers complete a screening survey 3 to 6 months following deployment (Winkenwerder, 2005). This new requirement is greatly needed in light of the fact that two-thirds of those seeking mental health assistance because of combat will do so in the 12 months after combat has ended (Belenky, 1987). Hoge et al.'s (2006) study revealed that one-third of OIF veterans sought mental health treatment during the 12 months following their return from deployment.

The perception of stigmatization in seeking help is powerful (Friedman, 2004), and those most in need of services are least likely to seek help. Hoge et al. (2004) found that during their study of Army and Marine veterans who served in Iraq or Afghanistan, of those who met the criteria for a postdeployment mental disorder, only 38–45% were interested in receiving help, and only 23–40% had received professional help in the past year. Those who met the criteria for a mental disorder reported barriers to seeking help: "I would be seen as weak" (65%); "My unit leadership would treat me differently" (63%); "Members of my unit might have less confidence in me" (59%); and "It would harm my career" (50%). These results highlight the need for leaders and peers to encourage rather than discourage help-seeking behavior.

In the 2002 DoD Survey of Health Related Behaviors Among Military Personnel, 18.7% of service members indicated a self-perceived need for counseling during the past year, and 67% of these individuals sought help (Bray et al., 2002). Sixty-six percent of those in the 2002 survey were uncertain about the impact on their careers of seeking mental health assistance, with 18% believing that it *definitely* would and 31% that it *probably* would hurt their careers (Bray et al., 2002). In a recently completed

study of 1,205 Airmen seeking mental health assistance at eight Air Force bases, only 3% of those who self-referred for mental health assistance experienced a negative career impact (Rowan & Campise, *in press*). In contrast, those who did not self-refer—but instead allowed their problems to escalate to the point where their commanders mandated a mental health evaluation—were 13 times more likely to have a negative career impact when receiving mental health services. Service members must be encouraged to get help early before their fear of a negative career impact becomes a self-fulfilling prophecy.

When service members seek assistance for stress-related difficulties, mental health professionals should respond with evidence-based treatment and practice guidelines, whether the treatment is for anxiety, depression, PTSD, or substance abuse. Mental health professionals should be aware of and utilize guidelines on PTSD (VA/DoD, 2004), cognitive-behavioral therapy and PTSD (Friedman, Davidson, Mellman, & Southwick, 2000), major depressive disorder (VA/DoD, 2000), wartime lessons learned (Bacon & Staudenmeier, 2003), mass violence (NIMH, 2002; NCPTSD, 2005), and pharmacotherapy and PTSD (Rothbaum, Meadows, Resick, & Foy, 2000; Friedman, Donnelly, & Mellman, 2003). In addition, clinicians would benefit from familiarity with resources such as the *Iraqi War Clinician's Guide, Second Edition* (Schnurr & Cozza, 2004); *Mental Health Advisory Team Report-II* (U.S. Department of the Army, 2005), and *Effective Treatments for PTSD* (Foa, Keane, & Freeman, 2004).

As previously stated, there is a *psychiatric cost to sending young men and women to war* (Friedman, 2004). It is, therefore, the responsibility of leaders, commanders, and the mental health community to reduce the factors that contribute to combat stress and to respond appropriately to its manifestation and treatment during the full deployment cycle.

## REFERENCES

Adkins, M. (1989). *Urgent fury: The battle for Grenada*. Lexington, MA: Lexington Books.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.

Appel, J. W., & Beebe, G. W. (1946). Preventive psychiatry. *Journal of the American Medical Association*, 131, 1469–1475.

Artiss, K. L. (1963). Human behavior under stress: From combat to social psychiatry. *Military Medicine*, 128, 1011–1015.

Bacon, B. L., & Staudenmeier, J. J. (2003). A historical overview of combat stress control units of the U.S. Army. *Military Medicine*, 168, 689–697.

Bartone, P. (1998, August). *Stress, hardiness, and symptoms in Bosnia deployed soldiers*. Paper presented at the annual meeting of the American Psychological Association, San Francisco, CA.

Belenky, G. L. (1987). Varieties of reaction and adaptation to combat experience. In W. W. Menninger (Ed.), *Military psychiatry: Learning from experience* (pp. 66–79). Topeka, KS: Menninger Foundation.

Belenky, G. L., Solomon, Z., & Noy, S. (1985). Battle stress: The Israeli experience. *Military Review*, 28, 28–37.

Bourne, P. G. (1970). *Men, stress, and Vietnam*. Boston: Little, Brown.

Bray, R. M., Hourani, L. L., Rae, K. L., Dever, J. A., Brown, J. A., Vincus, A. A., et al. (2002). *2002 Department of Defense survey of health related behaviors among military personnel*. Research Triangle Park, NC: RTI International.

Camp, N. M., & Carney, M. C. (1987). U.S. Army psychiatry in Vietnam: Preliminary findings of a survey. In W. W. Menninger (Ed.), *Military psychiatry: Learning from experience* (pp. 19–37.). Topeka, KS: Menninger Foundation.

Canadian Army Lessons Learned Centre. (2004, February). Stress injury and operational deployments. *Dispatches: Lessons Learned for Soldiers*, 10, 1–39.

DoD Directive 6490.5. (1999, February 23) *Combat Stress Control (CSC) Programs*.

DoD Inspector General Report No. 96-079. (1996, February 29). *Evaluation report on the management of combat stress control in the department of defense*.

DoD Instruction 6490.3. (1997, August 30). *Implementation and application of joint medical surveillance for deployments*.

Falk, B., Hersen, H., & Van Hasselt, V. B. (1994). Assessment of post-traumatic stress disorder in older adults: A critical review. *Clinical Psychology Review*, 14, 383–416.

Fisher, M. (1983). Lessons of the Falklands: Prepare for surprises. *U.S. Medicine*, 19, 3, 16.

Foa, E. B., Keane, T. M., & Friedman, M. J. (Eds.). (2004). *Effective treatments for PTSD: Practice guidelines from the International Society for Traumatic Stress Studies*. New York: Guilford Press.

Friedman, M. J. (2004). Acknowledging the psychiatric cost of war. *New England Journal of Medicine*, 351, 75–77.

Friedman, M. J., Davidson, J. R., Mellman, T. A., & Southwick, S. M. (2000). Pharmacotherapy. In E. B. Foa, T. M. Keane, & M. J. Friedman (Eds.), *Effective treatments for PTSD: Practice guidelines from the International Society for Traumatic Stress Studies* (pp. 60–83). New York: Guilford Press.

Friedman, M. J., Donnelly, C. L., & Mellman, T. A. (2003, January). Psychotherapy for PTSD. *Psychiatric Annals*, 33, 57–62.

Friedman, M. J., Schnurr, P. P., & McDonagh-Coyle, A. M. (1994). Post-traumatic stress disorder in the military veteran. *The Psychiatric Clinics of North America*, 17, 265–278.

Grossman, D. A. (1996). *On killing: The psychological cost of learning to kill in war and society*. New York: Little, Brown.

Gunby, P. (1991). Mental health professionals find fewer problems than expected in Desert Storm. *Journal of the American Medical Association*, 265, 559–560.

Hales, R. E., Borus, J. F., & Privitera, C. R. (1987). Unique characteristics of Army psychiatry programs. In W. W. Menninger (Ed.), *Military psychiatry: Learning from experience* (pp. 38–48.). Topeka, KS: Menninger Foundation.

Hall, D. P., Cipriano, E. D., & Bicknell, G. (1997). Preventive mental health inter-

ventions in peacekeeping missions to Somalia and Haiti. *Military Medicine*, 162, 41-43.

Helzer, J. E., Robins, L. N., & McEvoy, L. (1987). Post-traumatic stress disorder in the general population: Findings of the epidemiological catchment area survey. *New England Journal of Medicine*, 317, 1630-1634.

Hoge, C. W., Auchterlonie, J. L., & Milliken, C. S. (2006). Mental health problems, use of mental health services, and attrition from military service after returning from deployment to Iraq or Afghanistan. *Journal of the American Medical Association*, 295, 1023-1032.

Hoge, C. W., Castro, C. A., Messer, S. C., McGurk, D., Cotting, D. I., & Koffman, R. L. (2004). Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *New England Journal of Medicine*, 351, 13-22.

Hunt, S. C., Richardson, R. D., & Engel, C. C. (2002). Clinical management of Gulf War veterans with medically unexplained physical symptoms. *Military Medicine*, 167, 414-420.

Jones, F. D. (1995). Psychiatric lessons of war. In F. D. Jones, L. R. Sparacino, V. L. Wilcox, J. M. Rothberg, & J. W. Stokes (Eds.). *War psychiatry* (pp. 1-33). Washington, DC: Office of the Surgeon General.

Jones, F. D., & Johnson, A. W. (1975). Medical and psychiatric treatment policy and practice in Vietnam. *Journal of Social Issues*, 31, 49-65.

Kang, H. K., Natelson, B. H., Mahan, C. M., Lee, K. Y., & Murphy, F. M. (2003). Post-traumatic stress disorder and chronic fatigue syndrome-like illness among Gulf War veteran: A population-based survey of 30,000 veterans. *Journal of Epidemiology*, 157, 141-148.

Keane, T. M., & Wolfe, J. A. (1990). Comorbidity in post-traumatic stress disorder: An analysis of community and clinical studies. *Journal of Applied Social Psychology*, 20, 1776-1788.

Litz, B. T., Orsillo, S. M., Friedman, M., Ehlich, P., & Batres, A. (1997). Posttraumatic stress disorder associated with peacekeeping duty in Somalia for U.S. military personnel. *American Journal of Psychiatry*, 154, 178-184.

Malt, U. F. (1994). Traumatic studies of accidents. In R. J. Ursano, B. G. McCaughey, & C. S. Fullerton (Eds.), *Individual and community responses to trauma and disaster* (pp. 103-135). New York: Cambridge University Press.

Meichenbaum, D. (1994). *A clinical handbook/practical therapist manual for assessing and treating adults with post-traumatic stress disorder (PTSD)*. Waterloo, Canada: Institute Press.

Morgan, D. J. (1993). *USAF mental health lessons learned during Operation Desert Shield/Storm*. Maxwell AFB, AL: Air War College Associate Studies.

National Child Traumatic Stress Network and National Center for PTSD. (2005). *Psychological first aid: Field operations guide*. Washington DC: National Center for PTSD. Available at [www.NCPTSD.va.gov](http://www.NCPTSD.va.gov).

National Institute of Mental Health (NIMH). (2002). *Mental health and mass violence: Evidence based early psychological intervention for victims/survivors of mass violence* (no. 02-5138). Available at [www.nimh.nih.gov/research/massviolence.pdf](http://www.nimh.nih.gov/research/massviolence.pdf).

Noy, S. (1991). Combat stress reactions. In R. Gal & A. Mangeldorf (Eds.), *Handbook of military psychology* (pp. 507-526). New York: Wiley.

Prigerson, H. G., Maciejewski, P. K., & Rosenheck, R. A. (2002). Population attributable fractions of psychiatric disorders and behavioral outcomes associated with combat exposure among U.S. men. *American Journal of Public Health*, 92, 59–63.

Rosenheck, R. (1993). Returning Persian Gulf troops: First year findings. *NCP Clinical Newsletter*, 3, 18–19.

Rothbaum, B. O., Meadows, E. A., Resick, P., & Foy, D. F. (2000). Cognitive-behavioral therapy. In E. B. Foa, T. M. Keane, & M. J. Friedman (Eds.), *Effective treatments for PTSD: Practice guidelines from the International Society for Traumatic Stress Studies* (pp. 60–83). New York: Guilford Press.

Rowan, A. B., & Campise, R. L. (in press). A multi-site study of Air Force outpatient behavioral health treatment seeking patterns and career impacts. *Military Medicine*.

Salmon, T. W. (1919). The war neuroses and their lesson. *New York State Journal of Medicine*, 51, 993–994.

Sausen, K., Bourne, M., Kaufman, R., & Caruso, K. (1998, August). *Beck Depression Inventory scores in a deployed Marine expeditionary unit*. Paper presented at the annual meeting of the American Psychological Association, San Francisco, CA.

Schnurr, P. P., & Cozza, S. J. (Eds.). (2004). *Iraqi war clinician guide* (2nd ed.). Washington DC: National Center for Post-Traumatic Stress Disorder and Walter Reed Army Medical Center. Available at [www.ncptsd.org/topics/war.html](http://www.ncptsd.org/topics/war.html).

Shaw, J. A. (1987). Unmasking the illusion of safety. In W. W. Menninger (Ed.), *Military psychiatry: Learning from experience* (pp. 49–63). Topeka, KS: Menninger Foundation.

Solomon, Z. (1987). Combat-related posttraumatic stress disorder among Israeli soldiers. In W. W. Menninger (Ed.), *Military psychiatry: Learning from experience* (pp. 80–95). Topeka, KS: Menninger Foundation.

Solomon, Z., Weisenberg, M., Schwarzwald, J., & Mikulincer, M. (1987). Post-traumatic stress disorder among soldiers with combat stress reactions: The 1982 Israeli experience. *American Journal of Psychiatry*, 144, 448–454.

Steiner, M., & Neumann, M. (1978). Traumatic neurosis and social support in the Yom Kippur war returnees. *Military Medicine*, 143, 866–868.

Stouffer, S. A. (1949). *Studies in social psychology in World War II: Vol II. The American soldier: Combat and its aftermath*. Princeton, NJ: Princeton University Press.

Swank, R. L., & Marchand, W. E. (1946). Combat neuroses: Development of combat exhaustion. *Archives of Neurology and Psychiatry*, 55, 236–247.

Tiffany, W. J., & Allerton, W. S. (1967). Army psychiatry in the mid-60's. *American Journal of Psychiatry*, 123, 810–821.

Ursano, J. R., & Rundell, J. R. (1995). The prisoner of war. In F. D. Jones, L. R. Sparacino, V. L. Wilcox, J. M. Rothberg, & J. W. Stokes (Eds.), *War psychiatry* (pp. 431–455). Washington, DC: Office of the Surgeon General.

U.S. Department of the Army. (1994a, September 29). *Field manual 8-51. Combat stress control in a theater of operations: Tactics, technique, and procedures*. Washington, DC: Author.

U.S. Department of the Army. (1994b, September 29). *Field manual 22-51. Leader's manual for combat stress control*. Washington, DC: Author.

U.S. Department of the Army. (2000, June 23). *Field manual 6-22.5. Combat stress*. Washington, DC: Author.

U.S. Department of the Army. (2005). *Mental health advisory team report-II. Washington DC: Headquarter, Department of the Army*. Available at [www.armymedicine.army.mil/news/mhat\\_ii/mhat.cfm](http://www.armymedicine.army.mil/news/mhat_ii/mhat.cfm).

VA/DoD. (2000). *Major depressive disorder: Clinical practice guidelines*. Washington, DC: Veterans Health Administration (Publication No. 10Q-CPG/MDD-00.) Available at [www.oqp.med.va.gov/cpg/MDD/MDD\\_Base.htm](http://www.oqp.med.va.gov/cpg/MDD/MDD_Base.htm).

VA/DoD. (2004). *Clinical practice guideline for the management of post-traumatic stress*. Washington, DC: Veterans Health Administration. Available at [www.oqp.med.va.gov/cpg/PTSD/PTSD\\_Base.htm](http://www.oqp.med.va.gov/cpg/PTSD/PTSD_Base.htm).

Winkenwerder, W. (2005, March 10). *Post-deployment health reassessment [memorandum]*. Washington, DC: Department of Defense Health Affairs Policy 05-011. Available at [www.pdhealth.mil/dcs/pdhra.asp](http://www.pdhealth.mil/dcs/pdhra.asp).

Wolfe, J., Erickson, D. J., Sharkansky, E. J., King, D. W., & King, L. A. (1999). Course and predictors of posttraumatic stress disorder among Gulf War veterans: A prospective analysis. *Journal of Consulting and Clinical Psychology*, 67, 520-528.

Wright, K. M., Huffman, A. H., Adler, A. B., & Castro, C. A. (2002). Psychological screening program overview. *Military Medicine*, 167, 853-861.

## CHAPTER 11



# Survival, Evasion, Resistance, and Escape (SERE) Training

*Preparing Military Members  
for the Demands of Captivity*

ANTHONY P. DORAN

GARY HOYT

CHARLES A. MORGAN III

*This chapter is dedicated to former SERE instructor GYSGT Ronald Baum, who is remembered as a valued friend, a dedicated family man, a talented SERE instructor, a leader, and a warrior. GYSGT Baum was killed in Iraq in May 2004 after having served the United States Marine Corps for 18½ years.*

Becoming a prisoner of war (POW) has historically meant that a service member may experience brutality, torture, coercion, loneliness, and isolation, among many other forms of deprivation and exploitation. Each of these experiences is designed to accentuate human dependence on captors and, through these deprivations, achieve maximum exploitation. The immediate and lifelong effect of these experiences cannot be overstated. Service personnel captured and detained as POWs have significantly higher rates of emotional and physical trauma than service members not so detained (Babic & Sinanovic, 2004; Solomon, Neria, Ohry, Waysman, & Ginzburg, 1994), exhibiting as a group the highest rates of posttraumatic stress disorder (PTSD) and other mental health conditions (Sutker & Allain, 1996).

During World War II (WWII) roughly half of the military members captured in Germany and Japan developed PTSD (Goldstein, van Kammen, Shelly, Miller, & van Kammen, 1987; Zeiss & Dickman, 1989), which remained symptomatic throughout their lifetimes (Port, Engdahl, & Frazier, 2001; Tennant, Fairley, Dent, Sulway, & Broe, 1997). Sutker and Allain (1996) suggest that between 88 and 96% of Korean War POWs experienced a mental health condition related to their captivity. It has also been reported that POWs from WWII had extremely high mortality rates (Cohen & Cooper, 1954) and cognitive difficulties, such as visuospatial and memory deficits, decreased planning abilities, and impulse control problems (Sutker, Allain, & Johnson, 1993). In later life, surviving POWs who developed dementia were found to have higher rates of paranoia (Verma et al., 2001). Some of these problems are presumed to be related to the severe malnutrition often experienced by POWs; those who lost 35% or more of their body weight during captivity have had the greatest degree of verbal and visual learning and memory deficits (Sutker, Allain, Johnson, & Butters, 1992; Sutker, Vasterling, Brailey, & Allain, 1995). Also, in comparison with non-POW veterans, POWs have more adjustment disorders (Hall & Malone, 1976; Ursano, Boydston, & Wheatley, 1981), alcohol abuse (Rundell, Ursano, Holloway, & Siberian, 1989), depressive disorders (Page, Engdahl, & Eberly, 1991), anxiety disorders (Hunter, 1975; Query, Megrani, & McDonald, 1986), binge eating (Polivy, Zeitlin, Herman, & Beal, 1994), relationship difficulties (Cook, Riggs, Thompson, Coyne, & Sheikh, 2004), gastrointestinal and musculoskeletal disorders (Creasey et al., 1999), and premature aging (e.g., Russell, 1984).

## HISTORY OF SURVIVAL SCHOOLS

The military has long recognized the need for training programs to help service members effectively deal with survival in harsh environments, evasion from an enemy, and capture by a hostile force. The earliest survival schools focused on the use of life rafts, taught stereotyped traits of the Japanese, and provided the admonition, if captured, to disclose only the "Big Four" (name, rank, service number, and date of birth). Following WWII, when the Air Force was created in 1947, basic survival schools were set up in Nome, Alaska; Thule, Greenland; and Goose Bay, Labrador. Since the primary Air Force mission at that time was defending Alaska and preventing attacks over the North Pole, these schools were subsequently created to prepare service members for cold weather environments and taught such skills as building makeshift airstrips for rescue (J. Rankin & M. Wilson, personal communication, February 2002).

It was the Korean conflict, however, that dramatically changed the focus of the survival schools. Although the Korean War has been referred to as the “forgotten war” (caught between WWII and the Vietnam War), this description marginalizes the physical and psychological injuries suffered by many of the POWs of this war. Forty percent of the over 7,000 POWs in Korea died in captivity. The only POW death rate that was higher was American POWs held by the Japanese during WWII. Following the Korean War, 21 service members agreed to stay in Korea, having signed false confessions. Many interrogation experts and consultants believe that these confessions were the result of physical and psychological torture. Following these events, former POWs and senior military leaders began to take a long and serious look at how to better prepare our service men and women in survival training (Carlson, 2002).

Survival, evasion, resistance, and escape (SERE) training schools in their current form were the brainchild of the surviving Korean POWs and were first implemented by the Air Force in 1961. The Air Force Survival school is presently located in Spokane, Washington. The Navy SERE schools came online in 1962 (desert survival in Coronado, California and cold weather survival in Brunswick, Maine), followed by the Army in 1963 (Fort Bragg, North Carolina). The Marine Corps initially developed a SERE school at Cherry Point, North Carolina, but eventually chose to use the Navy schools and began augmenting their personnel in 1985 (J. Rankin & M. Wilson, personal communication, February 2002).

The Air Force initially used the term “survival” training to encompass everything from preparing for evasion and capture through recovery periods. The Navy coined the term “SERE” in the 1970s, according to the manner in which instructors divided the tasks to be taught (survive, evade, resist, and escape). The Army later followed the Navy, and the Air Force survival school became standardized with the other services, incorporating SERE in the 1980s (J. Rankin & M. Wilson, personal communication, February 2002).

Prior to the Korean conflict, the training for those at high risk of capture was to give only the Big Four, as taught during WWII. Because of the formidable task of enduring years of interrogation without revealing something other than name, rank, service number, and date of birth, other strategies were devised to help POWs manage interrogation without betraying their country and/or antagonizing their interrogators (Ruhl, 1978). After the Vietnam POWs returned in 1972, a number of them aided their SERE schools by teaching students about their experiences with torture, lengthy interrogations, threats of execution disease, and physical injuries, communications with fellow POWs, and most important, the means to keep hope alive. The most significant recommendation from the Vietnam veterans was

to standardize training across the services, and subsequently the Joint Personnel Recovery Agency (JPRA) was established (J. Rankin & M. Wilson, personal communication, February 2002).

In 1982, the Air Force was assigned to be the executive agent for SERE and Military Code of Conduct training. Director's conferences have been held since that time as forums to adjust and provide standardized guidance to all of the SERE schools. At the start of the 21st century, the SERE schools continue to develop and evolve. The Army has initiated plans for developing a SERE university to train thousands in survival techniques. The Marine Corp has begun initiatives to reestablish a school for tailored training, and the Navy and Air Force continue to develop training programs to better meet the needs of today's fighting force.

## OVERVIEW OF CURRENT SERE TRAINING

SERE instructors provide survival training to those military personnel designated as "high risk of capture" (e.g., aviation personnel, snipers, members of Special Forces, and intelligence gatherers). The course is designed to give students the skills to survive and evade capture or, if captured, to resist interrogation and exploitation and ultimately plan an escape if feasible. Given its sensitive nature and content, only an overview of the unclassified portion of the training may be provided here.

The first week of SERE training is conducted in an academic setting, where students review survival skills involved in successfully evading and resisting an enemy force. Following the academic week, students move to



SERE students are exposed to some of the stress associated with captivity.

the field to learn land-navigation skills through unknown territory and how to locate potable water, hunt and trap small animals, build small shelters, and differentiate edible from poisonous plants. During this time, students are forced to deal with hunger, uncertainty, fatigue, and discouragement in an experiential manner rather than in an academic format. In the field phase, students officially begin the live evasion portion of their training. Their primary task initially is to reach various navigation objectives (i.e., make contact with friendly forces) several miles away by successfully moving through hostile territory. At some point during this evasion phase, students are captured by simulated hostile forces, where they are transported to a mock POW camp. This is indeed the most memorable, and ultimately the most physically and psychologically demanding, aspect of the training.

### THE SERE PSYCHOLOGIST

The roles of the SERE psychologist are varied and demanding. The environment alone ranges from the Maine wilderness ( $-20^{\circ}$  to  $90^{\circ}$ ), to the Southern California desert ( $0^{\circ}$  to  $125^{\circ}$ ), to the temporary comfort of an office or classroom. The operational psychologist must be flexible and dynamic in providing both psychological intervention and instruction in any environment necessary. To be assigned as a SERE psychologist, the prospective staff member must first complete the training as a student. By providing an experience of the emotional and physical strain in being taken prisoner and the pressures of countering interrogation efforts, as well as generally being able to observe how the school operates from a student's point of view, the psychologist is able to achieve far greater empathy and understanding of what is necessary for survival in captivity.

### PRIMARY ROLES OF THE SERE OPERATIONAL PSYCHOLOGIST

Little has been written about the varied roles of a SERE psychologist. Although Executive Order 10631 initially created the Code of Conduct in 1955, and several Department of Defense Directives (DoDD) and Instructions articulate some of the roles and training requirements of the SERE psychologist (DoDD 1300.7, 2000a; DoDD 2310.2, 2000b; DoDI 2310.4, 2000, and DoDI 1300.21, 20001), nowhere are they clearly defined in a comprehensive fashion. However, the role and training requirements of SERE psychologists will best be delineated in a new JPRA instruction, presently being reviewed (JPRA, 2005) and outlined here. The roles include

evaluator, safety observer, educator, consultant and researcher, and operational psychologist during repatriation efforts.

### Evaluator

A key function of the SERE psychologist is the performance of screening assessments to evaluate a military member's suitability as a SERE instructor. Given that one of the most important and potentially dangerous roles of the SERE instructor is playing a mock captor, guard, or interrogator, this evaluative screening becomes paramount in importance. Many of the procedures at the SERE school for the selection and training of instructors are a direct result of the prison experiment conducted at Stanford University (Haney, Banks, & Zimbardo, 1973). This study examined the behavior of 24 individuals who had been carefully evaluated and selected for emotional stability. They were randomly assigned to either a "guard" or "prisoner" group. The experiment was initially designed to last 2 weeks, but it was discontinued after 6 days because of increasing and arbitrary antisocial behavior in the role-playing environment. The subjects who were pretending to be guards became overly "negative, hostile, affrontive, and dehumanizing" (p. 80) in effect, ceasing to perceive the prisoners as research participants. The subjects pretending to be prisoners became overly compliant, docile, and conforming, and five of them had to be released prior to the premature end of the experiment because they developed "extreme emotional depression, crying, rage, and acute anxiety" (p. 81).

A reevaluation of this decades-old experiment tells us that these lessons continue to have just as much merit today. Haney and Zimbardo (1998) suggest that prison environments must be carefully evaluated and regulated, and they warn that social contexts with significant power differentials left unchecked can interact to produce dehumanizing environments. They further suggest that psychological assessment for prison personnel must include situationally sensitive models that tap specific situations likely to occur in a prison environment. Essentially, an intrinsically problematic social context can significantly affect the behavior of normal individuals and contribute to their participation in behavioral drift (consciously or unwittingly). More recent events at Abu Ghraib continue to support the fact that when certain factors come into play (e.g., combat stressors, inadequate training, and role immersion) ordinary people placed in the role of prison guards can perform unforeseen acts of cruelty (Fiske, Harris, & Cuddy, 2004).

Since it is clear that individuals who are screened for emotional stability still exhibit pathologic behavior (Haney, Banks, & Zimbardo, 1973), selection as a SERE instructor necessarily entails an arduous and extensive process, with months of follow-up training. A general profile of the SERE

instructor indicates that the average individual is over 30 years of age (approximately 10 years older than the college students used in the prison study), has more than 15 years of military service, is married, has numerous personal awards, was their previous command's top performer, and has no legal, substance abuse, or disciplinary history. For screening purposes, a comprehensive psychological evaluation is provided, consisting of an in-depth clinical interview, medical record review, reports from previous supervisors, and psychological testing (e.g., Minnesota Multiphasic Personality Inventory, 2nd ed. [MMPI-2]). Psychologically the SERE instructor has a high need for achievement, has a high frustration tolerance, enjoys being part of a group (Doran, 2002), and is able to tolerate the intense scrutiny of not only the evaluation process but, more important, the constant observation and oversight that is undergone throughout a tour at the SERE school.

### **Safety Observer**

Perhaps the most important lesson from the prison experiment in relation to SERE training is the necessity of maintaining the physical and psychological health of participants through consistent monitoring of individuals and systematic evaluation of the process itself. SERE training necessarily incorporates certain levels of emotional and physical distress to maintain the integrity and efficacy of the training experience, essentially integrating many of the lessons learned from prior POW experiences. For example, captors (e.g., Germans and Japanese in WWII and North Koreans and Vietnamese during these respective conflicts) have generally utilized four tactics with captured personnel: isolation, deprivation, abuse, and interrogation (Sherwood, 1986). Isolation consists of not only physical separation from other prisoners but also a more general isolation strategy of breaking ties with family, country, and most significantly, a former identity of oneself. Deprivation consists of withholding food, water, adequate clothing and shelter, sleep, access to constructive physical and cognitive activity, medical care, and adequate means of maintaining personal hygiene. Psychological abuse, such as threatening to harm or kill prisoners, and coercive physical abuse have been commonly reported historically. Last, interrogations for the purpose of gathering military intelligence have been routinely performed, often utilizing combinations of the first three tactics.

Because these imprisonment strategies are brutal in and of themselves, and approximating them for learning purposes in training scenarios is an extremely sophisticated task, the existence of stringent guidelines and protocols is basic for effective functioning. The above-mentioned issues illuminate the need for in-depth training of staff in positions of power, as well as in regimented safety procedures. The safety observer position was imple-

mented to ensure that “captors and guards” do not cross the line and that “prisoners” do not become unduly traumatized by their experience. Consequently, the role of safety observer is one of the key responsibilities of the SERE psychologist.

During SERE training, there are at least three to five personnel whose sole responsibility is to be safety observers, ensuring the well-being of those participating in training. Although all SERE personnel at times act as safety observers, the psychologist’s specific duty in this role is to monitor the instructors for cues that a “guard” or “captor” might be taking the role too seriously or too far. Other than the obvious scenario of a too-aggressive instructor, the psychologist looks for subtle changes in instructors’ typical mode of operating, which may indicate that they are having some difficulties. Some instructors might become more outspoken when they are typically quiet, become too gentle during an interrogation, exhibit real affect during or after an exercise, or even subtly or unconsciously target a specific student. Some of the more general indicators of behavioral drift include observed diffusion of responsibility, dehumanizing tendencies, or reliance on anonymity for decreased accountability. A key concept in training for instructors is “performing” the role versus “becoming” the role.

In addition to the monitoring in the training environment, instructors are also monitored outside of it. Accepting a job at SERE places a strain on even a healthy marital relationship, as much of the job cannot be discussed at home because of its classified nature. The combination of possibly bringing power roles home to spouses and children and being unable to discuss workday occurrences and stressors can be difficult on these military families. SERE personnel are taught how to monitor each other for warning signs, such as increases in irritability or alcohol consumption, decreased military bearing, or any new shifts in behavior that might affect their ability to perform. The SERE psychologist formally and informally encourages instructors to decompress from the training environment through the use of healthy stress management techniques (such as physical exercise, relaxation strategies, and humor). Also, the SERE psychologist is one of many personnel who help ensure that SERE instructors are rotated from position to position. This not only helps to promote cross-training but also helps to move SERE instructors out of power roles for extended periods of time.

Although a main thrust of the safety observer’s role is to closely monitor the instructors, the observers are ultimately there to maintain the integrity and realism of the training experience for the benefit of the students. Not unexpectedly, some students have strong, maladaptive reactions to certain aspects of the training. Given the nature of the highly dedicated and trained SERE students (e.g., Special Forces members, air crew and pilots, and intelligence operators), they are not always amenable to psychological intervention or performance direction. Although significant anxiety, irrita-

bility, and even hallucinations are considered normal, interventions may be initiated when they arise. Generally this early intervention and assessment of psychological status is best done by a corpsman or senior instructor to reduce stigma, although still under the supervision of the psychologist. Having a psychologist immediately intervene may create the perception that the SERE student is incapable of completing training or that his or her reaction is not normal (True & Benaway, 1992).

### **Educator**

The SERE psychologist provides multiple types of education for both staff and student trainees. All SERE personnel receive training in the dangers of role-playing situations in which individuals have power over others. The psychologist reviews in-depth information related to role immersion, the prison study findings, and the ethics involved in the mock imprisonment described earlier (Zimbardo, 1973). All personnel must exhibit a comprehensive understanding of the concepts raised by this research in order to work at SERE. In addition, the operational psychologist teaches the safety observers what signs to look for, in both the instructors and the students, that would indicate a problem so that appropriate intervention can be initiated.

In addition to regular training, the SERE psychologist also educates the trainees. In this role as educator, the operational psychologist explains the normal reactions to severe uncontrollable stress—including fear, anger, negative self-statements, crying, illusions and hallucinations, dissociation, somatic complaints, and memory problems—and how long they are expected to last (Dobson & Marshall, 1997; Engle & Spencer, 1993; Mitchell, 1983; Sokol, 1989; Yerkes, 1993). This education has proven to be an integral part of the success of captured service members. A number of factors help individuals to be more resilient under stress (Morgan et al., 2000). From Korea and Vietnam POWs to the more recent EP-3 crew detained in China, service members reported that whereas their military training aided in the survival of a particular incident, it was the experiential nature of SERE training that facilitated their survival in captivity (Doran, 2001).

In addition to successfully completing SERE training, individuals who functioned well in captivity possessed several characteristics, including a strong faith in their country, in each other, and in God. Those who focused on factors under their internal control, such as thinking about future plans (e.g., designing their dream house, down to the smallest detail) or developing a personal exercise program in their cell, were also much more successful (Ursano & Norwood, 1996). Successful former POWs had a tremendous sense of humor (Henman, 2001), were older and had higher levels of



A SERE class completes the captivity phase.

education at the time of their imprisonment (Gold et al., 2000), and had an ability to reframe their situation even under the most dire circumstances. Research on former POWs from the Vietnam War has consistently demonstrated that this group is fairly resilient (Coffee, 1990) and that SERE training provided experiential anchors and cues to help them effectively cope with the demands of captivity. An example of the ability to reframe events comes from the comments of a commanding officer who kept a piece of shrapnel on his desk and would explain to the curious: "That is a piece of shrapnel that flew over my head during the Vietnam War when I was serving as a corpsman. When I am having a bad day, I realize things could be a lot worse" (CAPT A. Shimkus, personal communication, November 2003).

### Consultant and Researcher

Acquainted with the results of stress research (Meichenbaum, 1985), the U.S. military designs training to be physically and psychologically demanding and lifelike in stress intensity. Challenging and realistic training develops trainees' ability to perform on the battlefield, and exposure to realistic levels of stress is intended to inoculate them from the negative effects of operational stress. The concept of stress inoculation (Meichenbaum, 1985) is very much akin to the concept of preventing illness through vaccination. Like a vaccine, stress inoculation occurs when training stress is high enough to activate the body's psychological and biological coping mechanisms but not so great as to overwhelm them. When stress inoculation occurs, an individual's performance is likely to improve when stressed again. In the roles of consultant and researcher, the SERE psychologist explores a wide variety of research topics related to the effects that severe stress has on humans. SERE offers a unique opportunity to validate training parameters, establish predictors of superior performance, and develop new tools and

techniques for the war on terrorism. These topics have particular military relevance, and a brief synopsis of some of this research follows.

### *Validation of Training Parameters*

Over the past 4 years, a team of researchers from Yale University, the Army, and the Navy have assessed the impact of stress on the students in survival school from a psychological, physiological, and biological perspective (Morgan et al., 2001, 2002). The purpose of this research was to detect whether or not the stress level was within the range of real-world stress (Morgan et al., 2001). The investigators examined the overall impact of each phase of SERE training (classroom, evasion, and detention), as well as several specific components. The results of these studies provide the following evidence:

1. SERE stress is within the range of real-world stress and of a magnitude necessary for stress inoculation (Morgan et al., 2001, 2002).
2. Students who undergo SERE training recover normally and do not show a negative effect from training (i.e., stress sensitization; Morgan et al., 2001, 2002).
3. Students' physiology and biological measures indicate a normal recovery from the various physical interrogation aspects of SERE training (Morgan et al., 2001, 2002).

### *Establishment of Predictors of Superior Performance during Stress*

The SERE research conducted to date has also provided clues to why and how some students perform better under stress than others. More specifically, this team of investigators has examined why and how some students remain mentally clear and experience fewer stress-induced cognitive deficits when the stress increases. The researchers evaluated specific capacities such as resistance techniques, simple and complex problem-solving abilities during stress, and visual and verbal memory capacity (Morgan, Hazlett, et al., 2004). The results of this line of research indicate the following:

1. Specific psychological and biological differences at baseline predict objective performance during stress. For example, students who exhibit high heart-rate variability, low levels of neuropeptide Y (NPY)—a 36-amino-acid peptide that is related to the release of norepinephrine and is involved in the regulation of noradrenergic system functioning (Morgan, Wang, Southwick, et al., 2000)—and baseline symptoms of dissociation do significantly worse under stress (Morgan et al., 2001, 2002).

2. There are specific biological differences in circulating hormones during stress that explain why some students are more focused, more clear-headed during stress, and show more accuracy in cognitive and memory tests after stress. For example, students who do well release greater levels of dehydroepiandrosterone (DHEA, a steroid hormone that can convert into estrogen and testosterone) and of NPY during stress than those who do poorly. These individuals are more accurate in descriptions of what they encountered during stress. These studies can help us develop specific interventions to enhance operational abilities (Morgan, Southwick, et al., 2004).

### *New Tools and Techniques for Intelligence in the War on Terrorism*

The SERE platform offers a unique opportunity to evaluate old and new assessment techniques under conditions that are more realistic than traditional laboratories. Investigators have recently completed a study designed to test the accuracy (sensitivity and specificity) of the traditional polygraph in detecting concealed knowledge. Analysis of the data indicates that traditional measures of the polygraph did no better than chance in detecting the guilty subjects. However, a new approach, using heart-rate variability, accurately identified 50% of the guilty subjects, and no innocent subjects were identified as guilty (no false positives). The next phase of this research is designed to enhance the sensitivity of the test (Morgan, Hazlett, Doran, Steffian, & Southwick, 2005b).

Another line of research at SERE involves a low-tech methodology to find the identity of an undercover operative that some members of the group of students are attempting to conceal. Preliminary analysis suggests that this new technique is not only effective at uncovering the information suspects are trying to hide but also capable of detecting which subjects possess the sensitive information. The next phase is designed to assess whether the technique can be used to find a cell of "terrorists" hidden in a group of suspects. The SERE training environment affords the military services the opportunity to collaborate with various other government agencies in exploring old and new techniques in gathering human intelligence (Morgan, Hazlett, Doran, Steffian, & Southwick, 2005a).

One future direction of SERE stress research is to look at differences between men and women. It has been shown that women, like men, who report previous trauma from which they thought they might die tend to experience greater levels of dissociation. Women with higher levels of dissociation tend to report more somatic complaints ( $r = .86$ ;  $p < .001$ ). Further research will determine if the stress response mechanism is similar to

males or controlled by different brain and neurohormone mechanisms (Morgan, Hazlett, Doran, Steffian, & Southwick, 2005c). Ultimately all of this research is geared toward enhancing our understanding of stress and improving the performance of our sailors, soldiers, air crews, and Marines during combat.

## Repatriation

A critical role for the SERE psychologist is the repatriation process. Verifying both the applicability and efficacy of SERE training to real-world situations can be a difficult task, given the significant hurdles or confounds of validation research of POW occurrences. However, one of the primary vehicles utilized by the Department of Defense (DoD) for assessment of individual performance and SERE training in general is the process of repatriation. DoDI 2310.4 (2000), concerning personnel recovery, indicates that preserving the life and well-being of personnel who are placed in harm's way is one of the highest priorities. It states that "personnel recovery is a critical element in the DoD ability to fulfill its moral obligation to protect its personnel, prevent exploitation of U.S. personnel by adversaries, and reduce the potential of captured personnel being used as leverage against the United States" (p. 2).

In general, there are four basic types of personnel recovery. First and foremost, isolated individuals have an obligation to evade potential captors and, if captured or detained, to effect their own escape within the parameters of the Military Code of Conduct and Geneva Conventions (in essence, to facilitate their own recovery). The term "isolated" here is used to describe personnel who are supporting a military mission and are temporarily separated from their units in an environment requiring them to survive and evade capture or to resist and escape if captured. The second form of personnel recovery is characterized as conventional combat search and rescue (CSAR), wherein trained military forces on land or sea recover the isolated individual. An example would be the recovery of a downed pilot, in danger of being captured, but not yet detained. The third form of recovery, typically a far more fluid and dangerous proposition, is described as an unconventional assisted recovery. In this situation, trained Special Forces might be inserted into the equation to contact, authenticate, and extract detained U.S. personnel. In essence, the CSAR mission becomes an armed recovery from enemy forces, with the goal of returning detainees to U.S. control. Certainly, this can be fraught with danger, for both the detainees and recovery forces, and will have important implications in the repatriation process debriefings. The fourth method of personnel recovery involves a negotiated release, typically with diplomatic initiatives between govern-

ments. Of course, these four methods are general descriptions and contain a number of variants and convergences as the situation dictates.

Once isolated or detained personnel are recovered and returned to U.S. control, the work of repatriation begins. Repatriation can be thought of as an established process that bridges two entirely different contexts, the readjustment from captivity back into life as a U.S. citizen and/or service member. The repatriation of recovered DoD personnel is an extraordinarily important process for the well-being of the individual and for U.S. government interests. Certainly, one of the primary aims is to restore the health of formerly isolated personnel through a process of psychological decompression. Other critical concerns include the lessons learned from recovery incidents or methods, the tactical and strategic intelligence that may have been gleaned from or transferred to enemy combatants, and the applicability or efficacy of the SERE training course.

DoDI 2310.4 (2000) explicitly states, “The well-being and legal rights of the individual returnee shall be the overriding factors when planning and executing repatriation operations. Except in extreme circumstances of military necessity, they must take priority over all political, military or other considerations” (p. 3). Subsequently, the operational aspects of each stage of the repatriation process will be carried out in accordance with thoughtful consideration of the hardships endured and the physiological, psychological, and spiritual needs of the returnee. Other inclusive aims involve the recovery of personal dignity and pride that may have been affected by captivity and the restoration of confidence in one’s person and country.

Repatriation is accomplished in three phases. Phase I begins when recovered personnel are returned to U.S. control. If possible, they are met by an operational psychologist, a medical officer, a carefully selected key unit member, a chaplain, a public affairs officer (PAO), and a legal officer. At times, because of logistical complications, the presence of the entire repatriation team is not possible during Phase I and instead becomes available during Phase II. An essential component of the first phase is the immediacy of medical and psychological stabilization for the returnees. The initial medical and psychological triage of the individuals involved and the subsequent assessment of their health will significantly influence their handling and processing in each phase. Of course, these assessments will differentiate between actual detainment status and being isolated behind enemy lines, and they will also consider the duration and treatment in captivity, along with the type of recovery method utilized (conventional vs. unconventional).

Another key component in Phase I repatriation is transportation to a designated secure area nearby. This secure area can be in the same theater of operations and is intended to allow for safe and efficient repatriation.

Also, in the event of a relatively short period of isolated experience or evasion, and if no medical, psychological, or operational contraindications exist, the individual might very well return to duty from this location. There is a greater degree of flexibility in assessing recovered personnel who have been isolated but not detained. The decision to return to duty from this secure area is consistent with the BICEPS concept of combat stress control: *Brevity of treatment, Immediacy of the response, Centrality of the treatment area, Expectancy of recuperation, Proximity of treatment near the incident location, and Simplicity of the interventions* (see Chapter 10, this volume). Since the returnees are not considered in need of psychological services, the focus can be directed at transitioning them back to duty unless their condition suggests otherwise. They would still complete critical operational and/or intelligence debriefings for immediate dissemination but then would be allowed to return to their primary duty.

If the returnees have experienced a prolonged period of evasion from or detention by hostile forces, then the Phase I secure area will probably be a short transition point enroute to a Phase II location—typically, a major regional medical center near that theater of operation. General duties of the operational psychologist during this phase may include initial and ongoing psychological assessment to address the needs and psychological status of the returnees, which will subsequently direct future interventions and debriefing operations for them; education of the returnees (and their chain of command) about what they may expect in the near future; and the moderation of their activities and public or familial exposure to aid in decompression and transition. These factors will continue to be revisited and adjusted as needed while the SERE psychologist accompanies the returnee to the Phase II location.

In general, most returnees continue on to Phase II of the repatriation, where more thorough medical and psychological assessment takes place. Also, most of the formal debriefing occurs during this time. A variety of debriefings occur in Phase II and often carry over into Phase III. These might include operational or intelligence debriefs, SERE training debriefs, or psychological decompression debriefs. They are carried out separately to avoid convergence of details or facts and are generally moderated by an operational psychologist in accordance with the psychological condition of the returnees. The operational psychologist would monitor for situations that detract from the returnees' readjustment and advocate for protocols that maximize the accuracy of recalled information. Each of these debriefs are part of a larger decompression effort formulated to allow returnees maximum reintegration success in their military and civilian lives. The minimum time frame to complete these processes is 3 days.

Operational and intelligence debriefs are oriented toward the returnee's mission. Military members in general are routinely asked to complete postmission debriefs with superiors, often focusing on successes and failures, lessons learned, intelligence gleaned from the enemy or given away (if contact was made), or changes in standard operating procedures (should the situation warrant it). These military debriefs are carried out in a professional manner, are behaviorally or factually focused, and are tactical or strategic in nature. Operational and/or intelligence debriefers in a repatriation context try to mirror routine, typical debriefs. There is an important decompressing element as well, since returnees are able to obtain relevant feedback from authorities who can answer nagging concerns or questions they may have about their own performance. In this manner, returnees are allowed conceptually to "complete the mission." The relevant information from these debriefs is immediately disseminated to the appropriate commanders for tactical purposes.

Psychological debriefing primarily provides decompression for the returnees through a guided process of "telling their story." This process can be particularly helpful when there is more than one returnee, as experiences are shared and each recipient receives a fuller understanding of the situation and experiences. Furthermore, since returnees are not necessarily considered psychologically impaired as a result of their experiences, much effort is expended to educate and normalize their psychological reactions to the situations they encountered. The returnees generally find significant comfort in understanding their past and/or current reactions as "normal human responses to abnormal events" and the knowledge that these reactions will improve over time. Some of the typical psychological reactions to release from captivity are sleep disruption (nightmares, insomnia, or hypersomnia), changes in concentration (memory deficits or disorientation), mood fluctuations (irritability, hostility, depression, guilt, anxiety, or euphoria), and reevaluation of life goals and convictions. The extent of these symptoms largely depends on the preexisting traits of the individual, the level of sleep and sensory deprivation or isolation experienced, the type of duress and coercive attempts endured, and possibly the duration of captivity. Much of the psychological decompression occurring in Phase II involves the operational psychologist's ability to (1) educate and normalize the returnees' reactions to the events they experienced and (2) clarify the context in which their actions occurred, with the goal of providing meaning and connectedness to their actions.

A reciprocal benefit of SERE debriefs is the ability to provide feedback to the SERE training institutions in a research and development continuum. In other words, clarifying difficulties encountered with personnel recovery, learning about the enemy's interrogation methods or aims of exploitation,

or assessing the treatment of captives is directly applicable to the validation efforts of the current training methodologies and course of instruction. It is important in this educative process that returnees are able to ask direct questions and receive direct feedback about their own performance. Since military members are held to the standards of the Military Code of Conduct, it is often part of their psychological decompression to know that they have comported themselves well and “returned with honor.”

In Phase II, reintegration with the returnee’s family also begins. Generally, the initial contact with family is by telephone, as personal visitation in Phase II has been found to be problematic in the past. Although this principle would seem to be counterintuitive in some ways, experience has shown that the returnees’ immediate integration with their families can be conflictive with their own long-term psychological decompression needs, as well as with the general efforts of a repatriation operation. For instance, there may have been significant shifts in family roles during detention, or family issues may have already existed, making it difficult for the returnees to receive assistance in decompressing while engaged in familial needs. Accordingly, a PAO and legal officer are also assigned to the returnee to assist with any information or interview requests, as well as any relevant legal concerns caused by the detention. Again, with the returnee’s needs foremost, the operational psychologist will generally work closely with the PAO to jointly decide on the appropriate level of media exposure. A “key unit member” also aids the decompression process by providing familiarity to predetention life, liaison assistance between the returnee and the unit, and assistance with any other administrative or logistical concerns.

Phase III occurs in the continental United States (CONUS) and is the opportunity for the returnees to be physically reunited with their families, unit members, and friends. Despite the probable desire to be immediately sheltered away by family, loved ones, or friends, it is equally important for returnees to maintain some form of contact with their military unit or captivity peers upon returning home, particularly for returnees who had been held in group captivity and were repatriated together. Generally speaking, there may have been some unique experiences and psychological reactions that are best worked through with the same repatriated peers or with guides familiar with the psychology of captivity. Continued affiliation with groups that have experienced traumatic or difficult events together has proven to be helpful in the past. If significant changes occurred in the family structure because of the returnee’s absence, a period of transition or adaptation may be indicated. Furthermore, if family members wish to address their own needs or concerns related to the returnee’s absence, it can be provided by contact with the military unit or through JPRA and SERE psychologists.

For the returnee's aftercare, medical needs will continue to be attended to as necessary, along with follow-up by the affiliated SERE psychologist for any ongoing psychological needs. By protocol, the SERE psychologist will continue to be available and provide aftercare as indicated throughout the following year. Also, all detainees and POWs are eligible for annual screenings and continued medical and psychological services through the Robert Mitchell Center for Repatriated POW Studies in Florida.

## SUMMARY

SERE training aids and equips service members to cope with the unthinkable demands of captivity. Although SERE training may induce temporary psychological changes and demands while being held captive by a simulated enemy for several days, the psychological and physical effects of truly being held prisoner can result in permanent damage. One of the key functions of SERE training, and the experiential learning and preparation therein, is to give service members the tools needed to mitigate problematic future effects of the demands of captivity.

The operational psychologist plays a vital role in this training environment as a safety observer, educator, researcher, and consultant. When service members are recovered, the SERE psychologist functions as a consultant and clinician during the repatriation process. The SERE environment is a laboratory of realistic stress, and over time the research conducted can provide far greater understanding of how to enhance performance under severe stress.

## REFERENCES

Babic, D., & Sinanovic, S. (2004). Psychic disorders in former prisoners of war. *Medical Archives*, 58, 179–182.

Carlson, L. (2002). *Remembered prisoners of a forgotten war: An oral history of the Korean War POWs*. New York: St. Martin's.

Coffee, G. (1990). *Beyond survival: Building on the hard times*. New York: Putnam.

Cohen, B., & Cooper, M. (1954). A followup study of WWII POWs. *Veterans Administration medical monograph*. Washington, DC: U.S. Government Printing Office.

Cook, J. M., Riggs, D. S., Thompson, R., Coyne, J. C., & Sheikh, J. I. (2004). Post-traumatic stress disorder and current relationship functioning among World War II ex-prisoners of war. *Journal of Family Psychology*, 18, 36–45.

Creasey, H., Sulway, M. R., Dent, O., Broe, G. A., Jorm, A., & Tennant, C. (1999). Is experience as a prisoner of war a risk factor for accelerated age-related illness and disability? *Journal of the American Geriatric Society*, 47, 60–64.

Dobson, M., & Marshall, R. (1997). Surviving the war zone: Preventing psychiatric casualties. *Military Medicine*, 162, 283–287.

DoDD 1300.7. (2000a, December 8). *Training and education to support the code of conduct*.

DoDD 2310.2. (2000b, December 22). *Personnel recovery*.

DoDI 2310.4. (2000, November 21). *Repatriation of prisoners of war (POW), hostages, peacetime government detainees and other missing or isolated personnel*.

DoDI 1300.21. (2001, January 8). *Code of conduct training and education*.

Doran, A. (2001). *Summary of repatriation of EP-3 crew*. Unpublished mission summary.

Doran, A. (2002). *Descriptive factors of SERE Instructors at Brunswick, Maine, from 2000–2002*. Unpublished raw data.

Engle, C., & Spencer, S. (1993). Revitalizing division mental health in garrison: A post Desert Storm perspective. *Military Medicine*, 158, 533–537.

Executive Order 10631. (1955, August 17). *Code of conduct for members of the armed forces of the United States*.

Fiske, S. T., Harris, L. T., & Cuddy, A. J. (2004). Why ordinary people torture enemy prisoners. *Science*, 306, 1482–1483.

Gold, P. B., Engdahl, B. E., Eberly, R. E., Blake, R. J., Page, W. F., & Frueh, B. C. (2000). Trauma exposure, resilience, social support, and PTSD construct validity among former prisoners of war. *Social Psychiatry and Psychiatric Epidemiology*, 35, 36–42.

Goldstein, G., van Kammen, W., Shelly, C., Miller, D., & van Kammen, D. P. (1987). Survivors of imprisonment in the Pacific theater during World War II. *American Journal of Psychiatry*, 144, 1210–1213.

Hall, R., & Malone, P. (1976). Psychiatric effects of prolonged Asian captivity: A 2 year follow-up. *American Journal of Psychiatry*, 133, 786–790.

Haney, C., Banks, C., & Zimbardo, P. (1973). Interpersonal dynamics in a simulated prison. *International Journal of Criminology and Penology*, 1, 69–97.

Haney, C., & Zimbardo, P. (1998). The past and future of U.S. prison policy: Twenty-five years after the Stanford prison experiment. *American Psychologist*, 53, 709–727.

Henman, L. (2001). Humor as a coping mechanism: Lessons from POWs. *Humor*, 8, 141–149.

Hunter, E. (1975). *Isolation as a feature of the POW experience: A comparison of men with prolonged and limited solitary confinement*. San Diego, CA: Center for Prisoner of War Studies, Naval Health Research Center.

Joint Personnel Recovery Agency (JPRA). (2005). Requirements for qualification and use of DoD survival, evasion, resistance, and escape (SERE) psychologists in support of the Code of Conduct training. *JPRA Instruction*.

Meichenbaum, D. (1985). *Stress inoculation training*. New York: Pergamon.

Mitchell, J. (1983). When disaster strikes: The critical incident stress debriefing process. *Journal of Emergency Medical Services*, 8, 36–39.

Morgan, C. A., Hazlett, G., Doran, A., Garrett, S., Hoyt, G., Thomas, P., et al. (2004). Accuracy of eyewitness memory for persons encountered during expo-

sure to highly intense stress. *International Journal of the Law and Psychiatry*, 27(3), 265–279.

Morgan, C. A., Hazlett, G., Doran, A., Steffian, G., & Southwick, S. (2005a). *Low tech interrogation techniques in detecting concealed informants*. Unpublished manuscript.

Morgan, C. A., Hazlett, G., Doran, A., Steffian, G., & Southwick, S. (2005b). *New uses for the polygraph in detecting concealed information*. Unpublished manuscript.

Morgan, C. A., Hazlett, G., Doran, A., Steffian, G., & Southwick, S. (2005c). *Stress induced symptoms of dissociation and physical health complaints in female US Navy personnel enrolled in survival school training*. Unpublished manuscript.

Morgan, C. A., Rasmussen, A., Wang, S., Hoyt, G., Hauger, R., & Hazlett, G. (2002). Neuropeptide-Y, cortisol, and subjective distress in humans exposed to acute stress: Replication and extension of previous report. *Biological Psychiatry*, 52, 136–142.

Morgan, C. A., Southwick, S., Hazlett, G., Rasmussen, A., Hoyt, G., Zimolo, Z., et al. (2004). Relationships among plasma dehydroepiandrosterone in humans exposed to acute stress. *Archives of General Psychiatry*, 61, 819–825.

Morgan, C. A., Wang, S., Mason, J., Southwick, S., Fox, P., Hazlett, G., et al. (2000). Hormone profiles of humans experiencing military survival training. *Biological Psychiatry*, 47, 891–901.

Morgan, C. A., Wang, S., Rasmussen, A., Hazlett, G., Anderson, G., & Charney, D. (2001). Relationship among plasma cortisol, catecholamines, neuropeptide-Y, and human performance during exposure to uncontrollable stress. *Psychosomatic Medicine*, 63, 412–422.

Morgan, C. A., Wang, S., Southwick, S. M., Rasmussen, A., Hazlett, G., Hauger, R. L., et al. (2000). Plasma neuropeptide-Y concentrations in humans exposed to military survival training. *Biological Psychiatry*, 47, 902–909.

Page, W., Engdahl, B., & Eberly, R. (1991). Prevalence and correlates of depressive symptoms among former prisoners of war. *Journal of Nervous and Mental Disorders*, 179(11), 670–677.

Polivy, J., Zeitlin, S. B., Herman, C. P., & Beal, A. L. (1994). Food restriction and binge eating: A study of former prisoners of war. *Journal of Abnormal Psychology*, 103, 409–411.

Port, C. L., Engdahl, B., & Frazier, P. (2001). A longitudinal and retrospective study of PTSD among older prisoners of war. *American Journal of Psychiatry*, 158, 1474–1479.

Query, W., Megrant, J., & McDonald, G. (1986). Applying post-traumatic stress disorder MMPI sub-scale to WWII POW Veterans. *Journal of Clinical Psychology*, 42, 315–317.

Ruhl, R. (1978, May). The Code of Conduct. *Airman*.

Rundell, J., Ursano, R., Holloway, H., & Siberman, E. (1989). Psychiatric responses to trauma. *Hospital and Community Psychiatry*, 40, 68–74.

Russell, J. F. (1984). The captivity experience and its psychological consequences. *Psychiatric Annals*, 14, 250–254.

Sherwood, E. (1986). The power relationship between captor and captive. *Psychiatric Annals*, 16, 653–655.

Sokol, R. (1989). Early mental health intervention in combat situations: The USS *Stark*. *Military Medicine*, 154, 407-409.

Solomon, Z., Neria, Y., Ohry, A., Waysman, M., & Ginzburg, K. (1994). PTSD among Israeli former prisoners of war and soldiers with combat stress reaction: A longitudinal study. *American Journal of Psychiatry*, 151, 554-559.

Sutker, P., & Allain, A. (1996). Assessment of PTSD and other mental disorders in WWII & Korean POWs and Combat Veterans. *Psychological Assessment*, 8, 18-25.

Sutker, P., Allain, A., & Johnson, J. (1993). Clinical assessment of long-term cognitive and emotional sequelae to World War II prisoners-of-war confinement: Comparison of pilot twins. *Psychological Assessment*, 5, 3-10.

Sutker, P., Allain, A. N., Johnson, J. L., & Butters, N. M. (1992). Memory and learning performances in POW survivors with history of malnutrition and combat veteran controls. *Archives of Clinical Neuropsychology*, 7, 431-444.

Sutker, P. B., Vasterling, J. J., Brailey, K., & Allain, A. N. (1995). Memory, attention, and executive deficits in POW survivors: Contributing biological and psychological factors. *Neuropsychology*, 9, 118-125.

Tennant, C., Fairley, M. J., Dent, O. F., Suway, M., & Broe, G. A. (1997). Declining prevalence of psychiatric disorder in older former prisoners of war. *Journal of Nervous and Mental Disease*, 185, 686-689.

True, B., & Benaway, M. (1992). Treatment of stress reaction prior to combat using the "BICEPS" model. *Military Medicine*, 157, 380-381.

Ursano, R., Boydston, J., & Wheatley, R. (1981). Psychiatric illness in US Air Force Vietnam POWs: A five year follow-up. *American Journal of Psychiatry*, 138, 310-314.

Ursano, R. J., & Norwood, A. (1996). *Emotional aftermath of the Persian Gulf War: Veterans, families, communities, and nations* (chap. 17). Washington, DC: American Psychiatric Press.

Verma, S., Orengo, C. A., Maxwell, R., Kunik, M. E., Molinari, V. A., Vasterling, J. J., et al. (2001). Contribution of PTSD/POW history to behavioral disturbances in dementia. *International Journal of Geriatric Psychiatry*, 16, 356-360.

Yerkes, S. (1993). The "un-comfort-able" making sense of adaptation in a war zone. *Military Medicine*, 58, 421-423.

Zeiss, R. A., & Dickman, H. R. (1989). PTSD 40 years later: Incidence and person situation correlates in former POWs. *Journal of Clinical Psychology*, 45, 80-87.

Zimbardo, P. G. (1973). On the ethics of intervention in human psychological research: With special reference to the Stanford prison experiment. *Cognition*, 2, 243-256.

## CHAPTER 12



# The Psychology of Terrorists

*Nazi Perpetrators, the Baader-Meinhof Gang, War Criminals in Bosnia, and Suicide Bombers*

ERIC A. ZILLMER

The surprise terrorist attacks on the United States have changed the collective psychology of the nation and our perception of the threat of terrorism. This threat has led to many questions for psychological science posed by the military and law enforcement populations. As a result, there has been an increased opportunity for the psychology community to conduct behavioral research and consultation in these arenas, which provide opportunities for both scientific and clinical contributions. In fact, a primary strategy on the global war on terrorism must include an understanding of the psychological prerequisites for terrorist acts.

Given that terrorism on a grand scale has become increasingly possible because of the availability of materials and modern technology, it is important for psychologists to understand the terrorist's frame of mind. Military personnel, behavioral scientists, and psychologists may find themselves progressively more involved as consultants to the military, security firms, federal and state governments, intelligence agencies, and the police in their fight against the threat of terrorism. Old and outdated notions of the psychopathic or mentally ill terrorist yield maladaptive responses to the understanding of the terrorist culture. Thus, it has become increasingly more relevant to the behavioral and social sciences to study the terrorists' decision-making process, the social context under which terrorist acts

occur, and the specific personalities that may be involved in terrorist atrocities. Some believe that terrorism is a moral problem with psychological underpinnings (Moghaddam, 2005). Others suggest, however, that studying the “how” and the “why” of terrorism is an important emerging research and practice area for psychology (Zillmer, 2004).

Working from psychological data, biographical information, and historical accounts, this chapter proposes several assumptions concerning how and under what circumstances humans are most likely to be recruited for and engage in terrorism. The findings in this chapter are based on several different theaters of terrorism and genocide, and primarily they suggest that the threshold for terrorist participation is much lower than is commonly expected. Terrorists commit acts of terror for what they believe are entirely justifiable and logical issues. Chapter 13 (this volume) continues with an examination of the psychology of Al Qaeda terrorists and the evolution of the global Salafi jihad.

## HISTORY OF TERRORISM

The history of terrorism has a long past, but the psychological study of terrorists covers a relatively short time period. Terrorism dates back to ancient times, to at least 48 A.D., when a Jewish sect, the Zealots, began to infiltrate cities under Roman rule and assassinate Roman soldiers and Jewish collaborators (Bartlett, 2005). During the past 2 millennia, political violence has proliferated throughout the world (Reich, 1998). It is estimated that over 1,000 terrorist organizations are now active in more than 100 countries (Taylor, 1988).

Explanations of terrorism have typically focused on social, as well as individual, factors. It has been assumed that those who commit terrorist attacks must be financially disadvantaged and developmentally immature and have been raised in broken families. Based on their fanatic actions, terrorists, it is believed, cannot possibly be well educated, must have been brain-washed, and are unskilled and ignorant. They have to have weak minds, be religious zealots, or have a history of criminal behavior. It is often assumed that terrorists must suffer from a mental illness; how else could one explain some of the most hideous terror attacks, involving innocent women and children? Most people assume that terrorists are evil (for a comprehensive study of the psychology of human evil, see Bartlett, 2005). As we shall see, the modern notion of the psychology of terrorists is in stark contrast with almost all of these common conceptions. Terrorists perpetrate their actions with deliberation and a realistic knowledge of the consequences. Thus, a modern understanding of their psychology sees terrorists as a more formidable enemy.

## DEFINITION OF TERRORISM

The label “terrorist” is a negative marker that even so-called terrorists do not like to use. Most terrorists, in fact, do not regard themselves as terrorists at all but rather as soldiers, liberators, martyrs, and legitimate freedom fighters or revolutionaries for a noble social cause (Bartlett, 2005). As a result the term “terrorist” and the act of terrorism is controversial, and different groups often accuse each other of terrorist acts.

There are over 100 competing definitions of terrorism. A broad, but useful, definition has been proposed by Laqueur (1987, p. 144): “The unlawful use of threat of violence against persons or property to further political or social objectives. It is usually intended to intimidate or coerce a government, groups, individuals or to modify their behavior or politics.” Acts of terrorism can include punishment, threats, violence, kidnapping, extortion, torture, hate crimes, rape, child abuse, domestic violence, and even bullying. This definition demonstrates that such behaviors are widely engaged in by everyday individuals. Thus, without any further psychological study whatsoever, it should be apparent that terrorism as defined by Laqueur might have a much lower threshold than most people believe.

There are at least four types of terrorist group activity (Bartlett, 2005): those between groups (e.g., organized crime), those between groups and states (e.g., Al Qaeda and the United States), those between states and groups (e.g., Nazi genocide), and finally, those between states (war). Thus, it is useful to differentiate between terrorism from above (e.g., perpetrated by dictators and governments) and terrorism from below (involving rebels, revolutionaries, and protestors) (Hacker, 1980).

## RELEVANT PSYCHOLOGICAL STUDIES: ASCH, MILGRAM, AND ZIMBARDO

Several landmark studies have laid the groundwork for understanding possible psychological operations involved in the capacity to harm. An initial question about those who engage in terrorism is whether they are unique individuals, that is, outside of the norm. If this were true it would make it less likely for everyday individuals to become involved in terrorism and it would make it more difficult for terrorist organizations to recruit, for the simple reason that there would be smaller populations to recruit from. Three important psychological experiments have suggested that the threshold for individuals to conform—even in the face of obvious contradictory evidence, and at times resulting in potential harm to others—is much lower than commonly expected. These comparative experimental studies include Asch’s (1952) experiments on social conformity, Milgram’s (1974) studies

of obedience to authority, and Zimbardo's (1972) investigation of prison life.

Briefly, Solomon Asch (1952), a social psychologist, showed how powerful the tendency to conform to others could be. Faced with a simple, unambiguous task (matching the length of a line with one of three unequal lines), a large majority of the subjects ignored their own senses and agreed with the obviously incorrect choice made by a group of strangers (actually confederates of the experimenter). The "Asch effect" showed how readily most people will go along with a decision that their own judgment tells them is wrong, even when no coercion or force is used. For example, large groups of people in the Mideast felt ambivalent toward the 9/11 attacks. While they may have disagreed in principle with the *means* of terror, many endorsed the *effects* of the terror. Polls also show how a significant proportion of Palestinians who supported suicide bombings in the second intifada still said that they disagreed with it in principle (Nichole Argo, personal communication, December 11, 2005). Many terrorists, however, don't join a terror cell just because they think they should go along with the group. More often they actually believe that they are doing the right thing.

Guessing the length of a line is, of course, not comparable to participating in terrorist activities. However, Stanley Milgram (1974), a Yale psychologist, showed that obedience to authority relieves many people of moral responsibility, thus making them more likely to behave with considerable cruelty. Milgram had originally designed his experiment in response to the Adolf Eichmann trial, in part to understand why ordinary people in Germany had participated in the murder of millions of innocent victims during WWII. The results he obtained in the United States, however, made it clear that he did not have to leave home. Milgram recruited subjects through advertisements in a local newspaper for a "Study in Memory." In one of the experiments, almost one-third of the subjects were willing to hold a "learner's" hand against a metal plate to force him to receive an electric shock. Milgram's study clearly demonstrated that, under certain circumstances, the tendency to obey an authority figure is very strong, even when causing harm to an innocent person. This may explain why terrorists who sacrifice themselves through suicide bombs are vulnerable to the command of those perceived as authority figures in a terrorism cell. The masterminds of terror operations may have significant social authority and influence over their followers, and often a simple request is all that is necessary for a terroristic act.

In yet a different experiment, psychologist Philip Zimbardo (1972) asked a group of ordinary college students to spend time in a simulated prison. Some were randomly assigned as guards—given uniforms, billy clubs, and whistles—and were instructed to enforce certain rules. The remainder became prisoners and were locked in barren cells and asked to

wear humiliating outfits. After a short time, the simulation became very real, as the guards devised cruel and degrading routines. The prisoners, one by one, either broke down, rebelled, or became passively resigned. After only 6 days, Zimbardo had to terminate the study, demonstrating that, for many of us, what we do may be what we gradually become. Thus, once someone is assimilated into a terror cell, it may be surprisingly easy to take on the role of a terrorist.

If Asch (1952), Milgram (1974), and Zimbardo (1972) are correct, it may be that law-abiding men and women with conventional virtues are indeed capable of committing terroristic acts, once the command is given and necessary social mechanisms are set in motion. These three experiments laid the foundation for an understanding of the social and group characteristics in which potentially dangerous behavior can occur. But what are the psychological prerequisites for individual terrorist acts? To help answer this question, a detailed and unique account and psychological database on over 200 war criminals of the Third Reich, who committed state-sponsored terrorism and genocide, are available (Zillmer, Harrower, Ritzler, & Archer, 1995).

### STATE-SPONSORED TERRORISM: NAZI PERPETRATORS AND COLLABORATORS

The Third Reich revealed to the world the surprising and concerning conception that large groups of individuals, who were integrated into Western culture, could engage in state-sponsored terrorism against others, as well as their own people. One surprising account of the Third Reich was the scale of terror; that is, between 150,000 and 200,000 perpetrators were actively responsible for committing war crimes. Of those, approximately 35,000 have been captured, brought to trial, and convicted. Many theories were developed in reaction to the Nazi phenomenon, the Holocaust, and the creation of concentration and death camps. One popular notion was to attempt the psychological profiling of Nazis. Subsequently, at the end of World War II, theories of the sadistic personality (Miale & Seltzer, 1975) and the German authoritarian personality (Adorno, Frankel-Brunswick, Levinson, & Sanford, 1950) were formulated. Their basic notion was that the behavior of the Nazi perpetrators must have been related to some form of uniform pathology (Dicks, 1972). The problem, however, with the concept of a uniform Nazi personality theory was twofold. First, one could not think of a more heterogeneous group of individuals involved in the atrocities and state-sponsored terrorism during the Third Reich (Browning, 1993). They were people from all walks of life, including non-German collaborators. It is next to impossible to find simple psychological characteris-

tics for such a diverse group of individuals and such a heterogeneous and complex collection of behaviors. Second, many of the characteristics proposed by the theorists of a uniform Nazi personality can be attributed to individuals who played absolutely no role in the creation of Nazi terror. For example, most prisoners who have committed crimes and who are incarcerated in jail are considered antisocial or psychopathic, but they have no connection to the Nazi movement.

This uniform pathological Nazi personality was later revised by Hannah Arendt (1958, 1963), who argued that Nazis were not sadists or even aggressive individuals intent on doing harm to others for depraved satisfaction, but just ordinary, conscientious, moderately ambitious bureaucrats who were more interested in simply obeying orders. Arendt based her theory on the 1961 Adolf Eichmann trial in Jerusalem. Many observers, including Arendt, were surprised by Eichmann's personality, that is, the quality or lack of it. Arendt argued that the banality of his personality kept him from having compunction or even second thoughts about his job, which was keeping trains running to concentrations camps on time. Arendt's controversial thesis simply implies that many of the Nazis were banal, morally indifferent, mundane, and without a feeling of hatred or any



Auschwitz, which was established by the Nazis in 1940, has become a symbol of terror, genocide, and the Holocaust. Psychological analysis proved to be useful in separating the psychological characteristics of Nazi followers from those who were considered the leaders. Nazi rank and file, including guards, were found to be simple thinkers who were easily influenced by authority. Pictured here is the Auschwitz perimeter fence in which German shepherd guard dogs "patrolled." Not one prisoner ever escaped. Photo courtesy Eric A. Zillmer.

ideological malice toward their victims. In fact, she concluded that they were quite ordinary.

Arendt's concept of the banality of evil has some merit because it implies that ordinary men in the right circumstances can perform evil deeds. But it also assumes the presence of a relatively homogeneous personality prototype that others have argued to be sinister and vicious, not ordinary. Each of these hypotheses, the "evil Nazi personality" and "the banality of evil," starts with a divergent bias concerning the behavior of Nazis. Both assume a relatively homogeneous personality type—one vicious, sadistic, and antisocial; the other obedient, indifferent, and mundane. Both have naturally stirred much debate and controversy. Arendt's theory, however, differs from those endorsing the "mad Nazi" hypothesis in a very important way, for she suggests that the potential for behaving like a Nazi exists in many.

The psychological data on over 200 Nazi perpetrators and collaborators from the Copenhagen War Crime trials and the Nuremberg International Tribunal did not indicate a uniform Nazi personality (Zillmer et al., 1995). However, there were important findings among those accused of state-sponsored terrorism, genocide, and war crimes that have implications for contemporary terrorism. For example, an analysis of the psychological data suggests that it is important to differentiate between those who created the Nazi regime from those who were rank-and-file members. The Nazi elite were involved in the creation of concentration camps, initiated aggressive warfare, and were considered to be in authority. The rank and file, in contrast, were made up of Nazi officials, guards, military personnel, and bureaucrats who were largely responsible for implementing state terrorism. In fact, it still seems appropriate to consider modern terrorists in these two categories—the terrorist mastermind who initiates the mission and provides the orders, and the followers who execute them.

The Nazi psychological data on the rank and file suggest that they engaged in a unique information-processing style, which can be described as oversimplified. That is, they were not creative thinkers, were easily influenced by authority, were vulnerable to acts of impulsiveness, and were attracted to the rigid and quasi-military Nazi hierarchy. They were not complex individuals but rather preferred to seek out external structure, guidance, and reassurance. They believed that they were simply following orders and that they actually had nothing to do with the concentration camps. In fact, this was a frequent defense of those rank-and-file Nazis who were captured and put on trial. In retrospect, these cognitive operations were most prevalent among the rank and file. They actually felt that they were victims of circumstance and that their behaviors were not entirely under their control. It does not excuse their actions, but it explains why so many may have participated with little deliberation. As a group they relied

heavily on denial and were lacking an internal moral compass. They also exhibited an altered self-esteem; that is, they were lacking in confidence and felt socially frustrated. Socially and interpersonally, the rank and file were not so shallow and aloof as they have been portrayed in the media and film industry. They actually sought out social relationships and were eager about joining a fraternity (*Kameradschaft*), which gave them a sense of belonging and structure.

Thus, as a group, rank-and-file terrorists may demonstrate a cognitive simplicity that is consistent with an oversimplified problem-solving style. This means that they are not creative thinkers, are easily influenced by authority, and are attracted to the quasi-military hierarchy and structure of terrorist cells and camps. Since the capacity for terrorist evil seems easily accessible to many, it is very possible that there are tens of thousands of disillusioned individuals who are highly vulnerable to recruitment by terrorist cells. This disillusionment in the rank and file, the need for social bonding, and the search for external structure should now be considered main ingredients for how and why potential terrorists are being recruited—not because of fear, but because of a need for affiliation.

The psychology of Nazi leadership, in contrast, was different. The Nazi elite were overconfident, entitled, arrogant, and egocentric. They were well educated and bright, and in fact had average to superior intelligence (Zillmer et al., 1995). A deficiency in their ability to empathize with others was characteristic, being similar to individuals who would be considered psychopaths. The leaders of modern terrorist cells are most likely well educated, intelligent, creative, and manipulative. It is a mistake to mislabel the terrorists as cold-blooded killers and to underestimate their intelligence. The elusive nature of Osama bin Laden indicates that there may be some validity to this hypothesis.

The final analysis of the Nazi data suggests that the Nazis could not plead insanity in the court of universal justice. No specific inclination was found toward violence, aggression, or sadism. Ordinary, well-educated, middle-class, family-type people became involved in atrocities and did not demonstrate any particular inclination toward violence. The Nazis were not deranged in a clinical sense. Crazy was not the answer. The Nazis came in a variety of stripes. Hitler's men were more different from each other in terms of their personality than they were alike.

## POLITICAL TERRORISM: THE BAADER-MEINHOF GANG

The daily insecurity in the United States after the 9/11 attacks has been a familiar one for the German population, who lived through almost 10 years of unpredictable terror. The Baader-Meinhof terror group inflicted

on West Germany its first internal social-political crisis. In fact, the years 1968 through 1977 represented the most tumultuous era in the Federal Republic of Germany's short history. The Baader-Meinhof Gruppe (*Gruppe* is German for "group," but it was also commonly referred to as a *Bande*, or "gang") grew out of the West German 1968 student movement, whose mission was to resist capitalism and state-sponsored authority. National issues related to the Cold War, German national unity, the proliferation of nuclear weapons, and the presence of large numbers of U.S. military and troops of the North Atlantic Treaty Organization (NATO) in West Germany resulted in large-scale student protests. Many leftist students wanted a revolution and naively sought to kick-start the cause through terrorism in prosperous West Germany.

The Baader-Meinhof gang was named after their leader, Andreas Baader, and one of its founding members, Ulrike Meinhof. Baader, the leader of the violent leftist group was convicted of the 1968 arson bombing of a Frankfurt department store, along with his girlfriend, Gudrun Ensslin. He escaped from police custody in May 1970 with the help of the famous journalist Ulrike Meinhof, giving birth to the so-called Baader-Meinhof gang. What followed was a series of bombings, kidnappings, bank robberies, and murders, which left Germany in the wake of terror unlike any seen in an industrialized country (Rasch, 1979).

One surprising phenomenon that emerged from this terror activity and which is now thought to be an essential ingredient in the effectiveness of the Baader-Meinhof gang was its surprising popularity among West Germans. In fact, German polls showed that an extraordinarily high number (approximately 10–20%) of Germans supported its cause in one way or another. This is remarkable because it suggested that millions of ordinary Germans sympathized with the Baader-Meinhof's terror initiatives. The word "sympathizer" literally means to show pity or compassion and to share ideas with someone else. Everyday Germans may have been reluctant to agree with Baader-Meinhof's radical methods of terror, but somehow the cause struck a chord with the German public. As a result, the term "sympathizers" of terrorist groups was coined and became a focus in the study of terrorism. In fact, sympathizers are now considered an essential ingredient in any terror movement. If there were no sympathizers, there would most likely not be a financial, intellectual, or ideological basis for a terror movement. This appears relevant historically, for example, with the Holocaust (Goldhagen, 1996), as well as with terror groups, such as the Islamic Resistance Movement (HAMAS), the Irish Republican Army (IRA), the Basques of northern Spain, and Al Qaeda. Even though the Baader-Meinhof gang engaged in unquestionable criminal behavior, many German citizens, including well-known and established authors and lawyers, said publicly that some of its actions were ideologically justified. In the end,

the Baader–Meinhof gang's support fizzled to almost nothing when these West German terrorists began to rely solely on violence, merely robbing banks and committing murders.

Most of the leaders of the Baader–Meinhof gang were captured in mid-1972. Their followers would kidnap and kill close to a dozen people over the next 5 years in an effort to secure their leaders' release from prison. But the West German government had no intention of releasing them. On October 17, 1977, perhaps related to a failed attempt to secure their release through an airplane hijacking by Palestinian comrades, the leaders committed suicide. The Baader–Meinhof era was officially over (see Huffman, 2002, for a timeline).

Another important development related to the Baader–Meinhof group was the government's response—to organize their antiterrorism efforts with a specific police task force, which underwent specialized training and was centrally organized by the West German government. A special section of the police was created to oversee Germany's antiterrorism efforts. This marks one of the first responses of a specialized, federal anti-terror strike force in any country.

Once the terrorists were captured, the German Ministry of the Interior set out to understand how this terror movement evolved and was sustained. A five-volume set, published in the early 1980s, includes an analysis of over 220 members of the Baader–Meinhof gang. One volume is dedicated entirely to the psychological understanding of them (Jager, Schmidchen, & Sullwold, 1981). This study of the psychosocial causes of the Baader–Meinhof group indicates that all of the terrorists shared a common political ideology, which made them feel entitled to commit acts of violence. For example, Baader would admit publicly to being "politically" responsible for a bombing but not "personally" responsible. In their own minds their actions were justified and reasonable in the pursuit of their cause.

A psychological investigation of those imprisoned shows no conclusive evidence for the assumption that a significant number of the terrorists were disturbed or abnormal. In fact, most of the supporters were well educated, intellectual university students. The members of the Baader–Meinhof gang did share a common conception of disillusionment (*Urmisstrauen*), disappointment caused by a frustrated ideal. This appears to be a common ingredient of terrorist cells, that is, a feeling of frustration, which then leads to action. Personality investigations suggest that, similar to the Nazi rank and file, members of the terror group exhibited significantly poor self-esteem (*Minderwertigkeitsgefühle*). An important mechanism of their terror affiliation centered around the fact that many of them were friends who felt a solidarity (*Solidarität*) with each other and frequented the same social circles. This desire for a social network (*soziale Rollenfindung*) was similar to a *Gemeinschaftsgefühl* among the Nazi groups, and in fact appears to play

an important role in any terror cell (within-group love, outside-group hate; see Chapter 13, this volume).

In general, however, the psychosocial studies of participants of the Baader-Meinhof gang do not reveal a uniform terrorist personality but do indicate a number of prerequisites for such a terror movement. These characteristics centered on the fact that many members of the gang felt frustrated and disillusioned and that many of them were or became friends who ultimately committed suicide together. The study of the political and psychological aspects of group terrorist membership, such as the Baader-Meinhof gang, also brought to the forefront the advent of sympathizers and supporters, without which a terror movement would not be possible (e.g., the white supremacy movements in the United States today generally lack any support of the population and are essentially ineffective). As a result, addressing sympathizers through education and propaganda is now considered an important step in fighting terrorism.

### NATIONALISTIC TERRORISM: WAR CRIMES IN BOSNIA

The former Yugoslavia was a multiethnic republic under communist rule for over four decades. After the death of Marshal Tito, the republic's leader, Yugoslavia fragmented along ethnic lines. In 1992, and related to bitter tension between the ethnic groups that had been simmering for generations, Slovenia, Croatia, Macedonia, and Bosnia and Herzegovina were recognized as independent states. But in April 1992, the remaining republics of Serbia and Montenegro declared a new Federal Republic of Yugoslavia. Under President Slobodan Milosevic, Serbia led numerous military interventions, including paramilitaries, militia, and armed civilians, to unite ethnic Serbs located in neighboring republics into a "Greater Serbia."

As a result, Bosnia, which is roughly the size of Maine, was burdened by a civil war that pitted three different ethnic groups against each other. There have been reports of mass executions and graves, as Bosnian and Yugoslavian Serbs waged war against Muslims. Under a program of "ethnic cleansing," the Serbian army and paramilitary groups "created conditions of comprehensive oppression; systematically raped, tortured, and murdered civilians; appropriated and pillaged civilian property; used detainees as human shields on front lines and in minefields; and threw Muslims into concentration camps" (Waller, 2002, p. 259). Brcko, on the border with Croatia, was the scene of some of the worst atrocities during the war. Over 20,000 Muslim exiles from Brcko have been housed in the vicinity of Brka. Mass graves in this area contain at least 7,000 bodies of Croat and Muslim civilians. There have been reports that over 1,000 Muslims



U.S. armed forces, Camp McGovern. Camp McGovern was a forward-operating base in northern Bosnia on the border of Croatia and a former war hot spot. It was a fortified camp and served as the base for 330 Pennsylvania National Guard reservists, one of 12 multinational militaries trying to enforce peace in Bosnia in 2001. Photo courtesy Eric A. Zillmer.

were executed in a factory near Srebrenica after they were separated from their families.

Since the end of the war in 1995, 2 million people have been displaced and over 1 million land mines are thought to be hidden. The country's physical infrastructure remains in shambles. All of the civic institutions that one takes for granted, including banks, police, garbage disposal, a judicial system, and public utilities, are either nonexistent or corrupted. After the war there was no economy to speak of, and a simulated, nontradable currency had to be introduced. There has been, however, significant progress in restoring peace and stability, credited mostly to a 12-nation peacekeeping force, which was organized by the United Nations (UN). Through special programs, such as Operation Harvest, the peacekeeping forces assist in the disarming of Bosnian civilians and provide for a safe, stable, and secure Bosnia. One reason the multinational peacekeeping force has been successful is not only the cooperation of the dozen countries participating, each with its own assigned territory, but also the fact that Bosnians, by-and-large, welcomed the international delegation. As a result, supervised elec-



Near Brka, Bosnia, 2001. "It is complete chaos," a U.S. sergeant-major offered. "The only thing left for them to do is to kill each other. Christians and Muslims, they all hate each other. It has been going on for generations and generations." Photo courtesy Eric A. Zillmer.

tions have been held, the railroad system has recently been restored, and a program of taxation has begun.

Bosnia is a modern-day reminder of how fragile any social structure is, how an entire nation can self-destruct, and how easily an organized outbreak of hostilities can be realized. This happened in a country that had been integrated into Europe, which had catered to millions of tourists over the years, and which is located only several hundred miles from many European cultural centers. In response to the terror, the UN formed an International Criminal Tribunal in The Hague, Netherlands, to address war crimes and crimes against humanity. The 2001 arrest of Slobodan Milosevic, who still enjoyed strong popularity among his supporters, allowed for his subsequent transfer to the tribunal to be tried for crimes against humanity. The Hague tribunal is modeled after the Nuremberg International Tribunal, which was formed after World War II and which pioneered many of the international laws that are now in place. The geographical areas of Albanian, Kosovo, and Bosnia remain a political hot spot, and the lessons learned from this most recent terror include how quickly a genocidal warfare engulfed a country as neighbor literally turned against neighbor, with the world standing by (Neuffer, 2001).

Bartlett (2005) suggests that the psychology of the terrorist has many of the same emotional characteristics that are found in those who commit genocide. The pursuit of an ethnically homogeneous state resulted in a thinly disguised terror/genocide campaign and included deportation and murder of ethnic communities who had previously cohabitated with the Serbs in shared territories (Waller, 2002). Although the Serbs committed a large majority of the atrocities, all sides, including the Muslims and Croats, were involved in the conflict in one way or another and also committed crimes against humanity. The recent human rights violation in Rwanda deserves mention here as well and serves as an additional reminder of the cruelties so easily engaged in by individuals who have seemingly lived together in peace for decades.

## INDIVIDUAL TERRORIST ACTS: SUICIDE BOMBERS

Nothing is more disturbing than reports of human bombers infiltrating a public gathering such as a discotheque (Israel), a wedding (Jordan), or a subway station (London) and setting off explosives. It seems inconceivable to most individuals that anyone would go to this extreme in order to engage in political violence. Are suicide bombers more evil than others? Surely, those who commit these acts of terror, in which they sacrifice their own lives, must be depraved individuals with nothing else to loose. Profiling suicide bombers' psychological characteristics is tempting because it may allow for a screening or early detection of potential threats.

Suicide bombings have been on the rise: "Suicide terrorists sought to compel American and French military forces to abandon Lebanon in 1983, Israeli forces to leave Lebanon in 1985, Israeli forces to quit the Gaza Strip and the West Bank in 1994 and 1995, the Sri Lankan government to create an independent Tamil state from 1990 on, and the Turkish government to grant autonomy to the Kurds in the late 1990s" (Pape, 2003, p. 343). Most agree, however, that there is not one psychological profile of suicide bombers (Merari, 2004) and that they are a heterogeneous group of individuals who even included women.

The first reports on suicide bombers included Japanese kamikaze pilots. For example, during the Battle of Okinawa in April 1945, several thousand Japanese planes crashed their fully fueled fighters into hundreds of U.S. Navy ships, killing over 5,000 sailors. A psychological analysis of those selected for suicide missions, however, found them to be relatively average citizens, that is, serious and reserved soldiers who engaged in terrorist actions for the Japanese cause (Morris, 1975; Taylor, 1988).

The modern suicide bomb is a stealthier but equally deadly weapon as the Kamikaze pilots. The Palestinian suicide bombers, who have been stud-

ied in most detail, do not seem to have the same psychological characteristics that almost all individuals have who commit traditional suicide—such as an affective disorder, depressed mood, or experience of loss or grief. Thus, it has been suggested that the appropriate term for those terror perpetrators should be “human bombs,” not suicide bombers or homicidal bombers (Argo, 2006). Since one can commit acts of violence without suicide, some researchers argue that the additional act of suicide may be significant in terms of the psychological makeup of the perpetrator. For example, Lester, Yang, and Lindsay (2004) suggest that suicide bombers may be characterized by risk factors that increase the probability of suicide. They suggest that the authoritarian personality might provide a good fit for the personality and psychodynamics of terrorists and suicide bombers. The authoritarian personality has been implicated before in the psychological makeup of terrorists, for example, in the discussion of Nazis, with little success.

When researchers had the opportunity to study Palestinian suicide bombers in Israeli prisons, they found a variety of individuals, which was similar to the findings for Nazis, the Baader–Meinhof gang, and the ideologies of those who committed war crimes in Bosnia. For example, Nichole Argo (2003) interviewed 15 preempted Palestinian bombers and 3 would-be bombers in Israeli prisons. All were males between the ages of 16 and 37. One-third were born to refugee families, and 14 were single; 2 were married, and 2 were engaged. These were not just brainwashed young individuals but also middle-aged, employed, and married adults.



Anonymous woman on a billboard in the Amari refugee camp, on the outskirts of Ramallah. The first female bomber of the second intifada came from the Amari camp. Photo courtesy Nichole Argo.

A psychological analysis of the interviews reveals a general absence of psychopathology; the would-be suicide bombers were not lunatics, extremists, maniacs, or depressed persons. They had compassion and showed empathy for their potential victims. But they also felt completely justified for their acts and showed no remorse. There was little evidence of despair and poverty. Thus, judging on these interviews, their prebombing quality of life was relatively good and they sacrificed everything for their cause. In fact, almost all interviewees in this study exhibited a sense of loyalty to an intimate cohort of peers, which would speak against the common conception that suicide bombers are loners. Similar to the common thread of friendship in other terror groups, they were prepared to die for one another. Also similar to other studies reported in this chapter, the pre-empted suicide bombers shared a common religion and a nationalist ideology. This appears to transcend all aspects of Palestinian bomber motivation, although there was much variance in level of religiosity amongst the bombers. While all of them were Muslim, some were far more observant than others and some even called themselves secular.

Pape (2005) examined the database of suicide bombers between 1980 and 2003—315 cases worldwide. He found that suicide attackers did not have a criminal background and were not illiterate or poor. Rather, they came mostly from secular, educated, middle-class families. The most recent 2005 London subway bombings were committed by suicide bombers who were friends, some older, married, and employed. Thus, suicide bombers have much to lose. The notion of sacrifice is an important concept in the psychological operations of suicide attackers. Suicide terrorists through their actions make a symbolic offering for what they believe is the larger good of their people. Atran (2003) reports that in the summer of 2002, for example, 70 to 80% of Palestinians endorsed martyr operations. Without the sacrifice, the act of terror may not be as meaningful to the terrorist and thus may be an important prerequisite.

## SUMMARY

This chapter reviews some historic and current theaters of terrorism in order to understand the psychology of terrorists. Psychologists who work with the military, intelligence, or law enforcement should understand that the threshold for terrorist participation is much lower than is commonly expected. Research on World War II Nazi perpetrators (Zillmer et al., 1995), modern German terrorists (Rasch, 1979), Japanese kamikaze pilots (Taylor, 1988), terrorists in northern Ireland (Bartlett, 2005), Palestinian terrorists (Laqueur, 1987), or Italian Red Brigade terrorists (Reich, 1998) found no consistent patterns of psychopathology. In fact, most terrorists

consider themselves soldiers, and perhaps it is best to think of them psychologically as such. Even though it has become common to think of terrorists as flawed, even deranged, individuals, those who committed atrocities in a variety of different venues showed a surprising absence of any psychopathology or uniform abnormality. Thus, psychological data indicate that ordinary people became involved in atrocities that did not demonstrate any prior inclination toward violence. Perpetrators may not be necessarily predisposed to such behaviors but act once an order is given.

In addition, terrorists are difficult to profile psychologically and appear to represent a heterogeneous population. Thus, there is very little evidence of a terrorist personality. The most common characteristic of terrorists, in fact, is their normality, which allows them, for example, to slip through airport security and blend into society. This absence of obvious psychopathology may explain why modern terrorists could live for some time in the United States or other countries undetected.

Those who are mentally ill are unlikely to possess the discipline and fortitude required of effective terrorists and expected by their leaders. They are probably not recruited by terrorist cells because of their possible mental instability. In fact, terrorist groups expel from their midst emotionally disturbed individuals, just as the U.S. military would, since they are a security risk. Individuals who have committed terrorist acts and who are most likely mentally unstable typically act alone, for example, Richard Reid, the shoe bomber; Eric Rudolph, the Olympic bomber; and Theodore Kaczynski, the Unabomber. Most terrorists, however, are not demented fanatics and have no history of criminal behavior. Thus, terrorist acts appear to the perpetrator to be a reasonable and necessary part of a rational strategy, with calculable costs and benefits. Terrorist leaders are most likely to be intelligent, charming, and charismatic.

The current evidence on the psychology of terrorists suggest that it may be rooted far more in nationalist defiance, as a means of the preservation of their community, rather than in religious extremism. An important finding is that almost all of the terror groups studied here, entered the network as part of a social process through friends, family, or a need for interpersonal closeness and attachment, not necessarily prior ideological beliefs, radicalization, or psychopathology (Argo, 2006; Sageman, 2004; Zillmer et al., 1995). Argo (2006) summarized it as follows, “Emotion and social ties precede the acquisition of an ideology” (p. B15). Terrorists do have a common world view, which provides a cognitive and emotional cohesiveness to their group. Political terrorists share an interpretation of the world—political, religious or otherwise—whose construction is often immune to argument and resistant to contrary facts. In a sense they are educated. Thus, for the individual terrorist, the act of self-renunciation is meaningful and rational. The giving of one’s life in an act of self-sacrifice is

in the name of the cause. Terrorists are engaging in terrorist acts for what they think are logical reasons. They are not forced to commit atrocities; rather, there is an overwhelming sense of loyalty and even affection for those who give the orders. Terrorists think they are not doing wrong but are promoting good ideals and effecting positive change. In their own minds they are idealists.

In the war on terrorism, a first line of defense should focus on the prevention of recruitment (Atran, 2003). Terrorists are more formidable than we thought because they are a rational enemy. Psychological concepts of loyalty, sacrifice, indoctrination, and disillusionment appear to play a common and important role in recruitment, and there is little evidence of poverty or illiteracy. Fighting terrorism by eliminating poverty and providing education appears to be naïve. One must reduce sympathizers since they are thought to be an essential ingredient for a terrorist movement. Most people have moderate views, and thus one has to counter psychological warfare with ideas and public relations in order to marginalize the terrorists (e.g., in Yugoslavia or during apartheid). Finally, fighting terror networks through technology is a most recent and important approach because terrorist cells depend on communication and financing through modern financial institutions.

Psychologists are experts in the science of human decision making and can put psychological science to good use in counterterrorism endeavors. Advancing psychological science directly and indirectly in these areas will benefit the security of our nation, as well as the discipline of psychology.

## REFERENCES

Adorno, T. W., Frankel-Brunswick, E., Levinson, D. J., & Sanford, R. N. (1950). *The authoritarian personality*. New York: Harper & Brothers.

Arendt, H. (1958). *The origins of totalitarianism*. New York: Meridian Books.

Arendt, H. (1963). *Eichman in Jerusalem: A report on the banality of evil*. New York: Viking Press.

Argo, N. (2003). *The banality of evil, understanding today's human bombs*. Policy Paper, Preventive Defense Project, Stanford University, Stanford, CA.

Argo, N. (2006, February 3). The role of social context in terrorist acts. *The Chronicle of Higher Education*, B15–B16.

Asch, S. E. (1952). *Social psychology*. New York: Prentice-Hall.

Atran, S. (2003). Genesis of suicide terrorism. *Science*, 7, 1534–1539.

Bartlett, S. J. (2005). *The pathology of man: A study of human evil*. Springfield, IL: Thomas.

Browning, C. R. (1993). *Ordinary men: Reserve Police Battalion 101 and the final solution in Poland*. New York: Harper.

Dicks, H. V. (1972). *Licensed mass murder: A socio-psychological study of some SS killers*. New York: Basic Books.

Goldhagen, D. J. (1996). *Hitler's willing executioners: Ordinary Germans and the Holocaust*. New York: Knopf.

Hacker, F. (1980). Terror and terrorism: Modern growth industry and mass entertainment. *Terrorism*, 4, 143–159.

Huffman, R., (2002, June 2). *This is Baader-Meinhof*. Available at [www.baader-meinhof.com](http://www.baader-meinhof.com).

Jager, H., Schmidtchen, G., & Sullwold, L. (1981). *Analysen zum Terrorismus 2: Lebenlaufanalysen*. Darmstadt: Seutscher Verlag.

Laqueur, W. (1987). *The age of terrorism*. Boston: Little, Brown.

Lester, D., Yang, B., & Lindsay, M. (2004). Suicide bombers: Are psychological profiles possible? *Studies in Conflict & Terrorism*, 27, 283–295.

Merari, A. (2004). Suicide terrorism. In R. Yufit & D. Lester (Eds.), *Assessment, treatment and prevention of suicide*. New York: Wiley.

Miale, F. R., & Selzer, M. (1975). *The Nuremberg mind: The psychology of the Nazi leaders*. New York: New York Times Book Company.

Milgram, S. (1974). *Obedience to authority*. New York: Harper & Row.

Moghaddam, F. M. (2005). The staircase to terrorism: A psychological exploration. *American Psychologist*, 60(2), 161–169.

Morris, I. (1975). *The nobility of failure: Tragic heroes in the history of Japan*. London: Secker & Warburg.

Neuffer, E. (2001). *The key to my neighbor's house: Seeking justice in Bosnia and Rwanda*. New York: Picador.

Pape, R. (2003). The strategic logic of suicide terrorism. *American Political Science Review*, 97, 343–361.

Pape, R. (2005). *Dying to win: The strategic logic of suicide terrorism*. New York: Random House.

Rasch, W. (1979). Psychological dimensions of political terrorism in the Federal Republic of Germany. *International Journal of Law and Psychiatry*, 2, 79–85.

Reich, W. (1998). *Origins of terrorism: Psychologies, theologies, and states of mind*. Washington, DC: Woodrow Wilson Center Press.

Sageman, M. (2004). *Understanding terror networks*. Philadelphia: University of Pennsylvania Press.

Taylor, M. (1988). *The terrorist*. London: Brassey's.

Waller, J. (2002). *Becoming evil: How ordinary people commit genocide and mass killing*. New York: Oxford University Press.

Zillmer, E. A. (2004). National Academy of Neuropsychology: President's address—The future of neuropsychology. *Archives of Clinical Neuropsychology*, 19, 713–724.

Zillmer, E. A., Harrower, M., Ritzler, B., & Archer, R. P. (1995). *The quest for the Nazi personality: A psychological investigation of Nazi war criminals*. Hillsdale, NJ: Erlbaum.

Zimbardo, P. G. (1972, April 4–8). Pathology of imprisonment. *Society*.

## CHAPTER 13



# The Psychology of Al Qaeda Terrorists

*The Evolution of the Global Salafi Jihad*

MARC SAGEMAN

Since the attack of September 11, 2001, the U.S. military has been heavily engaged in the war on terror. At present, SOCOM (Special Operations Command) is leading the global war on terrorism. In support of this mission, military psychologists may be called on to interact with Al Qaeda and, more likely, to educate the military leadership and personnel about the psychology of its members. Therefore, it is important to understand their psychology and their motivation to harm the United States.

The conventional wisdom about terrorists is that they are products of poverty, broken families, and ignorance, who lack skills and opportunities; they are without occupational or family responsibilities or have weak minds, vulnerable to brainwashing from madrasas (Islamist boarding schools) or their families of origin. Alternative explanations of terrorism center on personality factors. Some claim that terrorists, especially those who commit suicide in the process of murdering innocent civilians, are mentally ill; have personality disorders; or are criminals, religious fanatics, or simply evil. A third set of explanations focuses on situational factors, namely, the circumstances prevailing in the lives of the potential terrorists at the time they joined their respective terrorist organizations. The present

chapter attempts to empirically test this conventional wisdom through accumulation and analysis of biographical data (Sageman, 2004).

Traditionally, the study of terrorism has been hampered by attempts to define it: A common quip is that one man's terrorist is another's freedom fighter. So the first task is to identify whom to include in this study and, in order to do this, one must first define the threat to the United States.

The terrorists who flew into the World Trade Center and the Pentagon and crashed in the fields of Pennsylvania on September 11, 2001, were all a part of Al Qaeda. The term "Al Qaeda" is confusing because it refers both to a specific organization and to a more diffuse and global social movement at war with the United States. The formal organization of Al Qaeda is the vanguard of this violent Islamist revivalist social movement. Consequently, the sample in this chapter includes people who belonged to this terrorist social movement, which will be defined as the global Salafi jihad. Many of these terrorists are not formally in Al Qaeda, in the sense of swearing an oath of loyalty to Osama Bin Laden, its leader, but are nevertheless ideologically connected. Other terrorists, such as the Palestinians or Tamil Tigers (see Chapter 12, this volume, for a discussion of other terrorist groups, e.g., Nazis and the Baader-Meinhof gang), are not included. In order to determine who belongs to this social movement, it is important to understand its nature.

## THE EVOLUTION OF THE GLOBAL SALAFI JIHAD

The terrorist social movement is held together by a common vision, which arose in the context of a perceived Muslim cultural decline over the past 500 years. Because Islam claims to be the last and perfect revelation from God, its fall from a dominant position in the world presents a problem. Many explanations, secular and religious, have tried to deal with this obvious mismatch between claim and reality. One of the more popular religious explanations is simply that Muslims have strayed from the righteous path. The source of strength of the original and righteous Muslim community was its faith and its practices, which pleased God. Recapturing the glory and grandeur of its golden age requires a return to the authentic faith of the prophet Mohammed and his companions, the *salaf*, from the Arabic word for "predecessor" or "ancient one." The revivalist versions of Islam that advocate such a return are called Salafi. Their strategy is the creation of a pure Islamist state.

Most Salafists advocate a peaceful takeover of the state, either through face-to-face proselytism or the creation of legitimate political parties. Their peaceful strategy was undermined by Egyptian President Nasser's brutal crackdown in the name of a pan-Arabic socialist project. Some Islamists like

Sayyid Qutb concluded that Nasser would never give up power peacefully and preached his violent overthrow (Qutb, n.d.). He argued that Muslim countries had reached a state of decadence, injustice, and unfairness, which was similar to the state of barbarism, or *jahiliyya*, prevailing in the Arabian Peninsula just before the revelations of the Quran. This was due to a “crisis of values,” namely, greed, corruption and promiscuity, which could be redressed only from above, by capturing the state. Because their rulers were accused of having abandoned true Islam, they were branded apostates, and the Quranic punishment for apostasy was death. Mohammad Abdal Salam Faraj (1986) further claimed that the violent overthrow of these rulers, the “near enemy,” was the forgotten duty of each Muslim, a sixth pillar of Islam.

The 1979 Soviet invasion of Afghanistan further galvanized the Islamist militant movement worldwide. Sheikh Abdallah Azzam preached a traditional jihad against the Soviet invaders. Many militants from all over the Muslim world answered his call. As the Soviets withdrew, Azzam extended the defensive jihad into a more global one. He preached that all former Muslim lands dating back to the 15th century, from the Philippines to Spain, had to be liberated from the infidels (i.e., non-Muslims). A few of the foreign Arab fighters in Afghanistan answered his call. Most of the foreigners returned to their own countries, but those who could not, mainly because of previous terrorist activities at home, stayed behind and became the nucleus of Al Qaeda, the organization. After many Middle Eastern countries complained to Pakistan that it was harboring terrorists, Pakistan expelled them. The most militant went to the Sudan, invited by the new, militant regime of Hassan al-Turabi. During this Sudanese exile, the Islamist militants held intense discussions about their failure to capture a core Arab state and transform it into an Islamist state. Some militants attributed this failure to U.S. support of the local regimes. The strategy espoused by the most militant was to switch priorities and fight the “far enemy” (e.g., the United States and Israel), in order to expel them from the Middle East, so that they could then overthrow the near enemy, their own regimes. This argument split the Islamist militant community, for many did not want to provoke and take on a powerful enemy like the United States. When the Sudan was forced to expel the militants from the country, the few who advocated fighting the far enemy returned to Afghanistan. As a result, the most militant returned to Afghanistan under the leadership of Osama Bin Laden in the summer of 1996 and, within 2 months of their return, declared war on the United States (Bin Laden, 1996). In February 1998, Bin Laden extended his “Jihad against Jews and Crusaders” to include civilians outside the Middle East, ruling that “to kill the Americans and their allies—civilians and military—is an individual duty for every Muslim who can do it in any country in which it is possible to do it” (Bin Laden, 1998).

With the evolution of this ideology and social movement in mind, it is now possible to select the terrorists that belong in this sample. They are those who use violence against any foreign or non-Muslim government or population (the far enemy) to establish an Islamist state in a core Arab region.

### BIOGRAPHICAL DATA OF AL QAEDA

A paralyzing assumption in terrorism research is that there are no good data for research. First, terrorists would not grant interviews to serious researchers for security reasons. Second, the state would not grant access to captured terrorists for national security reasons. Third, one is never sure whether the terrorists would be honest with the interviewer. All this has prevented the emergence of evidence-based terrorism research. However, with the development of the Internet, open source data have become more available. All the data collected for this chapter are from the public domain, with no direct access to the terrorists or to any government's secret reports. Despite the problems listed above, there is enough information in open sources to support an empirical analysis of the global Salafi jihad. Sources include the documents and transcripts of legal proceedings involving global Salafi terrorists and their organizations, government documents, press and scholarly articles, and Internet articles. The information was often inconsistent, and the source had to be considered in assessing facts. In decreasing degrees of reliability, transcripts of court proceedings subject to cross-examination were favored, followed by government documents such as *The 9/11 Commission Report* (National Commission on Terrorist Attacks, 2004), followed by reports of court proceedings, then corroborated information from people with direct access to the information provided, uncorroborated statements with people with that access, and finally statements from people who had heard information secondhand. "Experts" fall into the last category, for their reliability as sources of information depends on their diligence as historians.

The collected information suffers from several limitations. First, the selected terrorists are hardly representative of the global Salafi jihad as a whole. Journalists and scholars tend to focus on the unusual: leaders, people they can investigate, and unusual cases. This bias tends to ignore those who cannot be investigated and downplays the rank and file. Second, reliance on journalistic accounts is problematic. In the rush to publish, the initial information may not be reliable. These initial inaccuracies can be corrected by following the developing stories over time, rather than simply relying on initial reporting. Third, reliance on retrospective accounts from principals and witnesses are subject to the biases of self-report and flawed

memory. These accounts, often the only available information, were very occasionally able to be corroborated with existing contemporaneous documents. Finally, there is a lack of a relevant control group that would allow the generation of statements specific to the terrorists. It is difficult to make specific statements about these terrorists without comparison to a group of Muslims with similar backgrounds and activities who did not participate in terrorism despite having had an opportunity to do so.

Nevertheless, even though each piece of information may be flawed, the large numbers involved in this research may help to shed light on an emerging pattern. A description of the whole sample might be able to support or refute the conventional wisdom about Al Qaeda terrorism. Within the definition of a global Salafi terrorist in the previous section, there are 394 terrorists on whom there is enough background information to include them in empirical generalizations of age, origin, religious commitment, and education.

## PROFILES OF THE AL QAEDA TERRORISTS

As mentioned, the common stereotype is that terrorism is a product of poor, desperate, naïve, single young men from Third World countries, vulnerable to brainwashing and recruitment into terror. In this formula, the geographical origins of the mujahedin (Muslim guerilla warrior) should be not only the Third World but also some of the poorest countries of the Third World. It also implies that they come from the lowest socioeconomic stratum. Their naïve vulnerability implies that they either are brainwashed early into hatred of the West or are relatively uneducated and susceptible to such brainwashing as young adults. In this sense, they should be relatively unsophisticated and local in their outlook. A broad experience of the world might be protective against the alleged brainwashing that presumably led to their conversion to terrorism. The desperation implies that their occupational opportunities are extremely limited. They should be single, for any strong family responsibilities might prevent their total dedication to a cause that demands their ultimate sacrifice.

In fact, most of the global Salafi terrorists come from core Arab countries (e.g., Egypt, Saudi Arabia, Jordan, Yemen, and Kuwait), immigrant communities in the West, Indonesia, or Malaysia. They do not come from the poorest countries in the world, including Afghanistan. Surprisingly, there is no Afghan in the sample. In terms of socioeconomic background, three-fourths come from upper- and middle-class families. Far from coming from broken families, they grew up in caring, intact families, mildly religious and concerned about their communities. Over 60% have some college education. Most are in the technical fields, such as engineering, archi-

ture, computers, medicine, and business. This is even more remarkable because college education is still relatively uncommon in the countries or immigrant communities they come from. Far from being immature teenagers, the men in the sample joined the terrorist organization at the age of 26, on average. Most of the terrorists have some occupational skills. Three-fourths are either professional (e.g., physicians, lawyers, architects, engineers, or teachers) or semiprofessional (e.g., businessmen, craftsmen, or computer specialists). They are solidly anchored in family responsibilities. Three-fourths are married, and the majority have children. About half of the sample were religious children, but only 13% of the sample, almost all of them in Southeast Asia, were madrasa-educated. The entire sample from the North African region and the second-generation Europeans went to secular schools. About 10% were Catholic converts to Islam, who could not have been brainwashed into Islam as children.

Another popular set of explanations of terrorism centers on mental illness or innate criminality. These explanations are based on the belief that "normal" people do not kill civilians indiscriminately. Such killing, especially when combined with suicide, is viewed as irrational. The mental illness thesis is dealt a strong blow by the fact that only 1% of the sample had hints of a thought disorder, which is below the base rate worldwide. A variant of the abnormality thesis is that terrorists are sociopaths, psychopaths, or people with antisocial personality disorder. These terms are used to mean that terrorists are recidivist criminals because of some defect of personality. Such recidivism implies that this personality defect had some antecedents in childhood. Childhood data were available for a third of the sample, and less than 8% showed evidence of a conduct disorder. The rest of this group seems to have had normal childhoods, and there is no evidence of getting in trouble with the law.

Although antisocial people might individually become terrorists, they may not do as well in a terrorist organization. Because of their personalities, they may have difficulty in getting along with others or not fit well into an organization; indeed, they would be the least likely to join any organization that would demand great sacrifices from them. Likewise, very few people in the sample had any criminal background. Those who did came from the excluded North African immigrant community in Europe and Canada, where they resorted to petty crime to survive. But there were no previously violent criminals in this sample. Therefore, it is more parsimonious to argue that in an organized operation demanding great personal sacrifice, those least likely to do any harm individually are best able to do so collectively.

The failure of mental illness as an explanation for terrorism is consistent with three decades of research that has been unable to detect any significant pattern of mental illness in terrorists. Indeed, these studies have

indicated that terrorists are surprisingly normal in terms of mental health (Silke, 2003).

## PERSONALITY DYNAMICS

Despite this consensus, some versions of the mental illness thesis still survive among mental health professionals, who seek an explanation for terrorism in terms of pathological personality dynamics. At present, the most fashionable versions of this thesis stem from neo-Freudian theories (Post, 1984, 1986a, 1986b, 1990/1998). While acknowledging the lack of major psychopathology, substantially acknowledging their normality, these sophisticated versions claim that terrorists suffer from some form of personality pathology due to childhood trauma. That is, psychological forces compel them to commit acts of violence. These arguments are as follows.

All versions of the personality pathology thesis confidently assert that terrorists have common personality features: They are action-oriented, aggressive people, who are stimulus-hungry and seek excitement. Their common psychological defense mechanisms are “externalization” and “splitting,” features common in individuals with narcissistic personality disorder, often the result of childhood narcissistic wounds. The essence of the argument is that narcissistic wounds at an early age split the self into a grandiose “me” and a hated and devalued “not me” projected onto specific outside targets, which are blamed and transformed into scapegoats. Unable to face their own inadequacies, potential terrorists need a target to blame and attack. Recognizing the limitations of his study, Post identified two types of inner dynamics that might heal a fragmented identity, resolve the split, and enable the individual to be at one with oneself and society. The “nationalist–separatist” terrorists are loyal to their parents, who reject the regime; they are carrying on the mission of their parents, who were wounded by the regime. The “anarchic–ideologues” are disloyal to their parents’ generation, which is identified with the regime. Through terrorism, they are striking at their parents, seeking to heal their inner wounds by attacking the outside enemy. Post’s followers (Akhtar, 1999; Gilmartin, 1996; Pearlstein, 1991; Volkan, 1997) are mental health professionals who have little experience with terrorism. Their speculations about childhood victimization that leads to “pathological” or “malignant” narcissism (or pathological anger or rage) and terrorism lack Post’s careful statements about the absence of empirical evidence for this theory.

Post’s dynamics of disloyalty to parents or the state fail to explain the global Salafi jihad. By definition, this jihad is not directed at the state (near enemy) where the terrorists grew up but at the United States (far enemy). Therefore, the terrorists could neither avenge their parents against their

native state nor strike out against their parents in the symbol of their native state. The United States did not “wound” their parents in the “nationalistic–separatist” logic, and their parents are often hostile to the West rather than identifying with it, in the “anarchic–ideologue” logic. The logic of the global Salafi jihad is altogether different. The evidence from the sample of these terrorists shows well-adjusted children, without any antecedents of a narcissistic personality disorder. Nor was there much evidence of “childhood trauma” described by themselves, friends, or relatives. As a group, they had surprisingly little personal trauma in their lives, given their origin (i.e., communities with higher mortality rates than in the Western world). There is little evidence of pathological, malignant, or even simple narcissism in the sample. Unlike many other terrorist organizations, Salafi groups are careful to avoid a cult of personality, for they believe that everything belongs to God. Indeed, they take seriously the notion of Islam as submission, and this is not compatible with a narcissistic cult of personality, which often degenerates in a pyramidal organization, with all the controls in the hands of the leader. Al Qaeda’s structure is quite the opposite, with a large degree of local autonomy and initiative.

A second variant of the personality pathology thesis reformulates the above dynamics to claim that terrorists suffer from paranoid personality disorder (Robins & Post, 1997). The core dynamic of the paranoid personality is surprisingly similar to that of malignant narcissism. Ideas of persecution and grandeur are a shield against uncomfortable feelings of depletion, inadequacy, shame, and vulnerability. The dynamic consists of a triad of insatiable narcissistic entitlement—disappointment, disillusionment, and frustration—that inevitably results when the narcissistic needs are not satisfied; and narcissistic rage arises from the rejection of the entitlement and a sense of betrayal. This rage is projected onto scapegoats—hence the need to have enemies (Volkan, 1994)—and results in violence. This is the essence of the “psycho politics of hatred” (Robins & Post, 1997). Group paranoia is viewed simply as a manifestation of the leader’s pathology. The followers suffer from a depreciation of their blemished personalities and demonstrate a readiness to hate, to imitate, to uncritically believe, and to attempt the impossible. Religious ideology provides a rationale for followers who yearn for a calling, a group to join, or a leader to follow, in order to flee from the self. Their sense of self rests on the integrity of their belief system, which protects them from painful psychological disintegration. From this perspective, their actions are seen as defensive aggression against an enemy who is challenging their belief systems, and thereby threatening their psychological integrity and provoking passionate, often violent responses.

This account, which depends on internal forces that cannot be formally surveyed, is, of course, not refutable. What needs to be shown is that leaders and followers of the global Salafi jihad suffer either from paranoid

personality disorder or the paranoid dynamic triad. The sample under study did not reveal a pattern of paranoid personality disorder or lifestyle before joining the jihad. The concern with security and secrecy after joining is simply a realistic necessity for survival of these clandestine organizations and not believed to be indicative of any pathology. Likewise, any politically violent group, whatever its ideology, demonizes its opponent. This is the nature of these organizations and does not imply paranoia. Indeed, the leadership of the global Salafi jihad has been remarkably free of internal purges and vicious infighting so common with more traditional terrorist organizations. This promotion of cooperation among different local terrorist groups is not consistent with the paranoid style of leadership postulated in this second variant of the pathological personality thesis.

A third variant is a revival of the authoritarian personality project of the 1950s (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950). This thesis postulates that punitive child rearing results in a personality style characterized by conformity, submission to authority, and aggression toward outsiders. In the biographies of the terrorists in this chapter, harsh child rearing is present in only a handful of cases. For the vast majority, it seems the opposite is true. The terrorists as children were overprotected in very caring families, often with doting parents.

The main problem with the personality pathology explanation of terrorism is the lack of relevant data to support it. Furthermore, this thesis suffers from the fundamental problem of specificity. Concepts are stretched to be all-inclusive and thus lose their analytic usefulness. Such accounts become post hoc theories that have no practical value. Conspiracy theories are a ubiquitous feature of human life, not particularly indicative of mental pathology and definitely not specific to terrorists. Experts have tried in vain for three decades to identify a common predisposition for terrorism. The most extensive research focused on former German and Italian terrorists from the 1970s. The studies concluded that there was no psychological profile for terrorism (see also Chapter 12, this volume). In addition, recent comprehensive reviews of the evidentiary basis of this thesis have found it to be completely unfounded (Horgan, 2003; Silke, 1998). The personality pathology thesis is not relevant to the global Salafi jihad.

## SITUATIONAL VARIABLES

The above findings refute the conventional wisdom about terrorists. The global Salafi terrorists were generally middle-class, educated young men from caring and religious families, who grew up with strong positive values of religion, spirituality, and concern for their communities. They were truly global citizens, conversant in three or four languages, and skilled in com-

puter technology. One of the striking findings of this sample is that roughly three-fourths of the terrorists joined the jihad as expatriates, mostly as upwardly mobile young men studying abroad. At the time, they were separated from their original environments. An additional 10% were second generation in the West, who felt a strong pull for the country of their parents. Hence a remarkable 84% were literally cut off from their culture and social origins. They were homesick, lonely, and alienated. Although they were intellectually gifted, they were marginalized, underemployed, and generally excluded from the highest status in the new societies. Although they were not religious, they drifted to mosques for companionship. There, they met friends or relatives and moved in together, often for dietary reasons (i.e., for halal: meat from animals that have been slaughtered in the ritual way prescribed by Islamic law). As their friendship intensified, they became a close-knit group, resenting society at large (which excluded them), developing a common religious collective identity, and egging each other on into greater extremism. By the time they joined the jihad, there was a dramatic shift in devotion to their faith. About two-thirds of those who joined the jihad did so collectively with their friends or had a long-time childhood friend already in the jihad. Another fifth had close relatives already in the jihad. These friendship or kinship bonds predated any ideological commitment. Once inside the social movement, they cemented their mutual bonds by marrying sisters and daughters of other terrorists. There was no evidence of “brainwashing”; rather the future terrorists simply acquired the beliefs of their friends.

Joining this violent social movement is a bottom-up activity. Al Qaeda has no top-down, formal recruitment program. There is no central committee for recruitment or any general campaign of recruitment, as there are plenty of volunteers. In fact, Al Qaeda’s problem is never recruitment but selection. It is akin to applying to a very selective college: Many apply, but few are accepted. Likewise, Al Qaeda is able to assess and evaluate potential candidates who show a desire to join by going to Afghanistan for training. It has invited only 15–25% of that group to join the jihad.

The process just described is grounded in social relations and dynamics. To look at it through individual lenses, as a Robinson Crusoe on a deserted island narrative, is to miss its fundamental social nature. And this is where women play a critical role. So far, the account of the global Salafi jihad seems to be a pure male story of heroic warriors fighting the evil West. Yet, women provide the invisible infrastructure of the jihad. As influential parts of the social environment, they often encourage their relatives and friends to join. Many Christian converts or secular Muslims have joined because of marriage to a committed wife. Indeed, invitation to join the Indonesian Jemaah Islamiyah depends on the background of the applicant’s spouse. And once in the jihad, single members often solidify their

participation by marrying the sisters of other members. This further separates the new recruit from the rest of society and increases his loyalty to the social movement.

## MOTIVATING TERRORIST OPERATIONS

So far, the evidence points to mobilization into this terrorist social movement as a social process based on preexisting friendship and kinship. But the most troubling aspect of this group of terrorists is their willingness to kill innocent civilians and themselves in the process. How does this process take place? This is where the role of religion comes into play.

Salafi ideology promotes new values, centered on personal commitment to Islam and the Islamic community. It preaches a new activist conception of Islam, where it is a personal duty incumbent on every Muslim to participate in the building of an Islamist society and state. New adherents usually welcome this new activist mandate despite considerable personal cost. It replaces the malaise of their passivity in the face of their marginality in society with a new sense of purpose and efficacy born from action. It also rewards them with feelings of solidarity with small cliques of like-minded militants, transcending their alienation from society and its values.

This transformation starts innocuously with the lifelong struggle to become a good Muslim. In Salafi doctrine, it implies an emulation of the mythical Salaf, which means a process of self-purification or struggle within oneself for the sake of God (i.e., greater jihad). His behavior must set a personal and vivid example to promote Islam as a worldview and a way of life. Novices must battle their own desires and temptation and reject material and sensual pleasures in their quest. Self-denial is difficult, for life is full of temptations. This may explain the hostility at tempting and suggestive sexual images, making such self-control more difficult.

Although this personal jihad is presented as an individual struggle against temptation, in reality it is a social one. Faith and commitment are grounded and sustained in intense small-group dynamics as friends and peers provide support and strength to help cope with any potential hardship. These born-again believers welcome struggles in this life as a test of their faith. Over time, “authentic” Islamic spirituality and religious growth replace dominant “Western” values of career advancement and material wealth, which had contributed to their original feelings of exclusion, frustration, unfairness, and injustice. The jihadists embrace Qutb’s (n.d.) diagnosis that society faces a “crisis of values,” for its main problems are not material but spiritual. The progressive detachment from the pursuit of material needs allows them to transcend their frustrated realistic aspirations and promotes satisfaction with spiritual goals. These goals, more con-

sistent with their limited resources and opportunities, relieve the malaise arising from their exclusion and marginalized status. Their sacrifices and participation in this Islamist vanguard provide them with a sense of moral superiority, optimism, and faith in a collective future. Their activism and firm belief in the righteousness of their mission generate a sense of efficacy that enables them to overcome the apathy and fear that would otherwise inhibit high-risk terrorist operations.

Over time, there is a general shift in values: from the secular to the religious; from the material to the spiritual; from short-term opportunity to long-term vision; from individual concerns to communitarian sacrifice; from apathy to active engagement; from traditional morality to specific group morality; and from worldly gains to otherworldly rewards. This transformation is possible only within intense, small-group, face-to-face interactions. The values and fellowship of these groups not only forge intense bonds of loyalty and a collective identity but also give a glimpse of what a righteous Islamist society could be like. The small size of these cliques and the mutual dedication of their members allow them to spontaneously resolve their problems among themselves. The quality of these small and dense networks promotes in-group love, transforming self-interest into self-sacrifice for the cause and comrades. The militants' experience in these groups deludes them into believing that social problems would also be spontaneously resolved in a righteous Islamist society, accounting for their curious lack of concern about what this ideal society would actually look like or how it might function politically or economically.

So far, this description of the transformation from a newly mobilized recruit into a motivated militant has stressed the positive and idealistic dimension of the process, much as militants report or subjectively experience it. However, there is a darker and more negative part of this process that insiders rarely talk about but outsiders clearly pick up, namely, the out-group hate displayed by these groups. Such hate is loud and clear in private speech captured in the wiretaps of the Hamburg, Montreal, and Milan Al Qaeda cells recorded in the late 1990s and is all too visible on websites sympathetic to Al Qaeda. A top-down focus on the refined abstractions of the Quran and Hadith or Al Qaeda official proclamations cannot explain the unleashed hatred and passion. Only a bottom-up examination of the concrete interactions of the militants and their circumstances can account for it. It is grounded in their everyday experience of humiliating exclusion from society at large and promoted within the group by a vicious process of one-upmanship in mutual complaints about the alienating society. This phenomenon escalates resentment into a hatred and rejection of the ambient society itself. They express their hatred by cursing its symbols and legitimizing myths and by endorsing a conspiracy theory of

Jews who are corrupting a now totally degenerate and unredeemable society. The wiretaps give a hint of this visceral hatred, which seeks to destroy society even at the cost of their own lives. This virulent rejection of society finds a home in the doctrine of *takfir*, or excommunication of society, which is popular in militant circles and sanctions the commission of crimes against infidels in the pursuit of the jihad.

This trajectory from low-risk participation with an increasingly closer set of friends, to medium-risk proselytism for an ideal way of life, and to high-risk terrorist activities is progressive and insidious. It embraces an ideology that frames activism as a moral obligation, demanding self-sacrifice and unflinching commitment to the jihad. This particular interpretation of Islam stands apart and challenges the validity of mainstream Islamic faith and practices and isolates the new adherents to this doctrine. Their self-sacrifice is again grounded in in-group dynamics. The terrorists are ready to show their devotion to their now exclusive friends, their group, and their cause by seeking death. In-group love combined with out-group hate is a strong incentive for committing mass murder and suicide.

## CONCLUSION

The terrorism of the global Salafi jihad is grounded in group dynamics rather than individual pathology. It is difficult for participants in this violent social movement to abandon it without betraying their closest friends and family. This natural and intense loyalty to the group inspires the participants' faith and transforms alienated young Muslims into fanatical terrorists.

## REFERENCES

Adorno, T. W., Frenkel-Brunswik, E., Levinson, D., & Sanford, N. (1950). *The authoritarian personality*. New York: Harper & Brothers.

Akhtar, S. (1999). The psychodynamic dimension of terrorism. *Psychiatric Annals*, 29(6), 350-355.

Bin Laden, O. (1996). *Declaration of war against the Americans occupying the land of the two holy places*. Published in al-Quds al-Arabi (London) on August 23. Available at [www.pbs.org/newshour/terrism/international/fatwa\\_1996.html](http://www.pbs.org/newshour/terrism/international/fatwa_1996.html).

Bin Laden, O. (1998, February 23). *Jihad against Jews and Crusaders*. Available at [www.fas.org/irp/world/para/docs/980223-fatwa.htm](http://www.fas.org/irp/world/para/docs/980223-fatwa.htm).

Faraj, M. (1986). Al-Faridah al Ghaibah. In J. Jansen, *The neglected duty: The creed of Sadat's assassins and Islamic resurgence in the Middle East*. (pp. 159-234). New York: Macmillan.

Gilmartin, K. (1996, September). The lethal triad: Understanding the nature of isolated extremist groups. *FBI Law Enforcement Bulletin*, pp. 1–5.

Horgan, J. (2003). The search for the terrorist personality. In A. Silke (Ed.), *Terrorists, victims and society: Psychological perspectives on terrorism and its consequences* (pp. 3–27). Chichester, UK: Wiley.

National Commission on Terrorist Attacks upon the United States. (2004). *The 9/11 commission report*. New York: Norton.

Pearlstein, R. (1991). *The mind of the political terrorist*. Wilmington, DE: Scholarly Resources.

Post, J. (1984). Notes on a psychodynamic theory of terrorist behavior. *Terrorism: An International Journal*, 7(3), 241–256.

Post, J. (1986a). Hostility, conformity, fraternity: The group dynamics of terrorist behavior. *International Journal of Group Psychotherapy*, 36(2), 211–224.

Post, J. (1986b). Narcissism and the charismatic leader–follower relationship. *Political Psychology*, 7(4), 675–688.

Post, J. (1990/1998). Terrorist psycho-logic: Terrorist behavior as a product of psychological forces. In W. Reich (Ed.), *Origins of terrorism: Psychologies, ideologies, theologies, states of mind* (pp. 25–40). Washington, DC: Woodrow Wilson Center Press.

Qutb, S. (n.d.). *Milestones*. Cedar Rapids, IA: Mother Mosque Foundation.

Robins, R., & Post, J. (1997). *Political paranoia: The psychopolitics of hatred*. New Haven, CT: Yale University Press.

Sageman, M. (2004). *Understanding terror networks*. Philadelphia: University of Pennsylvania Press.

Silke, A. (1998). Cheshire-cat logic: The recurring theme of terrorist abnormality in psychological research. *Psychology, Crime and Law*, 4, 51–69.

Silke, A. (Ed.). (2003). *Terrorists, victims and society: Psychological perspectives on terrorism and its consequences*. Chichester, UK: Wiley.

Volkan, V. (1994). *The need to have enemies and allies: From clinical practice to international relationships*. Northvale, NJ: Jason Aronson.

Volkan, V. (1997). *Blood lines: From ethnic pride to ethnic terrorism*. Boulder, CO: Westview.

## CHAPTER 14



# The Psychological Effects of Weapons of Mass Destruction

MARK S. OORDT

The threat of weapons of mass destruction (WMD) on the battlefield adds a unique dimension to the psychological effects of combat. In addition to their physiological effects, chemical, biological, and nuclear weapons are designed specifically for their psychological effects. History reveals the effectiveness of WMD in this regard. Reports dating back to World War I indicate that chemical casualties (e.g., mustard gas) were related to psychological symptoms more than twice as often as to physical injury (Joy, 1997). Can we predict similar high rates of “stress” casualties from the future use of chemical, biological, and nuclear weapons, or even the threat of such weapons? Or could the psychological casualty rates be even higher, given technological advances in weapons and threats of terrorism beyond the battlefield? How do we best address these threats to contain the psychological impact? These are questions that military psychologists must address in the face of today’s WMD threat. Additional questions arise from the more recent threat of terrorists’ use of chemical agents, biological organisms, or radiological “dirty bombs” against civilian populations. How will they respond to a chemical or biological attack? What should emergency response and healthcare providers expect as psychological reactions and stress symptoms? What preparatory steps can be taken in advance of an attack to prevent panic and minimize stress symptoms?

This chapter reviews the literature on the psychological aspects of WMD, including the impact they can have directly on military performance, as well as the potentially degraded performance that comes through the use of protective equipment. The chapter concludes with a discussion of the role mental health personnel can have in minimizing the negative impact of these factors.

## HISTORY OF WMD

Smart (1997) has compiled a comprehensive history of chemical and biological weapons development and use, as well as defenses against such attacks. Chemical warfare has been traced back as early as 1000 B.C., when the Chinese used arsenic smoke to gain a military advantage. Chemical agents were used or proposed in numerous conflicts throughout history, including proposals to use chemical agents in the American Civil War.

Biological agents were known to be used as early as 190 B.C., when venomous snakes were projected by Hannibal's army onto enemy ships. Other early examples include the projection of plague-infected bodies and leprosy-infected wine onto the enemy.

The 20th century led to increases in the expansion of chemical and biological weapons programs among the world's military powers. World War I saw the use of chemical agents on both sides. Approximately 1 million of the 26 million casualties were from gas; there were no casualties or deaths attributed to biological warfare. World War II marked the first use of nuclear weapons, and though there was no major use of chemical or biological agents, there were reports of chemical and biological incidents. Germany produced approximately 78,000 tons of chemical warfare agents between 1942 and 1945, and Japan produced about 8,000 tons of chemical agents during the war. Approximately 146,000 tons of chemical agents were also produced by the United States between 1940 and 1945. Biological agents were developed on a smaller scale, although Germany worked with antipersonnel organisms such as plague, cholera, typhus, and yellow fever, and the United States initiated the U.S. Biological Weapons Program to establish retaliatory ability in the event of a Japanese biological attack. Chemical and biological warfare continued to be discussed and developed during the Korean War and the Vietnam War, although their use was not initiated. Since the 1960s, chemical agents have been used in the Yemen Civil War, the Soviet-Afghanistan War, the Iran-Iraq War, internally in Iraq against the Kurdish population, and in the Libyan invasion of Chad. During the Persian Gulf War, Iraq had an active chemical and biological weapons program and announced intentions to use chemical weapons against the United States, although this did not occur.

The threat of chemical and biological, as well as radiological, weapons continues to be an issue in the global war on terrorism today, and there is no reason to predict a change. Understanding the psychological impact of these weapons and taking steps to minimize the potential degradation of performance from their threatened use and from protective equipment is an essential aspect of military planning.

## AGENTS USED IN WMD

A detailed review of physiological effects of the various WMD on humans is outside the scope of this chapter. Interested readers can find this information in the World Health Organization's (WHO, 2004) guidance on the public health response to biological and chemical weapons. A brief review of the various types of agents that have been weaponized and their physiological effect may be helpful, however, in order to understand their psychological impact.

### Chemical Agents

During World Wars I and II, almost every known noxious chemical was evaluated for possible use as a weapon. According to WHO (2004), approximately 60 chemicals have been stockpiled or used as military weapons, although only about 12 have been found to be effective. Chemical agents used as weapons can be classified into two types: *lethal chemicals*, which are used to kill enemy forces, and *disabling chemicals*, which are intended to incapacitate, demoralize, and frighten the enemy. Chemical agents are also classified according to the effect each has on the body. The four primary types of lethal chemicals used or stored as weapons are (1) blood agents, (2) nerve agents, (3) vesicants or blistering agents, and (4) lung irritants or choking agents.

Blood agents are absorbed through the skin or through inhalation into the blood, causing interference with the exchange of gasses in the blood (oxygen or CO<sub>2</sub>). The most common blood agent is hydrogen cyanide. Individuals affected by high concentrations of cyanide can die within 2–3 minutes of exposure.

Nerve agents affect the ability of nerves to send impulses through the body. These agents are generally transmitted through inhalation and/or skin penetration. Examples of nerve agents include sarin, Soman, cyclosarin, tabin, and VX. Death is generally caused from respiratory and circulatory system failures.

As the name suggests, blistering agents (or vesicants) cause blistering of the skin, as well as of internal airway tissues when inhaled. Contact with

the eyes can cause temporary blindness. Examples of blistering agents include sulfur mustard and lewisite. Only a few drops of mustard gas on bare skin can be incapacitating. Use of mustard gas in World War I and the Iran–Iraq War, however, resulted in death for only 2–3% of those exposed.

Inhalation is the main route for lung irritants or choking agents. Primary symptoms of exposure include irritation of the eyes, nose, throat, and lungs. Examples of such agents include phosgene, chloropicrin, and perfluoroisobutene. Phosgene was used extensively during World War I and was responsible for the large majority of deaths from chemical agents (Centers for Disease Control and Prevention, 2004). Chloropicrin is a pesticide that was also used in World War I as a chemical agent. Perfluoroisobutene is a gas produced by overheating polytetrafluoroethylene (Teflon) and is approximately 10 times as toxic as phosgene. Inhalation of this gas can cause pulmonary edema, which can lead to death (Patocka & Baigar, 1998).

### Biological Agents

Biological weapons rely on the dispersion of organic agents to spread disease. The most widely considered method for dispersal is as an aerosol that can be inhaled. Other dispersal methods exist, however, such as using infected insects as vectors (e.g., mosquitoes). The effectiveness of the weapon depends on the organisms' ability to survive independently of a host organism. Examples of biological agents that have been used as weapons include bacteria (e.g., anthrax), fungi (e.g., coccidioidomycosis), viruses (e.g., ebola), and protozoa (e.g., toxoplasmosis).

### Nuclear and Radiological Weapons

Nuclear and radiological weapons are unique in that they disperse ionizing radiation in addition to the blast of the explosion and the thermal effects produced by conventional weapons (Mickley & Bogo, 1991). Nuclear weapons include large thermonuclear warheads and smaller tactical nuclear weapons used on the battlefield. Estimates suggest that as many as three-quarters of personnel targeted with a tactical nuclear weapon would be exposed to radiation in doses ranging from nonlethal to lethal (Young & Auton, 1984). Other radiological weapons include radiological dispersal devices (RDD), or “dirty bombs,” which combine a conventional explosive with radioactive material. An RDD is most likely to be used by terrorists, and the intent of its use is generally “mass disruption” rather than “mass destruction” (U.S. Nuclear Regulatory Commission, 2005). However, an RDD could contaminate up to several city blocks or significantly affect a large number of people if detonated in a public place such as a subway or

arena. Animal studies have demonstrated impacts from radiation exposure on learning, memory, cognitive tasks, motor tasks, and physiological functions (Mickley & Bogo, 1991).

## PSYCHOLOGICAL RESPONSES TO BIOLOGICAL, CHEMICAL, AND RADIOLOGICAL WEAPONS

In predicting the nature and extent of severe psychological responses after a biological or chemical attack, it is helpful to review the factors that contribute to combat stress reactions (CSR) in conventional combat. Noy (2001) points out that higher intensity of battle, surprise attacks, defeat, and static interlock in battle all increase the risk of CSR. Furthermore, members of units with limited combat experience, poor unit cohesion, tired or deficient leadership, and no preparation for managing the stress of combat tend to experience more CSR. Conversely, CSR casualties are minimized when battles are slow or moderate, when there is movement (even retreat), when there is a perception that the battle is being won, and when there is advance warning of combat. Units also cope better when they have prior battle experiences, adequate unit cohesion, effective leadership, and preparation through a CSR prevention program. Noy suggests that these findings may be applicable to future wars or terrorist activities involving WMD. For example, enhancing intelligence to increase the likelihood of advance warning of a WMD attack can reduce the surprise factor, thus potentially minimizing stress reactions among both military personnel and the civilian population. Prevention programs and drills will increase the sophistication of both commanders and the populace. Furthermore, such programs can familiarize the public with plans and procedures that will be activated in the event of a chemical, biological, or nuclear/radiological attack. Familiarity can enhance the implementation of the plans since instructions that are familiar and have been learned are more likely to be followed in the event of an attack.

Caution must be used, however, in generalizing findings from conventional warfare to situations involving WMD since biological, chemical, and nuclear weapons are unique in several ways. First, the threat of these weapons is unfamiliar and uncontrollable. Although biological, chemical and nuclear weapons have been used in combat (e.g., World Wars I and II and the Iran–Iraq War), conventional weapons have remained the norm, and the threat of WMDs conveys a unique sense of desperation. Second, chemical and biological agents and radiation are often invisible and odorless. Exposed personnel may not realize an attack has occurred until symptoms begin to occur. The absence of sensory cues can contribute to significant anxiety, which can lead to symptoms in people not actually exposed. Third,

chemical, biological, and nuclear weapons may pose prolonged danger because of the persistence or contagion of some of these agents, whereas with conventional weapons there is presumed relative safety when the explosions cease. Finally, symptoms of exposure to many weaponized chemical or biological agents may be vague and similar to symptoms of many other conditions, such as general aches, breathing problems, rapid heart rate, gastrointestinal distress, sweating, and dizziness. It is likely that "causalities" presenting to medical facilities for care will include both those exposed and those who only believe they were exposed. It may be difficult for individuals and even healthcare professionals to distinguish between the physiological effects of a nerve agent and stress. Many hospitals (including military facilities) don't have behavioral health staff with the experience to make the differential diagnosis (Romano & King, 2001).

Norwood, Holloway, and Ursano (2001) discuss several ways in which the psychological effects of a biological attack may be unique from that of a chemical or traditional attack. First, they point to the tendency for magical and distorted thinking to develop about an invisible and odorless microbe or virus that may be contaminating the air. Such thinking will probably contribute to the fear and anxiety surrounding the idea of infection from this ill-defined organism. Health care facilities may be overwhelmed by uninfected individuals who attribute nonrelated symptoms to the attack. The 1995 sarin gas attack in Japan is an example: 12 people died from sarin exposure; however, over 5,500 people sought medical treatment (Okumura, Ninomiya, & Ohta, 2003). Second, Norwood et al. suggest that steps taken to respond to a biological attack may inadvertently contribute to maladaptive psychological reactions by the public and by public officials. For example, they suggest that the psychological process of overgeneralization may lead officials to conclude that quarantine is necessary to prevent infection when there is no scientific evidence that the infection is contagious. DiGiovanni (2001) cautions that careful consideration should be given to whether public education and voluntary travel restrictions may be sufficient to curb the spread of disease since mandatory quarantine is likely to lead to greater public distress and panic. Finally, Norwood et al. suggest that mass immunization may contribute to psychological reactions, which would be intensified if the mandated vaccination was considered "experimental." The authors point to the experience with anthrax vaccination in the U.S. military prior to and during the Iraq War as an example of the kind of resistance that may be encountered. Recent experience has also suggested that an insufficient quantity of vaccine against a deadly agent may also contribute to psychological disruption. This phenomenon was observed when concern was raised in the media over the supply of ciprofloxacin following the 2001 anthrax mailings in Washington, DC, and somewhat with the insufficient U.S. flu vaccine supply in 2004-2005.

## THE IMPACT OF PROTECTIVE GEAR

As Romano and King (2001) have pointed out, many of the psychological effects of WMD in the military population are the result of wearing or using protective equipment. Mission-oriented protective posture (MOPP) gear is worn by military members for protection and includes a chemically resistant suit with hood, gas mask, gloves, and boots. Studies have demonstrated a decline in cognitive functioning and in military performance for personnel wearing MOPP gear (see Fullerton & Ursano, 1990). Given the importance of protective technology in responding to chemical or biological threats, it is alarming to consider that effective functioning is compromised for people wearing protective clothing and a gas mask. The problems are compounded with the extreme physical and emotional distress seen in some military personnel. Problems while wearing gas masks date back to their first use in the early 20th century. In World War I, during which gas was used extensively, significant casualties were attributed to poor gas mask discipline. Contemporary accounts indicate that masks were removed prematurely because of physical discomfort, shame, and "gas hysteria" (Ritchie, 1992a).

Fullerton and Ursano (1990) reviewed several studies of the psychological impact of wearing MOPP gear during military exercises and pointed out that 10–20% of military participants in chemical-biological warfare-training exercises experienced moderate to severe psychological symptomatology, and 4–20% displayed behavioral or psychological responses that disrupted performance or decreased safety. The most common symptoms were shortness of breath and rapid breathing. Carter and Cammermeyer (1985) reported that 69% of military medics reported such symptoms as anxiety, claustrophobia, and tremors during a 2-hour exercise, and 14% of these participants actually removed their protective clothing. Brooks, Xenakis, Ebner, and Balston (1983) found that 20% of participants displayed hyperventilation and tremors during a 1-hour exercise.

The syndrome of anxiety that leads to the removal of a gas mask or other protective gear may best be understood as an interaction of numerous factors, including physiological, emotional, cognitive, behavioral, and environmental (Oordt, 2001). The 20% reduction in airflow from the gas mask (Muza, Banderet, & Forte, 1996) can trigger an alarm reaction that activates the sympathetic nervous system. Perceptions of threat related to the decreased airflow and alarming interpretations of physical sensations may add to the distress. For example, thoughts such as "I can't breathe," "I'm going to pass out," or "I can't stand this" are likely to enhance anxiety reactions. Modeling by peers who are tolerating the protective gear either more or less well and opportunities for distraction from physiological symptoms may both play a role in whether or not a person removes the

gear. Also, a past experience of taking off the mask when uncomfortable may condition further removal.

Many individuals with significant anxiety problems related to protective equipment are likely to be self-selected out or dismissed during initial job training (e.g., basic military training). Nevertheless, the studies cited above indicate that people do continue to serve in the military services or other relevant professions while struggling with significant gas mask anxiety. Fortunately, special training in managing these symptoms can help to promote mission effectiveness and to retain personnel.

## THE ROLE OF CLINICAL PSYCHOLOGISTS IN MINIMIZING THE PSYCHOLOGICAL IMPACT OF WMD

Military psychologists and others in operational settings can significantly minimize the psychological impact of WMD through active consultation with leaders and direct intervention with affected personnel. Most notably, psychological principles can be applied by leaders to reduce the impact of protective gear on operational readiness.

### Consulting with Commanders

Military commanders should understand that discomfort and mild anxiety while wearing a gas mask is common, and efforts should be made by leaders and training planners to prevent severe problems from developing (Ritchie, 1992a). Stress inoculation techniques can be implemented in routine training by educating personnel about the normal physical and emotional "symptoms" to expect when wearing a gas mask and chemical protection suit. Frequent use of the gas mask is also essential for habituating personnel to the experience of functioning while wearing the protective gear. Stokes and Banderet (1997) suggest that military members wear gas masks daily for 1 hour while performing their duties and during structured recreational activities (e.g., cards and volleyball). The military services commonly include exposure to nonlethal gas (e.g., tear gas) as part of training. Military members are typically required to enter a gas-filled chamber with a gas mask on, engage in various physical activities while wearing the mask (e.g., push-ups and jumping jacks), and then remove the mask to build confidence in it as a protective device. These approaches can help reduce the normal, mild anxiety experienced by most people when wearing a gas mask, as well as help identify personnel with more severe symptoms who may need more specialized training or intervention. Psychologists may have to serve as consultants to commanders to encourage them to apply these approaches since some leaders may not be familiar with the importance of taking steps to prevent problems with the use of protective gear.

## Intervening in Severe Gas Mask Anxiety

When severe gas mask anxiety is evident, education and training may not be sufficient. Focused training by a clinical specialist (e.g., a behavioral psychologist) may be required for individuals whose anxiety is severe enough to interfere with satisfactory job performance, who pose a safety risk to others, or who cannot tolerate wearing the mask for as long as needed. Standard systematic desensitization procedures (Wolpe, 1990), which have been well established with other anxiety problems, can also be successfully applied here (Oordt, 2001; Ritchie, 1992b).

The intervention protocol described by Oordt (2001) is based on well-established procedures for anxiety-related problems (Barlow, 1988; Wolpe, 1990) and is designed to teach individuals to manage uncomfortable symptoms enough to perform military operations.

The intervention can typically be applied in 4 to 10 sessions and involves specialized training in self-regulation, conducted in four phases. Phase I focuses on education. Information should be provided about the human fear response, emphasizing that it is a normal and adaptive response to the perception of inadequate airflow. Anxiety symptoms can be reframed as a sign that the body's "alert system" is fully functioning. The symptoms can be viewed as a "normal" reaction, occurring at an inopportune time. Participants should also be informed that they can learn to control these symptoms through simple relaxation techniques.

Phase II involves relaxation training. Teaching both a deep relaxation exercise, such as progressive muscle relaxation (PMR), and a briefer form of relaxation, such as diaphragmatic breathing, will provide a range of tools for managing symptoms and for progressing in later phases of the treatment (relaxation instructions can be found in Blanchard & Andrasik, 1985; Everly, 1989; and McGuigan, 1993). Diaphragmatic breathing is a brief relaxation exercise for use in exposure trials and in field exercises with the gas mask. Care should be taken to ensure that the individual is able to relax before moving to the next phase of training.

Phase III involves systematic exposure to progressively more feared stimuli, using standard systematic desensitization techniques (see Wolpe, 1990). A hierarchy must be established, in collaboration with the participant, of stimuli that provoke varied levels of anxiety, from mild to severe. A 100-point Subjective Units of Distress Scale (SUDS) is used to rate items by asking, "On a 1 to 100 point scale, how much distress do you think you would feel when exposed to this item." In accordance with the recommendations of Wolpe (1990), items that are approximately 10 SUDS units apart should be selected. With gas mask anxiety, stimulus items will generally involve progressively more restricted breathing (e.g., progressively narrow breathing tubes such as a snorkel, soda straw, and gas mask) or a progressively restricted visual field (costume mask, dive mask, and gas mask).

These items can also be endured for progressively longer times and with differing ease of removal (e.g., holding the mask on with one's hands versus using the straps).

The participant is then systematically exposed to the items on the hierarchy, starting with the least-feared item. Exposure to the item will be repeated until the SUDS rating is sufficiently low to not trouble the individual (usually less than 10). If the SUDS rating does not diminish with exposure, the stimuli should be considered too anxiety provoking and a lesser item should be found. The individual will then be exposed to the next item on the hierarchy, which if properly constructed will be at a lower SUDS rating than it was initially. This procedure continues through all the items on the hierarchy so that the individual is able to wear the gas mask fully strapped on for an extended period of time in the room where the training occurs.

When the participant is able to tolerate wearing the gas mask without significant anxiety, it is important to generalize the progress made to environments outside the training office. This component of training constitutes Phase IV. The individual is instructed to wear the gas mask on a daily basis for 30 minutes during sedentary activity (e.g., watching television). When this is achieved with minimal anxiety, the level of activity can be systematically increased (e.g., doing housework or walking up stairs) until the individual is able to do moderate aerobic activity while wearing the mask.



Treatment for gas mask phobia.

If the individual is unable to generalize in this manner, coaching from the trainer and practice in reassuring self-talk may be necessary. The final test of success will come only when the participant has an opportunity to wear the gas mask in a training exercise or actual deployment. Regular exposure to maintain confidence may be necessary.

A similar approach can be applied to other protective gear, including the MOPP ensemble. Graduated exposure may involve gradually adding parts of the ensemble, increasing the duration of wear, and/or manipulating environmental conditions (e.g., heating up the room). Such approaches can also be applied in a group setting. Group training increases efficiency and also may be necessary if protective gear is distributed to civilians who have not had previous experience with the equipment.

Obstacles that may have to be addressed include hesitancy to admit anxiety reactions, fear of negative impact on one's career, and stigma in receiving mental health services. Psychologists can address these concerns by normalizing anxiety symptoms, ensuring that leaders and their personnel are aware of the effectiveness of behavioral interventions; advising leaders to "advertise" that assistance is available and that help seeking is encouraged; and taking services into the workplace and reframing them as "specialized training" (as opposed to therapy).

Another significant obstacle is the intensity and duration of the intervention. A brief course of behavior therapy may not be brief enough once an imminent threat of chemical attack is present. For example, it would be impossible to provide this level of intervention to the general population in the event that gas masks were needed for the civilian population, as with Israel in 1991 (Golan, Arad, Atsmon, Shemer, & Nehama, 1992). Family members of the military or diplomatic personnel might also be vulnerable groups. More rapid interventions might include connecting an active air-supply system to the gas mask for certain medically at-risk individuals (Golan et al., 1992), using flooding procedures (i.e., wearing the gas mask until anxiety subsides), or holding mass relaxation training sessions for self-regulation in auditoriums or on television. It is still likely that the more severe and/or refractory cases will require individualized interventions as described above.

## THE ROLE OF PSYCHOLOGISTS IN MANAGING COMMUNITY REACTIONS TO A WMD ATTACK

With the increased risk of chemical and biological weapons being used by terrorists on civilian populations, it is essential that attention be given to the likely psychological reactions of the general population in the event of an attack. In this arena, too, psychologists can play an active role by con-

sulting with community leaders in preparing for and responding to a WMD attack.

### Key Issues in Preparing for a WMD Attack

In advance of an attack, community leaders must consider and prepare for (1) effectively communicating with the public, (2) maintaining sources of emotional and practical support, and (3) dealing with fear and helplessness resulting from actions taken by leaders in response to the crisis. Decision makers must anticipate the effects of their actions on the public.

DiGiovanni (2001) discusses key issues in the management of public reactions, including several suggestions to “consequence managers” preparing for and responding to a WMD event:

- Creating training scenarios that involve role players with emotional distress, psychiatric symptoms, and behavioral disturbances.
- Avoiding use of quarantine, when possible, and instead using public education about exposure to biological agents and requesting voluntary curtailment of travel.
- Ensuring that all officials are aware of the basic principles of risk communication when working with the media, including the importance of expressing empathy to the public and providing accurate and honest information.
- Developing a public education campaign on preparation for a chemical or biological attack.
- Educating and training of first responders (i.e., fire, police, and emergency medical service).
- Establishing a command and control center to coordinate services and use of personnel.
- Ensuring the security of communication systems.
- Planning for processing of the dead that is attentive to family wishes and customs.
- Maintaining medical records during a crisis.
- Educating medical staff on the effects of chemical and biological agents and appropriate treatment.
- Training professionals to provide debriefings (see Chapter 16, this volume, for more details) to rescue personnel.
- Ensuring adequate resources to maintain military medical readiness.

### Key Issues for Early Intervention after a WMD Attack

In addition to preparing the community and the disaster response system for a chemical or biological attack, community leaders should ensure that

proper personnel are trained and available for providing early psychological intervention to survivors. In 2001, the National Institute of Mental Health (NIMH) convened a group of experts to reach consensus on the best practices for responding to the psychological needs of victims of mass violence. Their report (NIMH, 2002) indicates that expectations of normal recovery for survivors is a sensible working principle during the early phases. Furthermore, it is not appropriate to presume the presence of clinically significant disorder in the early postincident phase unless a preexisting condition was present. The participating experts also suggest that the term "debriefing" be reserved only for operational debriefings and that survivors' participation in early intervention sessions should be voluntary. The review of the research suggests that early, brief, and focused psychotherapeutic intervention can reduce distress in survivors who have lost family members and that cognitive-behavioral approaches may be helpful in the treatment of acute stress disorder, posttraumatic stress disorder, and depression. The experts also note that there is no evidence that early interventions consisting of one-on-one reprocessing of the traumatic experience is effective and therefore should not be considered the treatment of choice (see Chapter 16, this volume, for a thorough description of disaster response).

## CONCLUSION

History and empirical research both highlight the importance of attending to psychological factors in preparing for and responding to the threat of WMD. Psychologists can play a key role in helping military and community decision makers address these factors to maximize military readiness and control community responses in the event of an attack. Decision makers are often not aware of the valuable contribution psychology can play, however; clinicians and researchers alike must diligently market their skills and services as consultants to military and civilian leaders to ensure that psychological factors are adequately accounted for when planning for responses to WMD.

## REFERENCES

Barlow, D. H. (1988). *Anxiety and its disorders: The nature and treatment of anxiety and panic*. New York: Guilford Press.

Blanchard, E. B., & Andrasik, F. (1985). *Management of chronic headaches: A psychological approach*. New York: Pergamon.

Brooks, F. R., Xenakis, S. N., Ebner, D. G., & Balston, P. M. (1983). Psychological reactions during chemical warfare training. *Military Medicine*, 147, 232-235.

Carter, B. J., & Cammermeyer, M. (1985). Biopsychological responses of medical unit personnel wearing chemical defense ensemble in a simulated chemical warfare environment. *Military Medicine*, 150, 239-249.

Centers for Disease Control and Prevention (CDC). (2004). *Facts about phosgene*. Retrieved October 1, 2004, from [www.bt.cdc.gov/agent/phosgene/basics/facts.asp](http://www.bt.cdc.gov/agent/phosgene/basics/facts.asp).

DiGiovanni, C. (2001). Pertinent psychological issues in the immediate management of a weapons of mass destruction event. *Military Medicine*, 166, 59-60.

Everly, G. S. (1989). *A clinical guide to the treatment of the human stress response*. New York: Plenum.

Fullerton, C. S., & Ursano, R. J. (1990). Behavioral and psychological responses to chemical and biological warfare. *Military Medicine*, 155, 54-58.

Golan, E., Arad, M., Atsmon, J., Shemer, J., & Nehama, H. (1992). Medical limitations of gas masks for civilian populations: The 1991 experience. *Military Medicine*, 157, 444-446.

Joy, R. J. T. (1997). Historical aspects of medical defense against chemical warfare. In F. R. Sidell, E. T. Takafuji, & D. R. Franz (Eds.), *Textbook of military medicine: Medical aspects of chemical and biological warfare* (pp. 87-110). Washington, DC: Office of the Surgeon General, Department of the Army.

McGuigan, F. J. (1993). Progressive relaxation: Origins, principles, and clinical applications. In P. M. Lehrer & R. L. Woolfolk (Eds.), *Principles and practice of stress management* (2nd ed., pp. 17-52). New York: Guilford Press.

Mickley, G. A., & Bogo, V. (1991). Radiological factors and their effects on military performance. In R. Gal & A. D. Mangelsdorff (Eds.), *Handbook of military psychology*. Chichester, UK: Wiley.

Muza, S. R., Banderet, L. E., & Forte, V. A. (1996). Effects of chemical defense clothing and individual equipment on ventilatory function and subjective reactions. *Aviation, Space and Environmental Medicine*, 67, 1190-1197.

National Institute of Mental Health (NIMH). (2002). *Mental health and mass violence: Evidence-based early psychological intervention for victims/survivors of mass violence. A workshop to reach consensus on best practices* (NIH Publication No. 02-5138). Washington, DC: U.S. Government Printing Office.

Norwood, A. E., Holloway, H. C., & Ursano, R. J. (2001). Psychological effects of biological warfare. *Military Medicine*, 166, 27-28.

Noy, S. (2001). Prevalence of psychological, somatic, and conduct casualties in war. *Military Medicine*, 166, 31-33.

Okumura, T., Ninomiya, N., & Ohta, M. (2003). The chemical disaster response system in Japan. *Prehospital and Disaster Medicine*, 18, 189-192.

Oordt, M. S. (2001). Managing severe gas mask anxiety with a cognitive-behavioral approach: An illustrative case study and treatment protocol. *Military Psychology*, 13, 165-176.

Patocka, J., & Baigar, J. (1998). Toxicology of perfluoroisobutene. *ASA Newsletter* 98-5.

Ritchie, E. C. (1992a). Psychological problems associated with wearing mission oriented protective posture gear. In F. R. Sidell, E. T. Takafuji, & D. R. Franz (Eds.), *Textbook of military medicine: Part I. Warfare, weaponry, and the casualty: Medical aspects of chemical and biological warfare* (pp. 393-395).

Washington, DC: Office of the Surgeon General at TTM Publications, Borden Institute.

Ritchie, E. C. (1992b). Treatment of gas mask phobia. *Military Medicine*, 157, 104-106.

Romano, J. A., & King, J. M. (2001). Psychological casualties resulting from chemical and biological weapons. *Military Medicine*, 166, 21-22.

Smart, J. K. (1997). History of chemical and biological warfare: An American perspective. In F. R. Sidell, E. T. Takafuji, & D. R. Franz (Eds.), *Textbook of military medicine: Medical aspects of chemical and biological warfare*. Washington, DC: Office of the Surgeon General, Department of the Army.

Stokes, J. W., & Banderet, L. E. (1997). Psychological aspects of chemical defense and warfare. *Military Psychology*, 9, 395-415.

U.S. Nuclear Regulatory Agency. (2005). *Fact sheet on dirty bombs*. Retrieved July 4, 2005, from [www.nrc.gov/reading-rm/doc-collections/fact-sheets/dirty-bombs.html](http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/dirty-bombs.html).

Wolpe, J. (1990). *The practice of behavior therapy*. New York: Pergamon Press.

World Health Organization (WHO). (2004). *Public health response to biological and chemical weapons* (2nd ed.). Geneva: Author.

Young, R. W., & Auton, D. I. (1984). The Defense Nuclear Agency Intermediate Dose Program: An overview. In G. E. Lee & T. E. Ulrich (Eds.), *Proceedings of the 9th Psychology in the Department of Defense Symposium* (pp. 85-89) (USAFA TR 84-2). Colorado Springs, CO: U.S. Air Force Academy.

## CHAPTER 15



# Crisis and Hostage Negotiation

KIRK L. ROWE  
MICHAEL G. GELLES  
RUSSELL E. PALAREA

On September 5, 1972, at the Olympics in Munich, Germany, 13 members of the Palestinian terrorist organization Black September invaded the Olympic village and took 11 Israeli athletes and coaches hostage. The terrorists demanded that they be flown to Egypt and that 200 Palestinian prisoners being held in Israeli jails be released. The terrorists stated that (1) if actions to meet their demands were not taken immediately, two athletes would be killed, and (2) if they were not given transportation to Egypt, all the athletes would be killed. In the end, when authorities demanded surrender at the airport, the result was the death of all 11 Israeli athletes, 1 police officer, and 10 attackers (McMains & Mullins, 1996).

Because of the concern about the loss of life in hostage situations and the close scrutiny of police practices that grew out of the 1960s and the Munich terrorist incident, the New York City Police Department evaluated the effectiveness of tactical confrontations in the 1970s (McMains & Mullins, 2001). At that time, Harvey Schlossberg (1979), a detective with a PhD in psychology, noted the lack of literature about negotiation techniques in law enforcement, and he and Lieutenant Frank Boltz from the New York City Police Department developed new tactics for crisis negotiation. They viewed crisis negotiation principles from the perspective that the incident was a crisis for the hostage taker; emphasized the importance of

containing and negotiating with the hostage taker, understanding his or her motivation and personality; and stressed the importance of slowing down an incident so time could work for the negotiator. Schlossberg noted four alternatives to an incident similar to the one in Munich: (1) assault, (2) selected sniper fire, (3) chemical agents, and (4) contain and negotiate. The first three options were originally the norm for police departments and included a high probability for violence, injury, and death. Although a primary goal was to limit loss of life, the first three options most often resulted in injury and death to the hostage, hostage taker, police officers, and sometimes all three. With the development of negotiation strategies, law enforcement now had another option, one that often led to a peaceful outcome. Minimizing and eliminating loss of life is a guiding principle for negotiations today (McMains & Mullins, 2001).

## PSYCHOLOGICAL APPLICATIONS TO CRISIS NEGOTIATIONS

Hostage negotiation is closely linked to the behavioral sciences, and more specifically, to psychology. Changes and developments in the field of psychology have inevitably influenced hostage negotiations. For decades, the negotiator has been confronted with many situations that require establishing a dialogue with an individual who may or may not have hostages but who has been found to be mentally ill. The need for understanding what "crazy" or "erratic behavior" might represent led the field of hostage negotiations to develop a relationship with psychology and psychiatry communities in order to better understand different types of aberrant behavior. As a result, negotiators became closely aligned with mental health professionals, who taught negotiators about mental illness and consulted with them on difficult or challenging cases. Thus, psychologists and psychiatrists became active members of negotiating teams and frequently became negotiators on the front line. Today, psychologists and psychiatrists with operational training and experience are active consultants to negotiators, but they no longer typically become primary negotiators.

The 1972 incident in Munich brought to light the need to develop responses other than tactical maneuvers. Hostage negotiation was born out of Munich to address traditional hostage-taking incidents; however, Gist and Perry (1985) found that negotiators were primarily called out for domestic, barricaded, and suicidal incidents. Ninety percent included domestic incidents, jilted lovers, and individuals with mood disorders, psychosis, or suicidal intent. McMains (1988) found that over a 5-year period in the 15 largest U.S. cities, fewer than 18% of negotiated incidents involved hostages. Fifty percent of the calls involved barricaded subjects

without hostages, and 17% involved high-risk suicide attempts in which others were at risk of injury. Hatcher, Mohandie, Turner, and Gelles (1998) noted a change in that negotiators worked more with emotionally disturbed individuals, trapped criminals, and domestic incidents and less with terrorists and prisoners.

This second generation of negotiations involves crisis intervention and active-listening skills in order to reach a peaceful resolution, and it transformed what was once hostage negotiation into a comprehensive field of crisis negotiation. Active listening (i.e., paraphrasing, reflecting feelings, reflecting meaning, and summing up reflections; Bolton, 1984) involves basic skills for effective psychologists, which are taught to negotiators. These techniques are used by negotiators to engage in effective communication in order to build trust and rapport, help the individual feel understood, and enable that person to resume more adaptive levels of coping, thus defusing the crisis state (Vecchi, Van Hasselt, & Romano, 2005).

In effective communication, the negotiators must focus beyond the spoken words and on the style, intensity, and context of the communication of the individual and then apply that effectively to themselves and their approach to the situation (Taylor, 2002; Taylor & Donald, 2004). Considerable emphasis has been placed on active listening in the training of negotiators to gain insight into a subject's motivation and intention (Van Hasselt, Baker, et al., 2005). For example, if a hostage taker in a barricade situation asks for a relative (e.g., a mother or spouse) to be brought to the scene, the negotiator must ask, "Why does he want this relative at the scene?" Many negotiators initially focus on a request as an opportunity to gain leverage or provide the hostage taker with something that will lead to some gain for the police. What negotiators are now learning is to consider the communication within the larger context: understanding the nature of the relationship with the relative and the relative's role in this crisis or recognizing that the relative may in fact increase the possibility of violence. In many cases, the relative's presence facilitates a witnessed suicide or, worse, a homicide-suicide.

In the case of suicidal individuals, negotiators may be drawn into a debate with a barricaded suspect over the benefits of suicide. It is common for negotiators, when focused solely on the content of the communication, to become increasingly frustrated. What negotiators are taught instead is to listen for the *idea* that the barricaded individual might be trying to engage the negotiator in his or her suicide. A failure to see that the subject is attempting to reenact with others his or her frustration from being misunderstood, for example, significantly raises the possibility of suicide.

Active-listening skills have been well articulated in the literature. However, the previous examples highlight the need to listen to the information provided by a subject and understand its relevance to the context in which

the crisis has arisen. What is currently motivating the subject at a particular time? How does this reflect other behaviors that suggest movement toward violence? The negotiator must adapt to the speaker, listen for ideas rather than facts, not be distracted by emotional statements, and respond to any situation that may arise (e.g., withdrawal, intoxication, suicide; McMains & Mullins, 1996).

In addition to active listening in managing a hostage crisis, Cialdini (1993) noted six psychological strategies for negotiators: reciprocity, commitment, social proof, liking, authority, and scarcity. The first principle, reciprocity, simply means that when people are provided with something from someone else (e.g., goods, favors, or compliments), they feel compelled to respond in kind (Webster, 2003). In negotiations, the crisis negotiator can provide a small concession and later ask for something larger in return. Reciprocity is so effective that people often give more than they receive; they may comply even though what they received was something they did not ask for and it came from someone they disliked. In a hostage situation, the simple act of listening places the subject in a position of reciprocity.

Two compliance techniques that fall under reciprocity are the “door in your face” effect and the “that’s not all” effect. These are basic social psychology concepts that are often used as sales techniques. When a person asks for a large favor and is refused (door in your face), compliance with a smaller favor is much more likely than if the person had initially asked only for the small favor (Webster, 2003). This technique is commonly seen in negotiations when the negotiators ask for the release of the hostages and then reduce their request to some or just one of the hostages. The “that’s not all” technique involves requesting something negotiators know the subject will reject. While the subject is contemplating the request, the negotiator reduces it, which then appears to be a concession and is likely to result in the acceptance of the second offer.

The second strategy is commitment. Once people commit themselves, their desire to remain consistent is strong and they may agree to something that may not be in their best interest (Webster, 2003). In negotiations, just talking to the negotiator implies a commitment. The longer individuals communicate with the negotiator, the more committed they become to a peaceful resolution.

The third principle, social proof, describes how individuals look to others to determine how they should think or behave in certain situations. This principle suggests that people behave within the context of the others around them. In crisis negotiations, the negotiators may explain to a barricaded subject how others have dealt with similar predicaments, hoping that the subject will follow this lead. The negotiators mirror the gestures and language style of the hostage taker, and when they sense that they are

matching the subject, they attempt to influence his or her thoughts, feelings, and behavior.

Liking, the fourth principle, applies to the aforementioned negotiation technique of active listening. In general, people tend to like others who are nonthreatening, who listen, understand, and are worthy of respect. If a person describes another in these terms, he or she is more likely to comply with that person, and the negotiator attempts to achieve this status with the hostage taker. Active listening goes far in achieving this goal and, combined with the impression that the negotiator is attempting to assist the hostage taker, significantly helps in peaceful resolutions by enhancing positive feelings of the hostage taker toward the negotiator.

The fifth principle, authority, is based on the notion that people with authority have significant influence. In crisis negotiations, the negotiator is the lifeline for the subject and is viewed as the authority figure. Whatever the subject wants or needs will come through the negotiator. Authority figures are also often seen as trustworthy and credible experts, and people have been socialized to obey authority even when this may be contraindicated. The crisis negotiator leverages all of these attributes in an effort to gain compliance and eventually a peaceful surrender.

The sixth principle, scarcity, helps to determine something's value. In negotiating, the more the subject's independence is limited, the more attractive self-sufficiency and freedom become. When discussing concessions or providing the subject with something requested, it is most effective to grant reasonable requests slowly. Overall, these six compliance strategies help shift the focus of crisis negotiation from outcome to the negotiation process.

In addition to the negotiator-hostage taker relationship, the crisis response team also focuses on the relationship that develops between the hostage taker and the hostages. The most powerful depiction of this is shown by a phenomenon known as the Stockholm Syndrome, and its promotion is a vital strategy of negotiators during an incident.

In August 1973, two individuals attempted to rob a bank in Stockholm, Sweden. Police responded before their escape, and the robbers took four employees hostage for 5 days. Following a peaceful resolution, authorities were surprised when the former hostages showed great sympathy for their captors and animosity toward the police. The former hostages refused to testify at their trial and spoke on behalf of the hostage takers, and some tried to raise money to help pay for their defense (McMains & Mullins, 2001).

The Stockholm Syndrome consists of one or more of the following conditions (Ochberg, 1980): (1) Hostages begin to have positive feelings toward their captors, (2) the captors begin to have positive feelings for the hostages, and (3) the hostages begin to have negative feelings toward authorities. Strentz (1979) suggests that the development of the syndrome

depends on the interaction of the passage of time, whether the hostages are isolated, and whether contact between the hostages and hostage taker is positive or negative. If there is no emotional, physical, or sexual abuse, and the hostages are kept together, the syndrome usually develops, often within a few hours. Given its positive impact on the safety of the hostages, crisis negotiators are trained to encourage its development. This is achieved by trying to get the hostage taker to use the names of the subjects, by inquiring about any medical needs, and by not using the term "hostage." The crisis negotiator may also request that the hostage taker pass on personal messages to the subjects from their family members (McMains & Mullins, 1996).

A recent incident in Atlanta, Georgia, in March 2005 clearly illustrates the transference that develops between a hostage taker and a hostage. Brian Nichols held Ashley Smith hostage for approximately 7 hours in her own apartment. She was able to remain calm throughout the ordeal and early on began talking about herself, her daughter, and the death of her husband 4 years before. As they continued to talk, Nichols became calmer and untied Smith; she followed him in her car so he could get rid of his stolen vehicle. Mr. Nichols was surprised when she did not drive off. After returning to her apartment, she made him pancakes, and he let her go to see her daughter at church. Illustrating the bond they developed, he asked Smith as she was leaving if there was anything he could do, such as hang curtains, while she was gone. He was apprehended after she called 911 (Metz, 2005). In this case the hostage taker allied with the hostage, though there was no reciprocation by the hostage. Rather, she displayed an intelligent tactical strategy, using a basic tenet of the Stockholm Syndrome, in gaining the hostage taker's trust as a means to escape the situation and alert authorities.

Along with active-listening skills, transference, and compliance strategies, crisis negotiators are trained to help subjects use problem-solving techniques. Negotiators help the subjects to focus on solutions as opposed to problems, successes instead of failures, and the future rather than the past (Webster, 2003). For example, in cases in which hostage takers are depressed, it is critical for the psychologist to give the negotiator insight into the subjects' level of information processing, as well as their degree of helplessness and hopelessness. Frequently, depressed individuals have difficulty with attention and concentration. Therefore, speaking slowly and more concretely and offering simple solutions not only help subjects engaged in negotiations to problem-solve but also increase the probability that they will be able to reliably process what is communicated to them. In cases in which the negotiator communicates too abstractly, with little consideration for the complexity of the ideas or the speed in which information is communicated, the hostage takers can become confused and frustrated and misinterpret what is being said, leading them to action that could be lethal.

## THE DEPARTMENT OF DEFENSE CRISIS RESPONSE TEAMS

The process of crisis negotiation is dynamic and ever changing. Just as psychotherapy requires constant reassessment of goals and objectives to increase the likelihood of success, so, too, does crisis negotiation. Because of their ability to work in a high-stress setting and their understanding of the strategies of crisis negotiation, U.S. Department of Defense psychologists are recognized as vital members of the crisis negotiation team. Although there are no regulations mandating an operational psychologist on the crisis negotiation teams, the Air Force encourages psychologists with appropriate training and experience to participate in their crisis negotiations program. Currently psychological consultation for hostage negotiations in the Navy is handled by the operational civilian staff psychologists of the Naval Criminal Investigative Service. The Army currently consults with other organizations.

Despite the fact that the military generally does not require or provide crisis negotiation training, psychologists in the military would significantly benefit from it. In situations in which psychologists may be requested to consult with their military installation's crisis negotiations team (particularly in remote and embedded environments), it is important that they first receive training for it. This is a critical point, as it reflects the ethical principle of responsibility and standard of competency of the American Psychological Association (APA, 2002) and may result in significant adverse consequences if the consultation is performed incorrectly. Also, although the psychologist's role in hostage negotiations in the military is recent, there is a well-defined history of this role in law enforcement. Since the psychologist's role does not differ between military and law enforcement contexts, military psychologists are encouraged to study and adopt this law enforcement model. Many individuals are involved in the response to a negotiable incident. The optimum crisis response team consists of the on-scene commander, tactical and negotiation supervisors, negotiators, a psychological consultant, and a recorder.

## THE ROLE OF THE PSYCHOLOGIST IN CRISIS NEGOTIATIONS

As this field has developed, the importance of the role of a psychological consultant as part of the negotiation team has become increasingly clear. Research suggests an upward trend in the use of such consultants. Butler, Leitenberg, and Fuselier (1993) reported that 39% of 300 police departments surveyed used mental health consultants. McMains and Mullins

(2001) noted that departments using psychological consultants reported a higher incidence of negotiated surrenders and fewer incidents of death or injury to the hostages, hostage takers, or the tactical team.

A psychologist with appropriate training is well equipped to work as a consultant during crisis negotiation. The people with whom the law enforcement teams are negotiating for a peaceful resolution are those individuals for whom psychologists in many cases provide assessment and treatment. Psychologists not only have extensive knowledge about human behavior but, more important, are experts in addressing active suicidality, as well as the types of mental illness or altered mental states that may result in an individual becoming a barricaded subject or taking hostages.

### **Preincident Roles of the Operational Psychologist**

Psychologists play a major role prior to, during, and after any negotiation. They participate actively in the screening and selection of negotiators. In addition, they can provide training for negotiators on a wide range of topics—including active-listening skills, persuasion techniques, crisis intervention, assessment of personality types, threat assessment, and aggression potential—as well as by participating in training exercises (Fuselier, 1981b).

### **Intraincident Roles of the Operational Psychologist**

The psychologist has several functions as a consultant to a negotiation team during incidents (Fuselier, 1988). As an on-scene participant observer, the psychologist monitors negotiations, translating relative information and behavior of the hostage taker, with an emphasis on the assessment of potential violence. Also, the psychologist manages the stress level of the negotiator and liaisons with collateral sources and other professionals to support the ongoing assessment of the subject. The psychologist must help negotiators in not only assessment but also management of the different behaviors that are presented during a negotiation. The differing patterns of behavior and clinical syndromes presented in negotiation scenarios call for a variety of approaches in managing the hostage taker. Given the complexity of hostage situations, there is a high risk that events will agitate the subject. The psychologist assists the negotiator in moving beyond any misperceptions or problems and helps to prevent escalation of the incident.

Since all behavior occurs within a context, the psychologist is in a position to assess the critical interface between the mental state of the hostage taker and the situation that is unfolding. The key to initial assessment in a negotiation scenario is to evaluate the motivation for the hostage taker to engage in negotiation, and it is critical to understand the events that led to a

barricaded situation and interaction with law enforcement. An assessment of the context can more clearly evaluate the motivation of the hostage taker. For example, is the situation based on a terrorist group's attempt to promote a political or religious cause and gain publicity? Are the individuals going to use violence as the punctuation to their communication, as has been recently seen in Iraq? Is the situation the result of a botched robbery, with the hostage taker motivated to negotiate an escape? Is the subject suicidal and barricaded with or without hostages over a failed relationship and sense of helplessness? Is the individual delusional or hallucinating? Are hallucinations the result of drugs or mental illness?

Assessing the situation also includes evaluating whether the hostage taker has engaged in predatory or affective violence (Meloy, 1992). In cases of predatory violence, the hostage taker demonstrates minimal levels of arousal, does not demonstrate emotion, acts in a purposeful and planned manner, and demonstrates behavioral responses that are not time-limited. Generally these individuals demonstrate a level of heightened awareness, often the case in criminal escapes, botched robberies, or terrorist acts. When the hostage taker demonstrates indicators consistent with affective violence, the goal is threat reduction (Van Hasselt, Flood, et al., 2005). These individuals show an intense level of arousal and considerable emotion in the form of anger and fear; they are often reactive, and there is a heightened but diffuse level of awareness. This phenomenon is generally observed in domestic violence situations, with the serving of warrants, and with individuals who are either under the influence of a substance or mentally ill.

In any context in which a negotiation is initiated and an assessment pursued, it is critical to evaluate the hostage taker's motivation for negotiation. For example, an individual who has been interrupted during a homicide-suicide may have little interest in negotiating if he has already made a decision. The approach will be more solution oriented, geared toward buying time and offering alternatives. In situations in which the individuals are reactive and emotional, the preferred strategy is to create some sense of containment, using time to allow the subjects to utilize their available resources and reducing the tendency to act impulsively.

The art and science of psychological consultation in crisis negotiations has evolved over the years. The concept of psychological profiles has become increasingly outdated and of little use to negotiators. Traditional psychiatric diagnosis is also of limited relevance. Rather, demonstrated critical variables include behavioral indicators or behavioral constellations and their associated personality styles, which are assessed by accounting for the contexts in which they occur.

Psychological consultants to the negotiator engage in behavioral assessment that is ongoing and continuous, as well as situational and context-

specific, and it generates inferences and hypothesis that they want to corroborate. However, most critically, psychologists assess the motivation behind each communication and try to determine throughout the negotiation whether the hostage taker is *making* or *posing* a threat (Fein & Vossekuil, 1998, 1999). As consultants, psychologists are interested in what a person says and does, giving insight into whether the negotiation process is increasing or decreasing the potential for violence and/or peaceful resolution.

Turner and Gelles (2003) discuss five variables that help to assess any communication for potential violence: the degree to which the communication is organized, fixated on a theme, or blaming; whether it is focused on a specific person or targeted; and whether an action plan or time imperative is articulated. Today, as a result of considerable work in the area of targeted violence (Fein & Vossekuil, 1998, 1999), psychologists can help assess the potential for violence in the behavior and communication of a hostage taker. Also, with current developments in indirect assessment, psychologists contribute significantly to the analysis of gathered intelligence through interviews with family members, assessing the subject's mental status, recognizing potential mental illness, and utilizing data about the hostage taker's actions and patterns of behavior. However, given today's ethical dilemmas regarding the boundaries between "health provider" and "operational psychology consultant," consultations with other mental health professionals should be approached with caution.

Psychologists function as an adjunct resource to the team, offering expertise in understanding behavior (Bahn & Louden, 1999) and helping to translate behavior for the on-scene commander and the negotiator. As a mental health professional, the psychologist thinks and interprets behavior differently than a tactical commander, who serves as a strategic decision maker. Since negotiation is a law enforcement function, psychologists *do not, and should not*, function as a negotiator. It is uncommon for psychologists to know about the process of negotiations, the resources of law enforcement, or the public safety responsibility of law enforcement (McMains & Mullins, 2001). Using a psychologist as a negotiator may also escalate a situation by implying that an individual is mentally ill or by dredging up previous negative experiences with the mental health system (Hatcher et al., 1998). Psychologists function as consultants, and their expertise is used by the negotiation team to plan its strategy. One difficulty for psychologists is that after hours and possibly days of negotiations, the final resolution may require tactical operations to capture or kill the hostage taker (Fuselier, 1981b). This may also cause serious injury and/or the demise of the hostages, security force members, and other bystanders.

In addition to focusing on the hostage taker, monitoring the stress of the negotiator is a key role of the psychological consultant. Crisis negotia-

tors are highly trained, have superior verbal skills, and are able to think quickly and perform effectively under tremendous stress. But even these superior performers experience a high level of stress both during and after negotiations. The negotiators are under significant pressure to successfully conclude negotiations and prevent harm to innocent people. Although time is a great ally for the negotiator, increasing the chances of a positive resolution, the more time that passes, the more impatient the tactical arm of the crisis response team becomes. This creates added pressure for the negotiators, who must remain collected and rational. Psychologists should monitor the negotiator and provide feedback. If they believe that a negotiator is losing objectivity, they can recommend a new negotiator. The internal and external pressures on the negotiator ebb and flow throughout the process, and psychologists are a great asset in monitoring these stressors. To the extent possible, they can also monitor and promote the well-being of hostages (Giebels, Noelanders, & Vervaeke, 2005).

### **Postincident Roles of the Operational Psychologist**

Following an incident, psychologists provide stress management education, particularly when incidents have an adverse outcome, as well as team debriefings and counseling to team members. Unsuccessful negotiations that result in death and injury are a significant cause of stress for the hostage negotiator. One of the most recent occurred in September 2004 in Beslan, Russia, where Chechen terrorists were holding children and teachers. After authorities stormed the school, over 300 children and teachers were killed. When there are adverse outcomes like this, negotiators commonly feel guilty, angry, and depressed (Bohl, 1992). Although initially these feelings are considered normal, a psychological consultant can help restructure the perception of the event, showing the negotiator and the team how to use the experience to learn and move forward. When negotiators fail to manage symptoms appropriately after a poor outcome, long-term problems may occur, such as mood disturbance, occupational or marital problems, and substance abuse. Negotiators are also at risk of developing posttraumatic stress disorder (Bohl, 1992). A psychologist's expertise is invaluable when helping negotiators in this capacity.

### **CHARACTERISTICS OF INDIVIDUALS WHO TAKE HOSTAGES**

During the 1980s and mid-1990s, it became common for negotiators to describe the hostage taker in terms of diagnoses and psychological profiles. This was a direct reflection of the influence and input of mental health pro-

fessionals on the evolution of crisis negotiation. Although diagnostic labels were helpful, they proved to be more of an impediment than an asset in understanding the complexities of the hostage taker, especially in assessing the potential for violence.

Over the past decade, psychologists have begun to revise their positions on mental illness and dangerousness. It would be fair to conclude, with some degree of confidence, that mental illness does not often translate into violent behavior, nor do violent individuals generally suffer from mental illness (Monahan, 1992). "Mental illness" has become a misnomer for dangerousness, and diagnostic labels have become less useful in describing behavior and developing interventions in crises.

There continue to be certain behavioral clusters that are associated with a high potential for violence, such as suicidal, paranoid, and homicidal behaviors. These behaviors can be associated with delusions or hallucinations but are not mutually inclusive to any psychiatric disorder. However, they are critical to the resolution of any crisis. Although suicidal and paranoid behavior may be evident to law enforcement personnel, antisocial or inadequate personality types that exhibit these behaviors provide a very different challenge to the negotiator.

Nomenclature will continue to be revised and redefined to reflect behavioral patterns and personality styles that are useful in operations and place less emphasis on clinical diagnoses. For example, suicidal and paranoid behavior are considered very risky in a crisis. They are also two behavioral dimensions that cross several diagnostic categories. Evaluating them is important, not in the diagnosis but in paying specific attention to the content and process of the behavior in the crisis. Hallucinations and delusions as components of a psychotic or schizophrenic disorder are unimportant. Examining and assessing what the voices are saying and how fears of persecution increase or decrease the risk of violence is critical.

Similarly, determining the type of personality disorder is less relevant than attending to the subject's style. Unfortunately, personality disorders (as listed in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* [DSM-IV; American Psychiatric Association, 1994]) are associated with certain criteria that tend to be overly categorical when interacting with and assessing an individual in a crisis. Although the label may be helpful in orienting negotiators to patterns of behavior, the degree of stress inherent in the situation is likely to distort the discernable behavioral constellation of the disorder. Whereas the presence or absence of behaviors is useful in developing approaches, adjusting communications, and negotiating parameters, their intensity offers a certain degree of insight into the progress made in negotiations, the degree of deception by the subject, and the assessment of the subject's potential for violence.

Finally, beyond the diagnostic label, insight has been gained into behaviors that suggest a person is moving from idea to action. There are markers people display that suggest they are seriously contemplating action. Communications that reflect the projection of responsibility, egocentricity, organization, and a focus on specific individuals, along with an action plan and time imperative, indicate a considerable risk of violence. Similarly, barricaded subjects with hostages but no demands to be met by a third party are probably intent on killing the hostages and then committing suicide (Fuselier, Lanceley, & Van Zandt, 1991).

Negotiators will continue to be confronted with different challenges, and it is critical that they assess and manage the potential for violence. The communications and behavior demonstrated by a hostage taker must be evaluated in the context in which they are occurring. Whereas the presence or absence of a mental illness may or may not shed light on how to approach or negotiate with a perpetrator, attention to communications and the ongoing assessment of behavior are the keys to defusing or mitigating the potential for a violent outcome (Gelles, 2001).

### Terrorists

Terrorists are dramatically different from other types of hostage takers, are generally not mentally disturbed, and may only be taking captives for the express purpose of killing them. Terrorist behavior is generally very highly structured, well planned, and rational (Wilson, 2000), and taking hostages is usually done to obtain as much publicity as possible, to draw attention to a cause or plight. The likelihood of hostages being killed is high since many terrorists are ready to be “martyrs.” Negotiators try to convince the hostage takers that they have been successful in spreading their message and that by killing hostages they will be discredited in the public eye, thus also discrediting the message. As the war in Iraq has shown, this method has been far from successful; not only have terrorists killed their hostages, but they have publicly displayed their executions. In these cases, the captives were never truly hostages but, from the start, were a graphic way to threaten and intimidate. Negotiation may be best used to give the tactical team time to locate the captives and formulate a plan for rescue or assault on the hostage takers.

### Psychotic Individuals

When a hostage taker has either auditory hallucinations or a delusion, it is best that the negotiator not confront these symptoms. In stark contrast to an individual who may be floridly psychotic, strictly delusional individuals may easily sustain rational conversation, outside of the delusional topic.

The best approach to negotiation with these individuals is to discuss other topics while developing rapport and exploring other resolutions to demands (Fuselier, 1981a) prior to or instead of focusing on any delusional content. When necessary, it is critical to differentiate delusions that reflect grandiosity (e.g., the belief that one is Jesus Christ or a supreme being) from those reflecting paranoia and persecution. When a persecutory delusion is present, the hostage taker's communications concern actions that are in the service of self-preservation. When communications shift in theme from self-defensiveness (e.g., blaming) to self-preservation (e.g., threat of being destroyed), the potential for violence is increased.

In cases of command hallucinations, it is useful to have hostage takers describe what the voices are suggesting. For example, if they tell the negotiator that the voices are telling them to kill the hostages, put bags over their heads, or treat them as inanimate objects, the potential for violence will be assessed as high. It would be assessed lower if the voices are bothersome or frightening and hostage takers do not want to hurt anyone. This provides an opportunity for the negotiator to offer some solutions.

In negotiating with a psychotic individual, the negotiators should never confront the hallucination or delusion. Instead, they can actively listen and demonstrate interest in the subject's world, asking what the voices are saying, but they must not criticize or challenge the individual's view of reality. The negotiators can reinforce the idea that the voices are asking the individual to do things he or she does not want to do and offer some solutions to mediate the influence of the hallucinations, but they should never suggest that they seek the help of a mental health provider.

## **Depressive Symptomatology**

Suicide is a significant concern in individuals with depressive symptoms, and negotiators are advised to be attentive to suicidal ideation. After establishing contact, the negotiator initiates communications and develops rapport in an effort to establish a working alliance. As rapport, credibility, and trust increase, it is easier to help steer individuals with a mood disorder toward a peaceful surrender. Negotiators should provide reflective, non-judgmental statements that offer specific solutions and recommendations, while remaining empathic and focusing on the short term. Continuously monitoring plans for suicide is imperative, as suicidal ideation may wax and wane throughout negotiations. When consulting on cases in which individuals are suicidal, psychologists should be sensitive to sudden improvements in mood or a carefree attitude that reflects a resolution of ambivalence about committing the suicide. A depressive disorder with psychotic features significantly increases the risk for harm to the hostage taker and possible hostages or victims, who are typically family members

(Fuselier, 1981a). In addition, there are instances when subjects choose not to commit suicide themselves but force police officers to carry out the act (accomplishing a police-assisted suicide), and consultants must consider this as a possibility when assessing an individual's behavior.

### Maladaptive Personality Traits

When the hostage taker has, by clinical standards, an antisocial personality disorder or malignant narcissism, it is helpful if the psychologist can metabolize the clinical formulation into a more operationally relevant description. When the negotiator has to negotiate with a criminal personality, it is more useful for the psychologist to define that personality as a behavioral style. In this case, the hostage taker's personality would be described as an exploitative behavioral style, which generally exhibits the following features: entitlement, grandiosity, immediate gratification, defensive and reactive to criticism, focused on the present, not future-oriented, and limited ability to form attachments, make commitments, and demonstrate loyalty. These people tend to be manipulative, impulsive, blaming, predatory, and lacking in remorse.

When these persons present themselves as hostage takers, it is most important to first assess their motivation and determine whether it is instrumental (achieve a recognizable goal), expressive (demonstrate power), or stimulus seeking. Does the situation reflect the potential for affective or predatory violence? What could increase or decrease the potential for violence? What themes or ideas should the negotiator avoid? When initiating negotiations, the negotiator must choose words carefully to avoid threatening the ego of the hostage taker. The negotiator must control the level of stimulation and avoid the appearance of being indecisive or ambivalent. In almost all cases, negotiators should try to help the hostage taker save face. Negotiators are advised not to parent or direct the hostage taker, avoid discussions of jail sentences and "help," avoid focusing on the hostages (Zakrzewski, 2003), recognize the need to blame others, and recognize the need for immediate gratification. During the course of the negotiation, there will be much give and take, and negotiators should be prepared to give small things (e.g., cigarettes, candy, and soda) but never alcohol or other dangerous substances.

Those classified as avoidant or dependent personality types can be more appropriately labeled operationally as demonstrating an inadequate behavioral style. These individuals are generally quite bright but have not had much experience in applying their intellect. They may have a history of succeeding only with the help of others, have had difficulty persevering, and have probably been self-defeating. Overall, they are constantly trying to prove themselves. During the course of a negotiation, they tend to make

excessive demands, to change their demands on impulse, to refuse to negotiate with police, and to have a hostage speak for them. The general approach in negotiations is supportive, and negotiators should try to avoid bringing up past failures (Zakrzewski, 2003), to offer simple solutions, and to reinforce what is offered as explanations for the predicament. Negotiators are advised to always be sensitive to suicide as a possible solution to another failure.

## MAKING CONTACT

The first 15 to 45 minutes are the most dangerous time during a hostage crisis and can have a significant impact on the eventual outcome (Dolan & Fuselier, 1989). During this time, emotions are at their peak for the hostages, hostage taker, and the first responders. Upon arriving to the scene of the incident, the crisis negotiators try to make contact with the hostage taker as soon as possible in order to begin gathering intelligence. The first request is usually for surrender, and occasionally the individual will comply. Given this possibility, a surrender plan should already be in place to help allay the subject's anxiety and to ensure a peaceful conclusion. If there is not a quick resolution, the negotiator must immediately begin to assess the behavior and motivation of the subject, whether there are hostages, and the nature of the demands (Zakrzewski, 2003). The negotiator should attempt to have the hostage taker talk about what led up to the incident and provide the opportunity to vent about his or her challenges in life, which may include relationships with friends and family, occupation, health concerns, mental health issues, and substance use. The psychological consultant has a clear role in the indirect assessment of the hostage taker, whose motivation is then considered. The team may better understand motivation by learning whether the hostage taker is psychotic, delusional, depressed, suicidal, or homicidal. Does he or she have a specific personality style? Who are the hostages? Does the hostage taker know the hostages, or were they simply in the wrong place at the wrong time? What are the hostage taker's demands? In negotiations, there are usually material demands, which can include money, the release of select individuals from prison, or other situations. However, emotional needs and frustrations are often at the base of the material demands.

Demands can be either instrumental or expressive (Miron & Goldstein, 1979). Instrumental demands are concrete and specific and benefit the hostage taker. They may include money, food, a car, or the retreat of the police (McMains & Mullins, 2001). Expressive demands are less tangible and involve the emotional goals of the subject, which often revolve around frustration with some area of life. The expressive demands are what

drive the instrumental demands (McMains & Mullins, 2001). The skill of the negotiator is critical in managing both sets of demands. It is a balancing act, using bargaining skills to manage the instrumental needs and crisis negotiation skills to manage the expressive needs. As evident by news reports of hostage-taking situations, the expressive demands are at the forefront for the hostage taker, suicidal person, or barricaded subject and vary greatly, but they have at times included a request for an apology for some real or imagined wrong by a specific person, business, or government agency.

As the primary negotiator continues to talk to the hostage taker, the extension of time is a vital goal. Time decreases emotions and anxiety and increases rational thinking. As time passes, a relationship will develop between the hostage taker and the negotiator, which will allow the subject to take the suggestions of the negotiator more seriously. Time also increases the opportunity for a hostage to escape and for the subject to consider alternatives. As time passes, hostage takers decrease their expectations, and basic human needs (sleep, food, water, and elimination) come into play. Experience in the field shows that many stalled negotiations begin to progress after the subject has missed a meal (Zakrzewski, 2003). Time permits improved intelligence and better decision making for the crisis response team. Finally, time allows for tactical planning and rehearsing if the need arises.

Zakrzewski (2003) cautions that although mostly positive, there are some negative elements in having an incident continue. As negotiations become extended, people become tired and more apt to make mistakes. The longer the incident, the more likely people will become bored and irritable, thus losing objectivity. This can lead to pressure to move toward a tactical response. The pressure from the media can also be a negative factor in the management of a protracted event. The cost of maintaining an incident can be very expensive, both monetarily and in human resources.

During negotiations, the subject often sets deadlines for meeting demands. The Special Operations and Research Unit at the Federal Bureau of Investigation (FBI) Academy found only one U.S. incident in which a hostage was killed because a deadline was not met (Fuselier, 1981b). However, this has not been the case in Iraq. Many hostages have been killed as the terrorists threatened. The difference between terrorist and other hostage situations are vast. Insurgents in Iraq, for example, are fighting a war they cannot win by ordinary military means. Killing hostages is meant to enrage the public and fuel discontent and disagreement about the U.S. presence in Iraq.

When dealing with hostage takers in more traditional situations, meeting their deadlines is often manageable; at times they even forget the deadlines they have set (Fuselier, 1981b). However, deadlines set by the crisis

response team are often more difficult to handle. A deadline from the on-scene commander for a tactical response at a set time is the one that is most difficult for the crisis negotiator. These are the types of pressures negotiators attempt to deal with during each negotiation. More often today than in the past, both tactical and negotiation teams work better together, knowing that the negotiation team needs ample time to work and that the tactical option is usually used when all attempts to negotiate have failed.

An extreme example of problems related to the differences between the tactical and negotiation teams occurred in 1993 in Waco, Texas. This incident is ripe with lessons for military negotiation teams. The Bureau of Alcohol, Tobacco, and Firearms (ATF) raided Mt. Carmel, the home of the sect known as the Branch Davidians, in February 1993. They were there to serve a weapons warrant, but the Davidians were ready when the ATF arrived and a firefight broke out, leaving 4 ATF agents dead and 16 wounded. The operation was then turned over to the FBI. Throughout the long standoff, the negotiators were able to secure the release of 23 children (McMains & Mullins, 2001). However, the compound went up in flames on April 19, 1993, when the FBI's tactical team attempted to insert tear gas in an effort to bring the Davidians out. It is believed that the Davidians set the fires while the gas was entering. One of the significant lessons learned from the standoff is the essential need for communication between the negotiation and tactical teams. On at least three occasions, the negotiators learned of what the tactical team was doing (destroying cars, playing loud music, and running over their guard house) from David Koresh, the Branch Davidian leader. As the negotiators tried to gain the trust of Koresh, the tactical teams' actions quickly eroded any leverage the negotiators were building in attempts to secure the release of the Davidians, or at least their children. A fascinating turning point toward the end of the siege occurred when the Davidians released 7 more hostages. While the negotiation team was celebrating the release of 7 more people, the tactical team immediately began destroying the Davidian's cars with their tanks (McMains & Mullins, 2001). This devastating incident should not be seen as a failure of the negotiation process but rather a failure of the tactical and negotiation teams to work as one unit.

## USE OF NON-NEGOTIATORS

During a negotiable event, the question about the use of non-negotiators will undoubtedly arise. Family members, friends, mental health professionals, members of the clergy, on-scene commanders, and the subject's chain of command and coworkers will want to negotiate. For example, a man suffering from paranoid schizophrenia barricaded himself in his home. His

mental illness was well known to his family and neighbors, but recently he had become agitated about his perception that the government was controlling citizens' lives, and he posted numerous signs on his front yard, alerting the community to the local government's attempts to control them. The neighbors complained, and the police responded. The man asked to speak to his father, and the request was facilitated by the police. Upon the arrival of his father, the man promptly committed suicide. Experience in crisis negotiations shows that permitting non-negotiators to speak to a hostage taker has a high probability of further agitation. It may also be the case that the subject is planning to commit suicide, and a particular family member, friend, coworker, or commander is exactly the person he or she wants to hear or see this occur. The military crisis response team should do everything possible to prevent an audience.

## CONCLUSIONS

In closing, military psychologists can provide valuable consultation to the crisis negotiation team. Across the nation, law enforcement agencies report a steady increase in the use of mental health consultants in crisis negotiations and thus a significantly higher incidence of negotiated surrenders and fewer deaths and injuries (McMains & Mullins, 2001). With the change in the world since September 11, 2001, and subsequent wars in Iraq and Afghanistan, hostages have frequently been on the front page of the newspaper. Trained military consultants are in a position to provide significant assistance in both foreign and domestic situations. Psychologists can serve a fundamental role in this area and contribute directly to the optimal resolution of crises. Overall, negotiation is a means of significantly increasing the chances of peaceful resolution, and the psychological consultant provides vital assistance in the formulation of the approach to a given individual and situation.

## REFERENCES

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington DC: Author.

American Psychological Association (APA). (2002). Ethical principles of psychologists and code of conduct. *American Psychologist*, 57, 1060–1073.

Bahn, C., & Louden, R. J. (1999). Hostage negotiation as a team enterprise. *Group*, 23, 77–85.

Bohl, N. K. (1992). Hostage negotiator stress. *FBI Law Enforcement Bulletin*, 61, 24–26.

Bolton, R. (1984). *People skills*. Upper Saddle River, NJ: Prentice-Hall.

Butler, W. M., Leitenberg, H., and Fuselier, G. D. (1993). The use of mental health professional consultants to hostage negotiations teams. *Behavioral Science and the Law*, 1, 213-221.

Cialdini, R. B. (1993). *Influence: Science and practice* (3rd ed.). Glenview, IL: Scott, Foresman.

Dolan, J. T., & Fuselier, G. D. (1989). A guide for first responders to hostage situations. *FBI Law Enforcement Bulletin*, 58, 9-13.

Fein, R. A., & Vossekuil, B. (1998). *Protective intelligence and threat assessment investigations* (NCJ Publication No. 170612). Washington, DC: U.S. Department of Justice.

Fein, R. A., & Vossekuil, B. (1999). Assassination in the United States: An operational study of recent assassins, attackers, and near-lethal approachers. *Journal of Forensic Sciences*, 44, 321-333.

Fuselier, G. D. (1981a). A practical overview of hostage negotiations, part 1. *FBI Law Enforcement Bulletin*, 50, 2-6.

Fuselier, G. D. (1981b). A practical overview of hostage negotiations, part 2. *FBI Law Enforcement Bulletin*, 50, 10-15.

Fuselier, G. D. (1988). Hostage negotiation consultant: Emerging role for the clinical psychologist. *Professional Psychology: Research and Practice*, 10, 175-179.

Fuselier, G. D., Lanceley, F. J., & Van Zandt, C. R. (1991). Hostage/barricaded incidents: High risk factors and the action criteria. *FBI Law Enforcement Bulletin*, 60, 6-12.

Gelles, M. (2001). Negotiating with emotionally disturbed individuals: Recognition and guidelines. In M. J. McMains & W. C. Mullins (Eds.), *Crisis negotiations: Managing critical incidents and hostage situations in law enforcement and corrections* (2nd ed., pp. 229-288). Cincinnati, OH: Anderson.

Giebels, E., Noelanders, S., & Vervaeke, G. (2005). The hostage experience: Implications for negotiation strategies. *Clinical Psychology and Psychotherapy*, 12, 241-253.

Gist, R. M., & Perry, J. D. (1985). Perspectives on negotiations in local situations, part I: A different typology of situations. *FBI Law Enforcement Bulletin*, 54, 21-24.

Hatcher, C., Mohandie, K., Turner, J., & Gelles, M. (1998). The role of the psychologist in crisis/hostage negotiations. *Behavioral Sciences and the Law*, 16, 455-472.

McMains, M. J. (1988, October). *Current uses of hostage negotiators in major police departments*. Paper presented to the Society of Police and Criminal Psychology, San Antonio, TX.

McMains, M. J., & Mullins, W. C. (1996). *Crisis negotiations: Managing critical incidents and hostage situations in law enforcement and corrections*. Cincinnati, OH: Anderson.

McMains, M. J., & Mullins, W. (2001). *Crisis negotiations: Managing critical incidents and hostage situations in law enforcement and corrections* (2nd ed.). Cincinnati, OH: Anderson.

Meloy, J. R. (1992). *Violent attachments*. Northvale, NJ: Jason Aronson.

Metz, A. (2005, March 16). *She relied on instincts, faith*. Retrieved October 28, 2005, from www.newsday.com.

Miron, M. S., & Goldstein, A. P. (1979). *Hostage*. New York: Pergamon Press.

Monahan, J. (1992). Mental disorder and violent behavior: Perceptions and evidence. *American Psychologist*, 47, 511-521.

Ochberg, F. M. (1980). What is happening to the hostages in Tehran? *Psychiatric Annals*, 10, 186-189.

Schlossberg, H. (1979). Police response to hostage situations. In J. T. O'Brien & M. Marcus (Eds.), *Crime and justice in America* (pp. 209-220). New York: Pergamon Press.

Strentz, T. (1979). Law enforcement policy and ego defenses of the hostages. *FBI Law Enforcement Bulletin*, 4, 2-12.

Taylor, P. J. (2002). A cylindrical model of communication behavior in crisis negotiations. *Human Communication Research*, 28, 7-48.

Taylor, P. J., & Donald, I. (2004). The structure of communication behavior in simulated and actual crisis negotiations. *Human Communication Research*, 30, 443-478.

Turner, J. T., & Gelles, M. G. (2003). *Threat assessment: A risk management approach*. Binghamton, NY: Haworth.

Van Hasselt, V. B., Baker, M. T., Romano, S. J., Sellers, A. H., Noesner, G. W., & Smith, S. (2005). Development and validation of a role-play test for assessing crisis (hostage) negotiation skills. *Criminal Justice and Behavior*, 32, 345-361.

Van Hasselt, V. B., Flood, J. J., Romano, S. J., Vecchi, G. M., de Fabrique, N., & Dalfonzo, V. A. (2005). Hostage-taking in the context of domestic violence: Some case examples. *Journal of Family Violence*, 20, 21-27.

Vecchi, G. M., Van Hasselt, V. B., & Romano, S. J. (2005). Crisis (hostage) negotiation: Current strategies and issues in high-risk conflict resolution. *Aggression and Violent Behavior*, 10, 533-551.

Webster, M. (2003). Active listening and beyond: Compliance strategies in crisis negotiation. *Crisis negotiations: A compendium*. Quantico, VA: United States Department of Justice; Federal Bureau of Investigation, FBI Academy.

Wilson, M. A. (2000). Toward a model of terrorist behavior in hostage-taking incidents. *Journal of Conflict Resolution*, 44, 403-424.

Zakrzewski, D. R. (2003). *Crisis negotiation*. Jacksonville, AL: ZAK.

## CHAPTER 16



# Psychological Interventions after Disaster or Trauma

MICHAEL A. BORDERS

CARRIE H. KENNEDY

The field of disaster response is developing rapidly, prodded by such events as terrorist bombings and multiple natural disasters. Psychologists play an important role in assisting those who have experienced or witnessed a disaster or other personally traumatic event. Given their proximity to frequent traumatic events, military psychologists are in a unique position to study how humans react in a crisis and to investigate the optimal form of intervening during and after a disaster or personal trauma. Consider the following examples.

A young Navy corpsman was assigned to recover the bodies of four service members who were killed in a helicopter crash. The bodies were significantly deformed, and body parts had to be recovered from various areas and placed with the appropriate individual. Although the corpsman completed his mission, essentially reassembling each body and transporting them to the receiving facility, over the course of several months he developed a simple phobia to flying and became convinced that he would die in an aircraft mishap. He was not given any type of early intervention and eventually required 12 sessions of cognitive-behavioral therapy to enable him to use air transportation.

An Army master sergeant, in conjunction with three other senior enlisted personnel, found the body of a junior enlisted soldier who had

hanged himself. In the course of events, the master sergeant was told by a 911 operator to initiate cardiac pulmonary resuscitation (CPR), despite the fact that most of the young man's blood had collected in his lower extremities, and the sergeant later learned that the soldier had been dead for approximately 12 hours. In addition to feelings of guilt and failure over the suicide of one of his junior personnel, he was also confronted with the fact that he had been unable to perform CPR, given the condition of the body. He developed visions of the young soldier, whom he saw standing at the foot of his bed each night, resulting in insomnia. Intervention 3 days after the incident, which normalized his symptoms and provided positive feedback from his fellow soldiers, resulted in resolution of the symptoms.

An Army officer who was near ground zero at the Pentagon on September 11, 2001, witnessed the death of a fellow officer and close friend. Initially he was emotionally numb, but this evolved into extreme anger and guilt. Despite early educational efforts, he began abusing alcohol and had to be relieved of his duties. He required residential alcohol treatment with an intensive cognitive-behavioral component before he was able to return to duty.

In the military routine, operations involving training with and deployment of highly destructive technical weaponry and unique occupational hazards sometimes result in tragedy. Military mental health professionals must be trained in effective responses to suicides in the unit, training accidents, and personnel loss in operations other than war, as well as immediate deployment in order to help both survivors and responders to large-scale disasters of either natural origin or human design. Military psychologists' responses must enhance unit cohesion; allow appropriate responses to grief and loss; incorporate risk reduction, personal hardiness, and resilience; and identify those who may require services beyond early intervention. This chapter describes pertinent issues related to human resilience in the face of trauma, especially for those at high risk, as well as intervening strategies for military mental health professionals.

## PROMOTING RESILIENCE

The study of human responses to trauma in the American armed forces goes back as far as World War I, when labels such as war neurosis and shell shock described the reactive response to combat exposure (see Chapter 1, this volume). Throughout military history, responses to nuclear holocaust, concentration camps, and increasing lethality of combat, to name a few, resulted in increased study of the human trauma response. For example, in Vietnam the efficient use of highly lethal technology brought a drastic increase in rates of individual and crew-served weapons fire among U.S.

soldiers and exposure to devastating civilian and military casualties, with notable psychological impact.

Most research to date has focused on pathological reaction to trauma, with posttraumatic stress disorder (PTSD) at the forefront. PTSD can occur after

exposure to an extreme traumatic stressor involving direct personal experience of an event that involves actual or threatened death or serious injury, or other threat to one's physical integrity; or witnessing an event that involves death, injury, or a threat to the physical integrity of another person; or learning about unexpected or violent death, serious harm, or threat of death or injury experienced by a family member or other close associate. (American Psychiatric Association, 1994)

Rates of PTSD have shifted upward dramatically from 1974 to the present (James & Gilliland, 2001). Although PTSD is a significant concern, it is not the only mental health disorder that may follow a critical incident, such as a training accident, humanitarian mission, violent episode, hostage situation, or body recovery. Depression, other anxiety disorders, and substance abuse are also common.

In recent years, an increase in the literature on resilience has emerged, with an attempt to focus on those characteristics that assist people in coping with a traumatic event. Following the terrorist attacks of September 11, 2001, the American Psychological Association launched a resilience initiative, with the focus on increasing "the human ability to adapt in the face of tragedy, trauma, adversity, hardship, and ongoing significant life stressors" (Newman, 2005, p. 227). This initiative spawned nationwide presentations, forums, and publications on such topics as resilience in war and responding to natural disasters.

Research indicates that there are identifiable characteristics of individuals who cope well in the face of significant stress. These individuals seek out social support and talk about areas of difficulty, utilize rationalization as a defense mechanism, and engage in active problem solving (Yi, Smith, & Vitaliano, 2005). They believe that they can grow from both positive and negative experiences; they exhibit positive emotions such as gratitude and interest, laugh, and have a sense of control over events, as well as a tendency toward an overly positive view of themselves (Bonanno, 2004).

Just as there are individual characteristics that enhance coping with adversity, there are multiple risk factors for the development of problems, related either to the characteristics of the event itself or to the personal characteristics of the individuals exposed to the event. The nature of work in the military, law enforcement, firefighting, and health professions already places individuals at greater risk of traumatic experiences and, sub-

sequently, negative stress responses. Situational variables known to increase the chances of developing PTSD are being held prisoner of war (Sutker & Allain, 1996); witnessing atrocities and deaths, particularly of peers (Adler, Vaitkus, & Martin, 1996); sustaining significant physical injuries during a traumatic event (Acierno, Resnick, Kilpatrick, Saunders, & Best, 1999); and experiencing recurrent psychological traumas. Individual variables related to a negative stress response are age at enlistment in the military (younger individuals are more prone to the development of problems), less premilitary education, childhood behavioral and abuse issues, previous substance abuse problems (Acierno et al., 1999), previous mental health disorder, high levels of stress at work (Corneil, Beaton, Murphy, Johnson, & Pike, 1999), poor social support, and lower intelligence (McNally, 2003). Coping characteristics related to the development of functional difficulties are thought to be avoidance, denial, and blaming others (Yi, Smith, & Vitaliano, 2005), though some suggest that avoidance immediately after a traumatic event may be protective (Friedman, Hamblen, Foa, & Charney, 2004).

### Stress Inoculation

Because military, firefighting, law enforcement, and health-related professionals are inevitably exposed to traumatic events, their professional training is designed, in part, to provide strategies for both survival and resilience. The ability to deal effectively with potentially traumatizing events is one of the hallmarks of capability and competency-based training. In addition to initial skill development, advanced training, and practice, many training programs provide graded exposure scenarios, such as training films and simulations, which prepare the trainee for more sophisticated behavioral control during traumatic encounters. Also, more often than not, a period of cognitive and emotional adjustment and preparation is often allowed beyond initial training (e.g., the probationary period or rookie stage) in order to prepare professionals to handle the reality of trauma and death while obtaining the capability of a controlled response. Effective training will, as a byproduct, condition an adaptive response to actual events.

Training is a foundation for healthy and successful coping and results in increased resistance to the effects of potentially traumatic stress, as well as better functioning even when cognitive coping strategies temporarily fail or become inefficient (Grossman, 1995). Routine training and rehearsal, using mock casualties to simulate the results of armed conflicts, hostage-taking incidents, terrorist attacks, and mass casualties, condition cognitive and behavioral responses. Simulated stress casualties are often included in military training scenarios (e.g., mock terrorist attack exercises and Mobile

Medical Augmentation Readiness Training) to foster understanding of the effects of exposure to catastrophic events and the range of possible human responses. Many training programs incorporate cognitive-behavioral training models that resemble Meichenbaum and Deffenbacher's (1988) stress inoculation training model to inoculate against unhealthy effects when environmental stress is increased.

## INTERVENTION METHODOLOGIES

### Traditional Mental Health versus Disaster Mental Health

Those involved in catastrophic events may have seemingly pathological symptoms, but mental health professionals must realize that these reactions are probably normal. Immediate reactions to trauma can manifest themselves in many ways, including what are usually considered to be severe psychological symptoms, such as disorientation and panic. A diagnosis of pathology can take place only after a prolonged stabilization period has occurred and the individual begins to display response patterns that depart significantly from others who are a part of the same experiential cohort. Identifying clinical symptoms that may lead to the development of pathological syndromes after these experiences (sometimes separated by large gaps in time and behavior across environments) is difficult, and good, valid, reliable screening instruments are in the early stages of development.

Normal reactions to abnormal and extraordinary human experiences are as varied and complex in nature as is human behavior. Everyone who has undergone a traumatic event will be affected to some degree by the encounter, and it is important to understand the potential reactions in various populations. For example, regression behaviors such as thumb sucking and bedwetting are common in preschool children, whereas older children may exhibit behavioral problems and social withdrawal (DeWolfe, 2000). Adult responses may include emotional numbing, denial, confusion, disorientation, dissociative symptoms, impulsive behavior, aimless walking, exaggerated startle response, panic, anger, depression, guilt, hopelessness, insomnia, withdrawal, and interpersonal conflict (Lerner & Shelton, 2005; DeWolfe, 2000). Severe reactions—elevated blood pressure, rapid heart rate, breathing problems, chest pain, fainting, and hyperventilation—may require medical intervention (Lerner & Shelton, 2005). Moreover, individuals with preexisting mental health problems, the elderly, and those from various ethnic groups and cultural backgrounds will have differing reactions to trauma.

The type of trauma will also determine reactions. Traumas affecting individuals (assault or car accident) are quite different from those affecting a preexisting, cohesive group of people (military unit, firefighting team, and

school classroom), which will be different still from those affecting large numbers of previously unrelated people (terrorist bombings and natural disasters). Thus, any mental health responder must understand the phases of various types of disasters and be able to apply this information in an informed manner when deciding to use a particular type of intervention. In addition to the nature of the tragedy, the level of exposure is a factor. Mental health professionals may be seeing individuals with direct exposure, such as being injured during an event or handling human remains; secondary exposure, such as being eyewitnesses but remaining on the periphery; or indirect exposure. Regardless of the type or scale of a disaster, the primary objective of intervention is to promote human resilience to tragedy, thus preventing long-term problems.

A community-counseling approach, outlined by Lewis, Lewis, Daniels, and D'Andrea (2003), emphasizes building a sense of hope, a strong support system, and a sense of control over the environment, thus gaining the information and tools for effective problem solving and developing confidence in one's ability to adapt to new situations. These elements help avoid the negative effects of major stress. Brickman (1982) suggests that theoretical and intervention models in which people are held responsible for their own solutions are more likely to increase competence than those models that rely on an authority-derived solution to solve the problem. Self-efficacy seems to be an ameliorative or healing component of successful posttrauma intervention.

There are currently many intervention modalities and hypotheses concerning how to affect recovery and resiliency in the face of potentially traumatizing events. Differing interventions are conducted at different times, depending on the type of trauma and the involved individual or group. Interventions may occur immediately, within a few days, and/or over the course of several weeks or months (see Table 16.1).

## IMMEDIATE RESPONSES

### Psychological First Aid and Crisis Intervention

Psychological first aid is essentially an immediate response to a disaster, typically one in which there was no warning of the impending event (e.g., terrorist attack or school shooting). The primary focus is on safety, orienting individuals, and meeting basic needs (which includes emotional support). This response involves mental health triage of those survivors who most need immediate assistance because of severe stress reactions, such as disorientation, significant physiological symptoms, or behaviors that might constitute a danger to oneself or others. Other factors are the individual's preexisting medical or mental health conditions, premorbid level of func-

**TABLE 16.1. Interventions and Timelines for Various Responses to Disaster or Trauma**

Type of disaster/trauma	Timeline	Intervention
Combat (see Chapter 10, this volume, for a complete discussion of the management of combat stressors)	Prior to During First 1–72 hours 72 hours–2 weeks	<ul style="list-style-type: none"> <li>• <i>Prevention education briefs</i> focusing on combat stress reactions, self-care, and buddy aid.</li> <li>• <i>Comprehensive training and realistic training exercises.</i></li> <li>• <i>Self-care and buddy aid.</i></li> <li>• <i>Historical group debriefing</i>, which is provided to an entire unit with no presumption of problematic symptoms.</li> <li>• <i>Combat stress interventions</i> performed by corpsmen/medics or forward mental health support at any echelon of care.</li> <li>• If 1–3 days of forward care do not enable a member to return to duty, focused and intensive <i>cognitive-behavioral therapy</i> up to 2 weeks near the front line when feasible.</li> </ul>
Disaster response (e.g., body recovery, firefighters, healthcare workers)	Prior to During Immediately following response effort Follow-up	<ul style="list-style-type: none"> <li>• <i>Prevention education, realistic training</i> with exercises and practice, and/or <i>stress inoculation training</i>.</li> <li>• Provision of rest breaks, adequate food and nutrition, <i>brief psychoeducation</i>, and informal contact with mental health providers in the case of extended rescue/recovery efforts.</li> <li>• <i>Demobilizations</i> (part of critical incident stress management, CISM) to assist with transition from the disaster site to work or home.</li> <li>• Individual <i>cognitive-behavioral sessions</i> if indicated.</li> </ul>
Natural disaster (e.g., hurricane, typhoon, earthquake)	During Immediate	<ul style="list-style-type: none"> <li>• <i>Acute traumatic stress management (ATSM)</i> with a focus on minimizing the level of trauma.</li> <li>• <i>Psychological first aid</i> with a focus on safety, orientation, basic needs, and emotional support.</li> <li>• <i>Crisis intervention</i> for individuals with severe psychological symptoms.</li> <li>• <i>Informational briefings</i> given by individuals in authority but are optimized by input from psychologists.</li> <li>• Implementation of <i>ATSM</i> principles of identification of exposed individuals, establishment of communication, grounding and orienting individuals, provision of support, normalization of stress response, and education about expected course of possible reactions.</li> <li>• <i>Screening</i> to identify individuals at high risk of developing significant problems.</li> </ul>

*(continued)*

TABLE 16.1. (continued)

Type of disaster/trauma	Timeline	Intervention
Natural disaster (cont.)	Early and ongoing intervention	<ul style="list-style-type: none"> <li>Traditional critical incident stress debriefings (CISD) are not recommended because the traumatic experience is likely to continue for a significant period (e.g., clean up and rebuilding and lingering questions about the status of missing individuals).</li> <li>Continued <i>psychoeducation</i> toward healthy coping and help in accessing resources and promotion of resources that tap <i>natural social support systems</i> (e.g., community-based services and religious organizations).</li> <li>Continued <i>screening and monitoring</i> of at-risk individuals.</li> </ul>
Personal or individual trauma (e.g., rape, assault, car accident)	Immediate	<ul style="list-style-type: none"> <li><i>Psychological first aid.</i></li> <li><i>Crisis intervention.</i></li> <li>Brief psychoeducation and provision of resources.</li> </ul>
	Beginning 10–14 days after the trauma	<ul style="list-style-type: none"> <li><i>Cognitive-behavioral therapy</i> (4–5 individual sessions) with education, relaxation training, imaginal-exposure therapy, cognitive restructuring, <i>in vivo</i> exposure, and homework.</li> </ul>
Terrorist attack	During	<ul style="list-style-type: none"> <li>ATSM with a focus on minimizing the level of trauma.</li> </ul>
	Immediate	<ul style="list-style-type: none"> <li><i>Psychological first aid.</i></li> <li><i>Crisis intervention.</i></li> <li><i>Informational briefings.</i></li> <li><i>Death notification and missing person status</i> provided to family members by trained personnel.</li> <li>ATSM.</li> <li><i>Screening.</i></li> </ul>
	Early and ongoing intervention.	<ul style="list-style-type: none"> <li>Traditional CISD are not recommended because of the possible protective factor of avoidance in the short term and the potential for disruption of natural recovery.</li> <li>Continuous availability and provision of <i>psychoeducation</i> and avenues for <i>social support</i> for affected individuals.</li> <li>Multiple contacts with exposed individuals to the event to include those with direct involvement, those injured during the event, witnesses, and family members/friends of victims.</li> <li>Continued <i>screening</i> for detection of at-risk individuals.</li> </ul>
Unit or group trauma (e.g., unit suicide, operational accident, work place violence, school shooting)	Prior to	<ul style="list-style-type: none"> <li><i>Organization and training of military traumatic response teams</i> (e.g., critical incident stress teams).</li> <li><i>Comprehensive acute traumatic stress management</i> (CATSM), with stress management training for all, awareness training for leadership, development of traumatic management, and family support teams/programs.</li> </ul>

(continued)

**TABLE 16.1.** (continued)

Type of disaster/trauma	Timeline	Intervention
Unit or group trauma (cont.)	Immediately	<ul style="list-style-type: none"> <li>Depending on the incident and the population, <i>psychological first aid and crisis intervention</i> may be required (e.g., school shooting or workplace violence).</li> </ul>
	Early intervention	<ul style="list-style-type: none"> <li><i>Disengagement briefing (CATSM).</i></li> <li>Critical incident stress defusings (within 24 hours) or debriefings (within 72 hours, CISIM).</li> </ul>
	Ongoing support and follow-up	<ul style="list-style-type: none"> <li>Individual <i>cognitive-behavioral sessions</i> for those with significant problems.</li> </ul>

tioning, and primary language, to name a few. The core components of psychological first aid are protecting survivors from the interested public, media, and ongoing traumatic stimuli; directing survivors to a safe place; and connecting survivors with a mental health responder, friend, family member, or other source of support (U.S. Department of Health and Human Services, 2004). Lazarus and Folkman (1984) have found that a strong support system enhances the desire to survive, gives a sense of control over the environment, provides information and tools to effectively solve problems, enhances confidence to adapt to new situations, and takes the threat out of change. Thus the importance of involving family members, professional colleagues, friends, and significant others in post-catastrophe interventions is vitally important.

If psychological first aid is insufficient, individuals may require brief forms of crisis intervention, which focus on safety and security, identification of immediate needs and potential solutions, assessment of functioning, normalization of symptoms, psychoeducation, and practical assistance (U.S. Department of Health and Human Services, 2004).

### Informational Briefings

Although not generally a direct function of mental health personnel, informational briefings play a significant role in the psychological well-being of survivors and their family members. Inaccurate information and poor communication have a profound impact on individuals in crisis. Mental health responders may be asked to consult with individuals responsible for providing informational briefings. Psychologists can make recommendations about the frequency of briefings, multicultural issues, conveying information in an empathic way, and the degree of detail in sensitive or disturbing information (U.S. Department of Health and Human Services, 2004).

## Acute Traumatic Stress Management

Acute traumatic stress management (ATSM) was developed to provide caregivers of all types with tools effective in helping individuals who have been exposed to a tragedy (Lerner, 2005) in order to mitigate long-term symptoms and suffering (Lerner & Shelton, 2005). During the earliest response to a disaster (i.e., in the midst or immediate aftermath of the traumatic event), individuals are at the scene, providing emergency medical care, interviewing witnesses, and perhaps actively rescuing victims. Caregivers are taught how to minimize the traumatic experience (e.g., move living victims away from the dead and use supportive communication skills) while engaged in lifesaving operations. Following the immediate response of emergency personnel, disaster responders identify exposed individuals and establish effective communication with them. Once a connection has been established, caregivers ground and orient the individual, provide support, normalize the stress response, and discuss what to expect in the upcoming days and weeks.

Lerner and Shelton (2005) present a multifaceted model that builds on ATSM and addresses psychological needs, before, during, and after a critical incident or traumatic event. Comprehensive acute traumatic stress management (CATSM) is an organizationally implemented program, which begins prior to any type of traumatic exposure. A planning phase involves awareness training for management, stress management training for all staff, and development of an organizational traumatic incident management team (OTIM) and family support program. In the midst of a traumatic event—workplace violence, natural disaster, or sudden death of an employee—the organization enters the engagement phase, which closely follows the latter stages of ATSM (i.e., once medical and other emergency needs have been provided for). In this phase the OTIM uses already established personal relationships in the organization to enhance the effectiveness of the interventions and provides informational supportive briefings and family support. The disengagement phase includes further education, including the important disengagement briefing, before staff members are released from work after any traumatic event.

## EARLY INTERVENTION

Early intervention is designed to promote normal recovery and resiliency, as well as community and/or unit cohesion (National Institute of Mental Health, 2002). The U.S. Department of Health and Human Services (2004) warns that individual exposure levels and responses to a traumatic event must be considered when deciding what early intervention technique to use

and when. For example, those techniques rooted in the emotional processing of an event are not appropriate for people who are still in an acute state of distress. Watson (2004) reports that no interventions beyond psychoeducation and emotional support should be provided within the first 7 days of an incident of mass violence (e.g., terrorist attack) because of the risk of psychological harm.

## Screening

Those who are most at risk of developing long-term problems should be screened, although it is difficult to know who is most at risk. However, those who should be referred for formal follow-up include individuals meeting criteria for acute stress disorder or who have other intense psychological symptoms (Shalev & Freedman, 2005), bereaved individuals, those with a preexisting mental health or substance disorder, those who have required significant medical or surgical intervention, and those who have had prolonged, intense exposure to the event (National Institute of Mental Health, 2002). Litz, Gray, Bryant, and Adler (2002) advocate the importance of screening procedures to identify those at risk of developing chronic problems and to give them access to resources.

## Critical Incident Stress Debriefing

The dominant model of early intervention in the military is what is known as the Mitchell Model, and each branch of the military incorporates it into its critical incident stress management (CISM, Navy), special psychiatric response intervention teams (SPRINT, Navy), special medical augmentation response team–stress management (SMART-SM, Army), and critical incident stress teams (CIST, Air Force). The model is a form of psychological debriefing believed to have originated from the World War I and World War II practice of the combat after action report, where soldiers briefed their commanders after particularly difficult combat engagements for the purposes of intelligence gathering, lessons learned, and future battle planning (Litz et al., 2002).

In Mitchell's critical incident stress debriefing (CISD) model, those directly involved in a critical incident are seen within 72 hours in a single short session, with 90 minutes to 3 hours of “exposure therapy” and stress management. Individuals are invited to a structured group experience, during which they focus on their roles, thoughts, and emotions during the event and discuss their experiences with others who were involved in order to stimulate accurate understanding of the event and use the shared experience to encourage continued dialogue with their peers. The structured debriefing includes seven phases: (1) *introduction* of the team, the partici-

pants, and the process; (2) *fact-finding* phase in which the participants account the event from their perspective; (3) *thought* phase, which allows participants to describe their cognitive reactions to the event and then transition to the next phase; (4) *reaction* phase, during which each participant identifies the most troubling aspect of the critical incident, as well as emotional responses; (5) *symptom* phase, which elucidates current symptoms experienced by participants and allows a transition from an emotional phase back into a cognitive framework; (6) *teaching* phase, which provides psychoeducation about normal reactions, stress management, and post-incident self-care; and (7) *reentry* phase, which provides clarification of the process and the event, preparation for termination of the debriefing, and information about further support (Mitchell & Everly, 1998).

Those trained in CISD may also conduct other structured interventions, defusings and demobilizations. A defusing is a three-phase, structured, small-group discussion for the purpose of assessment, triage, and acute symptom mitigation. Defusings are generally only appropriate if done within 8 hours of the critical incident, and they typically last 20–45 minutes. Defusings are used to promote healthy cognitive processing, to provide information about stress management, and to provide an avenue for those individuals who may require additional support (Mitchell & Everly, 1998).

Demobilizations are very brief information and rest sessions, which provide opportunities for responders to manage stress during or immediately after exposure (e.g., extended rescue operations and/or body recovery) to assist with transitions from the disaster site to home or off-duty time. Demobilizations typically last 20–30 minutes and focus on educational briefings related to stress management and coping strategies (Everly & Mitchell, 1997). They may also include staff advisement on psychological issues affecting the responding team, as well as briefings to leadership and management personnel on the course and outcome of trauma exposure.

Mitchell and Everly (1998) expanded their focus from just debriefing to critical incident stress management (CISM) because they saw the need for continuity of care for those most deeply affected once the debriefing phase was concluded. This practice leaves room for the involvement of local professionals and organizations. Pastoral intervention may be added to the CISM model. This integrates traditional faith-based responses and support and tailors the intervention to the relevant practices of those exposed to the trauma. Family crisis intervention and organizational consultation also augment the model by fostering communications in families and organizations that alleviate the long-term effects of post-exposure issues (Everly, 2000).

Controversy currently surrounds the CISD or psychological debriefing model, with some authors advocating its use (e.g., Everly, Flannery, &

Eyler, 2002; Flannery & Everly, 2004), others noting that its efficacy is not established (e.g., Foy, Eriksson, & Trice, 2001; Hillman, 2002), and some concluding that the practice is potentially damaging (e.g., Devilly & Cotton, 2003). Hypotheses regarding the lack of efficacy of debriefing are that it interferes with natural recovery, it may foster negative thoughts about oneself, or it prematurely activates adrenergic activity, which fosters encoding of intrusive memories leading to PTSD (Friedman et al., 2004).

Empirical research for psychological debriefing is difficult, as random assignment to a control group (i.e., no intervention) is considered by many practitioners to be unethical and is difficult to do in the aftermath of a traumatic event. Research is also plagued by nonstandardized interventions; differing levels of facilitators' training; and wide variability in the types of trauma or disasters responded to, duration of the intervention, and timeliness of the intervention (Foy et al., 2001), as well as varying outcome measures (Deahl, Srinivasan, Jones, Neblett, & Jolly, 2001). Also in this realm is an ongoing debate about the term "psychological debriefing." It has been applied to multiple techniques and arbitrarily to nonstandardized interventions, and it has been seen by some as so problematic that it should no longer be used (National Institute of Mental Health, 2002). While this debate continues, the term "debriefing" is inherently useful in a military setting, and the concept of debriefing is accepted by military members. Therefore, discontinuation of the term by the military is not recommended.

### Historical Group Debriefing

Historical group debriefing (HGD) developed in WWII by Brigadier General Marshall to reconstruct military experiences for historical purposes, is based on the notion that interviewing an entire group of involved people is more accurate than interviewing individuals alone. Although this was not initially intended to be a psychological intervention for trauma, it was noted that the participants experienced relief after the debriefing (MacDonald, 2003). Shalev, Peri, Rogel-Fuchs, Ursano, and Marlowe (1998) noted a significant decrease in anxiety and an increase in self-efficacy when utilizing this approach, as well as increased group cohesion among soldiers exposed to combat.

## EARLY COGNITIVE-BEHAVIORAL INTERVENTIONS

Preliminary evidence supports the use of early cognitive-behavioral interventions (Gray & Litz, 2005), though it should be noted that they involve individuals who have experienced an independent trauma (e.g., rape or motor vehicle accident) as opposed to a group trauma (e.g., unit suicide,

terrorist attack, or destructive typhoon). Interventions are provided on an individual basis instead of in the more traditional group therapy format. Foa, Hearst-Ikeda, and Perry (1995) reported fewer symptoms of PTSD and depression in survivors of rape and physical assault (compared to an assessment-only control group) in individuals who received four sessions of psychoeducation, relaxation training, imaginal-exposure therapy, cognitive restructuring, *in vivo* exposure, and homework. Bryant, Harvey, Dang, Sackville, and Basten (1998) reported fewer instances of PTSD and depressive symptoms in survivors of severe motor vehicle accidents (compared to a supportive counseling-only control group) when using a similar intervention design as described above but with five sessions.

## BEHAVIORAL HEALTH RESPONSE AT THE PENTAGON

As the literature in this area evolves, so do the interventions utilized by both civilian and military personnel. The response at the Pentagon after the events of September 11, 2001, is an excellent example. On this day, at 0937, a hijacked commercial plane crashed into the Pentagon, only minutes after the attack on the World Trade Center in New York City. One hundred eighty-four individuals (not including the terrorist hijackers) died, including 75 Army personnel, 43 Navy personnel, 7 Defense Intelligence Agency personnel, and 59 American Airlines passengers and crew. Damage to the Pentagon, which houses 23,000 military and Department of Defense civilian personnel, was massive (Office of the Under Secretary of Defense, 2003).

The behavioral health response to the attack on the Pentagon displays the preparedness of U.S. military providers, an unprecedented pooling of behavioral health resources among the various branches of the military, government, and civilian organizations, and it is a powerful example of the wide array of mental health options available, as well as various ways in which similar interventions can be tailored for different groups of people.

There were varied mental health responses to this traumatic event. At ground zero, the SMART-SM focused on recovery workers and remained in effect 24 hours a day, 7 days a week (Cozza, Huleatt, & James, 2002). SMART-SM personnel focused on recovery workers' exposure to traumatic stimuli and on fostering positive mental health practices (e.g., breaks, hydration, and food).

The Pentagon Family Assistance Center (PFAC) coordinated much of the response effort; in the first month after the terrorist attacks, it staffed its offices 24 hours per day, logged 18,000 mental health contacts and 4,800 chaplain contacts, and coordinated the efforts of 2,500 military and civilian



September 11, 2001. A 200-foot gash exposes interior sections of the Pentagon following the terrorist attack. The attack on the Pentagon was just as psychological as it was physical, and these effects are still being addressed today. U.S. Navy photo by Photographer's Mate 2nd Class Bob Houlihan. Retrieved from *Navy NewsStand* ([www.news.navy.mil](http://www.news.navy.mil)).

personnel and volunteers (Office of the Under Secretary of Defense, 2003). Beyond these efforts, the PFAC provided a place where people could obtain accurate information and receive counseling and support services, as well as basic needs like food and lodging (Huleatt, LaDue, Leskin, Ruzek, & Gusman, 2002). The PFAC intervention for their emergency workers deviated somewhat from the traditional model. Brief education and support (BES) groups were implemented, with a focus on sharing experiences and reactions to them, as well as discussions of how group members were coping. The intent was to make the group predominantly educational in nature, with set limitations on discussions of traumatic experiences (Ruzek, 2002).

Because of the stigma often associated with mental health care, the behavioral health response to the Pentagon involved many informal and undocumented contacts between mental health professionals and survivors and relief workers. Operation Solace constituted the Army's behavioral health response to the Pentagon attack, with the objectives of minimizing long-term effects of the terrorist attack and preparing a response to terrorist activity in the future (Orman et al., 2002). Operation Solace adapted

principles initially learned in WW I for use in this disaster: PIECES OF PIES (see Chapter 10, this volume) were implemented: a Preventive, preclinical, and population-informed approach; Intervention geared toward preventing long-term problems; Enhancement of group cohesion; Consultation with leaders; increased communication geared to minimize Evacuation syndrome (i.e., the concept that individuals will seek evacuation from the situation if an exit exists); Surveillance contacts of every exposed individual; Occupational health orientation; Facilitating functioning; psychological Proximity of the trauma; Immediacy of interventions; Expectancy that this tragedy had meaning and individuals were supported; and Simplicity of interventions (Milliken et al., 2002). Army providers contacted Pentagon employees in their work space and normalized these contacts by simply walking around to communicate with employees, as opposed to setting up formal appointments.

The Navy employed “coffee rounds,” which met disaster relief workers housed aboard the hospital ship USNS *Comfort* during meals and stimulated informal conversations about coping, deemed necessary for the natural recovery process (Reeves, 2002), and also deployed a SPRINT team to the Navy Arlington Annex (Grieger & Lysczarz, 2002). The Navy also implemented counseling support and stress management education to the casualty assistance workers and casualty assistance calls officers (CACO; Schwerin, Kennedy, & Wardlaw, 2002). CACOs are active-duty volunteers who are trained to inform the next of kin that a loved one has died and to assist families in addressing such issues as planning funerals and navigating survivor benefits.

The Air Force critical incident stress teams (CIST) went “door to door” to each work section of the Pentagon, providing education and twice daily contacts to all staff; the teams made sure that individuals were aware of available resources and identified those in need of further assistance (Rowan, 2002). The Air Force activated CIST solely for the mortuary workers at the Dover Air Force Base Port Mortuary, who processed 188 human remains between September 13 and November 16, 2001 (Peterson, Nicolas, McGraw, Englert, & Blackman, 2002). Given that individuals who handle human remains often experience psychological distress (Keller & Bobo, 2002), the CIST provided daily briefing on stress management, sleep hygiene, and coping strategies, as well as preexposure preparation for inexperienced mortuary workers. Workers were reminded that interventions conducted in the course of mortuary duty were not recorded in the medical record; four individual sessions were available to each employee, again with no documentation in the military record.

Walter Reed Army Medical Center (WRAMC) immediately pooled all of its mental health personnel and prepared to care for injured victims,



New York, NY, September 17, 2001. Hospital Ship USNS *Comfort* (T-AH 20) docks pierside in Manhattan. The ship was deployed to New York to render assistance after the September 11 terrorist attack on the World Trade Center. Navy psychologists worked aboard the *Comfort*, providing psychological support to rescue workers. U.S. Navy photo by Chief Photographer's Mate Eric J. Tilford. Retrieved from *Navy NewsStand* ([www.news.navy.mil](http://www.news.navy.mil)).

their families, and their own medical staff both within WRAMC and at other local hospitals (Wain, Grammer, Stasinios, & Miller, 2002). These providers used a bedside therapeutic debriefing, which focused on normalizing responses, cognitive reframing when necessary, and stress management and coping education. Last, the Army (Center for Health Promotion and Preventive Medicine and Walter Reed Army Institute of Research) developed, field-tested (from October 15, 2001, to January 15, 2002), and validated a rapid assessment tool to identify those who may be at risk of developing a negative stress reaction (Hoge et al., 2002; Jordan et al., 2004).

In short, the work of these various groups was a deviation in the psychological response to disasters, implementing responsible interventions for a wide variety of individuals (e.g., injured victims, witnesses, family members, and responders) and using the most appropriate formats possible.

## SUMMARY

Both military and nonmilitary providers are required today, more than at any previous time, to respond to various types of disasters. In addition to routine traumas in the course of military work, society has been inundated with disasters of all types worldwide. Media headlines in recent years have included terrorist attacks in the United States, train bombings in Spain, bus bombings in England and Israel, and hotel bombings in international resort areas. The tsunami of December 26, 2004, which ripped through the coastlines of the Central Pacific after a magnitude 7.5 earthquake, has destroyed families, businesses, and national infrastructures of several developing nations. The emotionally and economically costly relief efforts were ongoing in 2005 as the world continued to experience massive storms. Developing in the Atlantic in July 2005, with outer weather bands the size of the state of Florida and wind speeds up to 150 miles per hour, hurricane Dennis was devastating. Dennis was just a prelude to hurricane Katrina, which struck in August 2005, was the size of the state of Ohio, and had massive wind speeds. Katrina hit Florida and Alabama and centered on Louisiana before moving toward the north-central U.S. continent and out into the North Atlantic, leaving in its wake horrific death and destruction. Rita and Wilma quickly compounded the impact of Katrina.

Psychologists who respond to such tragedies must conceptualize post-trauma interventions, using a model that takes into account individual and group characteristics of the survivors, type of disaster, and level of the trauma. Any intervention should be preventative and therapeutic and foster psychological resilience. Developing and implementing effective intervention and treatment strategies require strong clinical judgment, a comprehensive knowledge of the mental health disaster response literature, formal training in disaster response, supervised experience, solid research, and the ability to work as a team member among a wide variety of experts. It seems intuitive that no one model will work for every disaster and that research must continue to address the differentiation of normal recovery and pathological reactions (Friedman, Foa, & Charney, 2003), factors that increase resilience, and variability across disaster situations and within and between affected groups. As our understanding grows, we are sure to see the use of objective psychological tests and trauma symptom measures to identify personality and response variables to help develop more effective intervention models and identify those most likely to benefit from intervention. Although the field is an evolving one, the military mental health provider is well equipped to assist in both relief work and policy development—another way for practitioners to help service members, family members, and the community at large.

## REFERENCES

Acierno, R., Resnick, H., Kilpatrick, D. G., Saunders, B., & Best, C. L. (1999). Risk factors for rape, physical assault, and posttraumatic stress disorder in women: Examination of differential multivariate relationships. *Journal of Anxiety Disorders*, 13, 541-563.

Adler, A. B., Vaitkus, M. A., & Martin, J. A. (1996). Combat exposure and posttraumatic stress symptomatology among U.S. soldiers deployed to the Gulf War. *Military Psychology*, 8, 1-14.

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.

Bonanno, G. A. (2004). Loss, trauma, and human resilience. *American Psychologist*, 59, 20-28.

Brickman, P. (1982). Models of helping and coping. *American Psychologist*, 37, 368-384.

Bryant, R. A., Harvey, A. G., Dang, S. T., Sackville, T., & Basten, C. (1998). Treatment of acute stress disorder: A comparison of cognitive-behavioral therapy and supportive counseling. *Journal of Consulting and Clinical Psychology*, 66, 862-866.

Corneil, W., Beaton, R., Murphy, S., Johnson, C., & Pike, K. (1999). Exposure to traumatic incidents and prevalence of posttraumatic stress symptomatology in urban firefighters in two countries. *Journal of Occupational Health Psychology*, 4, 131-141.

Cozza, S. J., Huleatt, W. J., & James, L. C. (2002). Walter Reed Army Medical Center's mental health response to the Pentagon attack. *Military Medicine*, 167, 12-16.

Deahl, M. P., Srinivasan, M., Jones, N., Neblett, C., & Jolly, A. (2001). Evaluating psychological debriefing: Are we measuring the right outcomes. *Journal of Traumatic Stress*, 14, 527-529.

Devilly, G. J., & Cotton, P. (2003). Psychological debriefing and the workplace: Defining a concept, controversies and guidelines for intervention. *Australian Psychologist*, 38, 144-150.

DeWolfe, D. J. (2000). *Training manual for mental health and human service workers in major disasters*. Washington, DC: U.S. Department of Health and Human Services.

Everly, G. S. (2000). The role of pastoral crisis intervention in disasters, terrorism, violence, and other community crises. *International Journal of Emergency Mental Health*, 2, 139-142.

Everly, G. S., Flannery, R. B., & Eyler, V. A. (2002). Critical incident stress management (CISM): A statistical review of the literature. *Psychiatric Quarterly*, 73, 171-182.

Everly, G. S., & Mitchell, J. T. (1997). *Critical incident stress management* (2nd ed.). Ellicott City, MD: Chevron.

Flannery, R. B., & Everly, G. S. (2004). Critical incident stress management (CISM): Updated review of findings, 1998-2002. *Aggression and Violent Behavior*, 9, 319-329.

Foa, E. B., Hearst-Ikeda, D., & Perry, K. J. (1995). Evaluation of a brief cognitive-behavioral program for the prevention of chronic PTSD in recent assault victims. *Journal of Consulting and Clinical Psychology*, 63, 948-955.

Foy, D. W., Eriksson, C. B., & Trice, G. A. (2001). Introduction to group interventions for trauma survivors. *Group Dynamics: Theory, Research, and Practice*, 5, 246-251.

Friedman, M. J., Foa, E. B., & Charney, D. S. (2003). Towards evidence-based early interventions for acutely traumatized adults and children. *Biological Psychiatry*, 53, 765-768.

Friedman, M. J., Hamblen, J. L., Foa, E. B., & Charney, D. S. (2004). Fighting the psychological war on terrorism. *Psychiatry: Interpersonal and Biological Processes*, 67, 123-136.

Gray, M. J., & Litz, B. T. (2005). Behavioral interventions for recent trauma: Empirically informed practice guidelines. *Behavior Modification*, 29, 189-215.

Grieger, T. A., & Lysczarz, J. L. (2002). Psychiatric responses by the U.S. Navy to the Pentagon attack. *Military Medicine*, 167, 24-25.

Grossman, D. (1995). *On killing: The psychological cost of learning to kill in war and society*. Boston: Back Bay Books; Little, Brown.

Hillman, J. L. (2002). *Crisis intervention and trauma: New approaches to evidence-based practice*. New York: Kluwer Academic/Plenum.

Hoge, C. W., Engel, C. C., Orman, D. T., Crandell, E. O., Patterson, V. J., Cox, A. L., et al. (2002). Development of a brief questionnaire to measure mental health outcomes among Pentagon employees following the September 11, 2001 attack. *Military Medicine*, 167, 60-63.

Huleatt, W. J., LaDue, L., Leskin, G. A., Ruzek, J., & Gusman, F. (2002). Pentagon family assistance center inter-agency mental health collaboration and response. *Military Medicine*, 167, 68-70.

James, R. K., & Gilliland, B. E. (2001). *Crisis intervention strategies* (4th ed.). Belmont, CA: Brooks/Cole.

Jordan, N. N., Hoge, C. W., Tobler, S. K., Wells, J., Dydek, G. J., & Egerton, W. E. (2004). Mental health impact of 9/11 Pentagon attack: Validation of a rapid assessment tool. *American Journal of Preventive Medicine*, 26, 284-293.

Keller, R. T., & Bobo, W. V. (2002). Handling human remains following the terrorist attack on the Pentagon: Experiences of 10 uniformed health care workers. *Military Medicine*, 167, 8-11.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.

Lerner, M. D. (2005). In the aftermath of hurricanes Rita and Katrina. *September 25, 2005 trauma response e-news*. Commack, NY: American Academy of Experts in Traumatic Stress.

Lerner, M. D., & Shelton, R. D. (2005). *Comprehensive acute traumatic stress management*. Commack, NY: American Academy of Experts in Traumatic Stress.

Lewis, J. A., Lewis, M. D., Daniels, J. A., & D'Andrea, M. J. (2003). *Community counseling: Empowerment strategies for a diverse society* (3rd ed.). Belmont, CA: Brooks/Cole.

Litz, B. T., Gray, M. J., Bryant, R. A., & Adler, A. B. (2002). Early intervention for

trauma: Current status and future directions. *Clinical Psychology: Science and Practice*, 9, 112–134.

MacDonald, C. M. (2003). Evaluation of stress debriefing interventions with military populations. *Military Medicine*, 168, 961–968.

McNally, R. J. (2003). Progress and controversy in the study of posttraumatic stress disorder. *Annual Review of Psychology*, 54, 229–252.

Meichenbaum, D. H., & Deffenbacher, J. L. (1988). Stress inoculation training. *The Counseling Psychologist*, 16, 69–90.

Milliken, C. S., Leavitt, W. T., Murdock, P., Orman, D. T., Ritchie, E. C., & Hoge, C. W. (2002). *Military Medicine*, 167, 48–57.

Mitchell, J. T., & Everly, G. S. (1998). *Critical incident stress management: The basic course workbook* (2nd ed.). Ellicott City, MD: International Critical Incident Stress Foundation.

National Institute of Mental Health. (2002). *Mental health and mass violence: Evidence-based early psychological intervention for victims/survivors of mass violence. A workshop to reach consensus on best practices*. Washington, DC: U.S. Government Printing Office.

Newman, R. (2005). APA's resilience initiative. *Professional Psychology: Research and Practice*, 36, 227–229.

Office of the Under Secretary of Defense. (2003). *Response to the terrorist attack on the Pentagon: Pentagon Family Assistance Center (PFAC) after action report*. Washington, DC: Author. Retrieved September 17, 2005, from [www.mfrcc-dodqol.org/Enduring\\_Freedom/pdfs/Crisis\\_Report-new.indd/pdf](http://www.mfrcc-dodqol.org/Enduring_Freedom/pdfs/Crisis_Report-new.indd/pdf).

Orman, D. T., Robichaux, R. J., Crandell, E. O., Patterson, V. J., Hoge, C. W., Engel, C. C., et al. (2002). Operation Solace: Overview of the mental health intervention following the September 11, 2001 Pentagon attack. *Military Medicine*, 167, 44–47.

Peterson, A. L., Nicolas, M. G., McGraw, K., Englert, D., & Blackman, L. R. (2002). Psychological intervention with mortuary workers after the September 11 attack: The Dover behavioral health consultant model. *Military Medicine*, 167, 83–86.

Reeves, J. J. (2002). Perspectives on disaster mental health intervention from the USNS Comfort. *Military Medicine*, 167, 90–92.

Rowan, A. B. (2002). Air Force critical incident stress management outreach with Pentagon staff after the terrorist attack. *Military Medicine*, 167, 33–35.

Ruzek, J. I. (2002). Providing “brief education and support” for emergency response workers: An alternative to debriefing. *Military Medicine*, 167, 73–75.

Schwerin, M., Kennedy, K., & Wardlaw, M. (2002). Counseling support within the Navy mass casualty assistance team post-September 11. *Military Medicine*, 167, 76–78.

Shalev, A. Y., & Freedman, S. (2005). PTSD following terrorist attacks: A prospective evaluation. *American Journal of Psychiatry*, 162, 1188–1191.

Shalev, A. Y., Peri, T., Rogel-Fuchs, Y., Ursano, R. J., & Marlowe, D. (1998). Historical group debriefing after combat exposure. *Military Medicine*, 163, 494–498.

Sutker, P., & Allain, A. (1996). Assessment of PTSD and other mental disorders in

WWII & Korean POWs and combat veterans. *Psychological Assessment*, 8, 18–25.

U.S. Department of Health and Human Services. (2004). *Mental health response to mass violence and terrorism: A training manual*. Rockville, MD: Center for Mental Health Services, Substance Abuse and Mental Health Services Administration.

Wain, H. J., Grammer, G. G., Stasinios, J. J., & Miller, C. M. (2002). Meeting the patients where they are: Consultation-liaison response to trauma victims of the Pentagon attack. *Military Medicine*, 167, 19–21.

Watson, P. (2004). Behavioral health interventions following mass violence. *Traumatic StressPoints*, 18. Retrieved September 17, 2005, from [www.istss.org/publications/TS/Winter04/Winter04toc.htm](http://www.istss.org/publications/TS/Winter04/Winter04toc.htm).

Yi, J. P., Smith, R. E., & Vitaliano, P. P. (2005). Stress-resilience, illness, and coping: A person-focused investigation of young women athletes. *Journal of Behavioral Medicine*, 28, 257–265.

## CHAPTER 17



# Assessment and Selection of High-Risk Operational Personnel

JAMES J. PICANO

THOMAS J. WILLIAMS

ROBERT R. ROLAND

Operational psychologists are often involved in either developing or providing direct input into assessment and selection (A&S) processes for individuals involved in high-demand and high-risk missions. For the purposes of this chapter, a high-demand, high-risk mission involves nonstandard, unconventional demands in a denied or hostile operating environment in various cultural settings. These missions are likely to present many unknown and often uncontrollable factors in which an individual's success in avoiding failure and/or capture must often depend on one's ingenuity, expertise, initiative, and a high degree of common sense. Consequently, operational psychology support may range from the identification, design, and development of A&S processes and procedures to research on and validation of A&S decisions based on real-world operational outcomes.

In this chapter, we identify a number of the essential attributes from relevant published accounts of high-demand operational personnel, from our experiences within different operational assessment and selection programs, and from the results of a survey of experts in the selection of special military populations.

It is our contention that personnel who are especially well suited for high-demand operational occupations possess an identifiable set of attributes regardless of their specific mission or job. Though these attributes may be essential to successful adaptation regardless of the occupation, they may not be sufficient for any one particular occupation because of additional unique requirements. However, such attributes represent the core of those required for success, and their assessment is essential for any position under consideration.

Personnel who must perform high-demand, nonroutine military duties under hazardous and demanding conditions undergo stringent psychological A&S procedures. The goal is to evaluate the "psychological fitness" (Braun & Wiegand, 1991) of the applicant for unconventional military assignment. These operational personnel have special skills and abilities beyond those of their peers, and they must perform "no-fail" missions under challenging or extreme environmental conditions (including combat). Common psychological A&S programs include those for military pilots (Turnbull, 1992; see also Hilton & Dolgin, 1991), and special operations personnel, including U.S. Army Special Forces, U.S. Navy Seals, and Marine Corps Force Reconnaissance (Stolrow, 1994), as well as personnel from other government agencies, such as astronauts (Santy, Holland, & Faulk 1991) and drug interdiction teams.

We differentiate these "special warriors" (Mountz, 1993) from other personnel whose positions demand reliability but entail less environmental challenge, including nuclear power plant operators, airline pilots, air traffic controllers, and most emergency services suppliers, with the notable exceptions of police special operations or SWAT teams and bomb disposal experts. Personnel in these so-called high-reliability occupations (Flin, 2001) certainly have their own set of unique psychological demands. Other high-risk personnel, who must work in isolated and or confined environments (e.g., submariners and polar station inhabitants), probably occupy a borderland in our conceptualization, depending on how extreme the environmental challenge. The reader is referred to Suedfeld and Steel (2000) for a comprehensive discussion of issues related to these personnel.

Assessing and selecting high-demand military operational personnel involves two stages: selecting out and selecting in (Suedfeld & Steel, 2000). In the selecting (or screening) out phase, the assessment of psychological and emotional stability—that is, freedom from psychopathology and a minimal risk of developing psychological problems in the future—is of central concern. Assessment and selection procedures to screen out typically involve records reviews, psychological testing, and interviews. Some specialized high-demand military positions (e.g., sniper training), may depend entirely on a screening-out psychological selection process, for example, screening out someone with high emotional instability through a personal-

ity inventory such as the Minnesota Multiphasic Personality Inventory-2 (MMPI-2; Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989).

On the other hand, "selecting in" involves finding the best suited candidates for the nature of the work. Put another way, select in procedures are oriented to evaluating candidates for the complex skills and psychological attributes necessary for successful performance under unusually demanding conditions. Ideally these essential attributes are identified from job analyses, though more often they emerge from expert opinion, and previous empirical findings.

## ESSENTIAL ATTRIBUTES OF HIGH-DEMAND OPERATIONAL PERSONNEL

Little is published on essential attributes since most organizations are understandably reluctant to expose the details of their A&S processes and procedures. Many details of operational selection programs are classified (a point made by Flin, 2001, for other high-reliability personnel), and security concerns preclude their publication. Even when programs are not classified, the complexity and importance of maintaining the security of various A&S techniques and procedures results in a reluctance among many psychologists to share the details of their efforts in order to extend the "shelf life" of their processes. Measures and methods lose their value and utility as candidates gain access to the process, either by repeated exposure (reapplying), word of mouth, or access to scientific reports.

Consequently, there is a dearth of empirical literature identifying attributes for high-demand operational personnel defined *a priori* through the use of job analyses or expert surveys. Most often, one encounters a scattering of studies of various personnel in high-demand occupations in which one group is contrasted with a reference sample from the general population (or a similar comparison group) on a number of personality and psychological characteristics in an attempt to establish a psychological profile for the personnel under study.

The first formal attempt in the U.S. military to identify and assess key psychological attributes for high-demand military operational personnel was the A&S program for the Office of Strategic Services (OSS) during World War II (WWII; Fiske, Hanfmann, MacKinnon, Miller, & Murray, 1997; OSS Assessment Staff, 1948). Parenthetically, psychologists were involved in selection during World War I (WWI) and WWII prior to the establishment of the OSS, but their efforts were primarily directed at the assessment of intelligence and psychomotor skills, especially for military aeronautics (Resnick, 1997; see also Anastasi, 1988; Vane & Motta, 1984; Yoakum & Yerkes, 1920).

The OSS approach was the first coherent effort to establish a structured method to assess qualities deemed necessary for successful performance of hazardous military duties. This ambitious project, begun toward the end of the war, comprised a set of processes and procedures designed to reveal significant aspects of personality functioning, reflecting a recruit's potential to perform clandestine military operations, often deep behind enemy lines. It developed largely because prevailing selection methods (intelligence tests) proved ineffective in predicting success in the field (Handler, 2001; OSS Assessment Staff, 1948). Led by Henry Murray, already prominent from his position as director of the Harvard Psychological Clinic, the OSS staff comprised some of the nation's foremost psychologists and psychiatrists of the time, as well as others who went on to distinguished academic careers (e.g., Donald Adams, Donald Fiske, Urie Bronfenbrenner, Kurt Lewin, O. H. Mowrer, Edward Tolman, Eugenia Hanfmann, and Morris Stein). The OSS assessment and selection program was designed by these talented individuals in concert with military training specialists experienced in clandestine activities. However, they were almost certainly influenced by selection programs in Germany and Great Britain (Handler, 2001).

As noted by the OSS staff (Fiske et al., 1997; OSS Assessment Staff, 1948) and reinforced by Handler (2001), a number of factors made it difficult to identify specific attributes for assessment: No job analyses were available, jobs varied widely, and often a candidate was later placed in a different position than that known to the staff at the time of assessment. As a result, the OSS staff decided that each candidate would be judged on a set of general dispositions, qualities, and abilities essential to the effective performance of most of the assignments of OSS personnel overseas. In essence, these general qualifications became the core essential attributes of clandestine operations personnel and were basic to the OSS assessment process regardless of the methods used to evaluate them. The seven general areas outlined by the OSS staff included motivation for assignment, energy and initiative, effective intelligence, emotional stability, social relations, leadership, and security. The staff also evaluated additional "special qualifications" that were specific to one or two branches of the OSS and added three of them to the list of general attributes: physical ability, observing and reporting, and propaganda skills (Fiske et al., 1997; OSS Assessment Staff, 1948).

More recently, Kilcullen, Mael, Goodwin, and Zazanis (1999) identified individual attributes that predict effective on-the-job performance of soldiers in U.S. Army Special Forces (SF). Kilcullen et al. used a job analysis of SF positions conducted by Russell, Crafts, Tagliareni, McCloy, and Barkley (1994) as a basis for identifying attributes that were "best bet" predictors of performance. To do so, a group of psychologists and senior SF

soldiers (subject matter experts) examined a wide array of attributes and identified 30 that were relevant to SF job performance. These critical individual attributes were broadly grouped into four categories. *Cognitive* attributes included judgment and decision making, planning, adaptability, creativity, and specific cognitive skills (auditory, mechanical, spatial, math, and perceptual speed and accuracy). *Communication* attributes included reading and writing ability, language ability (learn new languages quickly), and communication abilities (verbal and nonverbal abilities). *Interpersonal, motivational, and character attributes* included diplomacy, cultural adaptability, maturity (emotional stability), autonomy, team playership, dependability, initiative, perseverance, moral courage, motivating others, and supervising. Finally, *physical* attributes included swimming, flexibility and balance, strength, and endurance.

In attempting to predict which of the attributes were most predictive of successful performance among well-adapted SF soldiers, Kilcullen et al. (1999) used rationally developed biodata scales that assessed similar though not exact constructs of the attributes they had identified. Even in this relatively homogeneous sample, motivational attributes (cognitive flexibility, work motivation, and achievement orientation) predicted SF field performance.

Hartmann, Sunde, Kristensen, and Martinussen (2003) studied Norwegian Naval Special Forces (NSF) candidates, searching for personality measures that predicted successful NSF training performance. To select their measures, they relied on both a job analysis and a description by subject matter experts of the personal attributes required for success in NSF. Of interest for our purposes are the attributes identified and reported in their article:

... the ideal marine aspirant was characterized as a highly gifted person, expressing above average emotional control, reality testing, and tolerance for stress. He has stamina, is able to quickly acquire theoretical knowledge and practical skills, can cope well with people, manages stress and ambiguity successfully, shows emotional stability, forms reasonable conclusions on the basis of sufficient evidence, and demonstrates goal-directed behavior based upon detached realistic judgments, and coherent cognition. (p. 88)

As part of an extended evaluation of a U.S. Air Force special-duty assessment and selection program, Patterson, Brockway, and Greene (2004) described the critical attributes necessary for high-demand operational duties developed in conjunction with a panel of experienced special-duty Air Force personnel who primarily served in organizational leadership positions. These experts identified 11 critical performance attributes: emotional stability and stress tolerance, effective intelligence and problem solv-

ing, motivation and commitment, integrity, attitudes toward and interactions with others, physical ability, security, maturity and self-awareness, work ethic, flexibility, and positive impact of family. Patterson et al. found that assessment of an individual's overall suitability for assignment to special duty positions based on a semistructured interview was correlated with later supervisors' ratings for 7 of the 11 attributes. It is interesting that the ratings of attitudes and interactions with others, physical ability, work ethic, and flexibility (adaptability) were not related to the psychologists' recommendations, suggesting that certain attributes may have more validity when assessed and/or observed over time.

Astronauts are an interesting group of high-demand operational personnel, which includes both military and civilian personnel, pilots and nonpilots, who are working within a quasi-military structure. There are two basic job classifications for astronauts, pilot and mission specialist (a third category, not traditionally included in the astronaut selection program, is payload specialist). The skill requirements for these positions are quite different, and the mission profiles vary in the National Aeronautics and Space Administration (NASA) so that astronauts may fly both short and long duration missions. Not surprisingly, personnel who want to become astronauts have quite different backgrounds and skills, and the subsequent performance demands are varied and multifaceted (Fogg & Rose, 1995). Thus, psychological assessment of the suitability of a candidate for aeronautics demands an appraisal of general attributes that apply regardless of the specific position or mission profile.

In a review of astronaut selection criteria for projects Mercury through the space shuttle, Senty et al. (1991) found that such qualities as intelligence, drive, independence, adaptability, flexibility, motivation, emotional stability, and lack of impulsivity were necessary for success. Later work by Galarza and Holland (1999) identified 10 attributes required for success on both short and long space missions: family issues (ability to cope with long separations from family), performance under stressful conditions, group-living skills (multicultural adaptability and humor), teamwork skills, self-regulation (emotional stability), motivation, judgment and decision making, conscientiousness (achievement, order, and integrity), communication skills (interpersonal, presentational, and diplomatic), and leadership capability (decisiveness, flexibility, and ability to motivate others).

Recently, James J. Picano and Robert R. Roland served as consultants in the development of a specialized Department of Defense A&S program for high-demand operational positions. These positions required behavioral reliability, multiple and extended separations from family, and performance of critical and sensitive missions under conditions of extreme threat.

We submitted a list of over 80 attributes—compiled from the literature and from materials we have accumulated in our experience with several

special selection programs—to a panel of nine subject matter experts. These experts all had operational experience in one or more high-demand military organizations, and most were involved in the selection and training of personnel for nonroutine and unconventional military positions.

The panel members were asked to rate each of the attributes according to a 5-point scale corresponding to how critical the attribute was for successful performance (5 = absolutely essential; 1 = unimportant). We considered an attribute to be essential if it was rated “absolutely essential” by at least five of the nine judges or if the average rating from all of the judges was over 4. With this method we identified over 40 individual attributes that were conceptually grouped into 7 broad categories comprising 20 different facets. These are shown in Table 17.1. We also note the overlap with attributes identified by others.

As is evident, there is considerable agreement about essential attributes for successful performance of high-demand operational positions. Four areas stand out as critical or essential across high-demand operational personnel over time (WWII to the present) and across cultures: stress resilience, adaptability, cooperation with others, and overall physical fitness and stamina.

Critical to successful performance is psychological hardiness and stress tolerance. All of the accounts emphasize some aspect of emotional stability, staying calm under pressure, effective performance under stress, and emotional control. In addition, adaptability to changing demands or circumstances is the only cognitive attribute area to emerge across all of the samples. A third critical area, labeled “cooperation” by us, is captured by other terms, such as “teamwork ability” or “effective group interactions.” It pertains to the degree to which the individuals are aware that they must subordinate self-interest and work cooperatively with others to accomplish goals. Finally, perhaps because high-demand operational occupations by definition involve extreme and unusual environmental and physical challenges, all of the samples we reviewed stress physical fitness and stamina.

To this listing we would add three other attributes identified by all but one of the samples: judgment, motivation, and initiative. Exercising good judgment and reasoning in decision making is described in various ways in most of the different accounts, but certainly it seems to be a critical part of effective functioning in high-demand operations. Likewise, nearly all of the descriptions emphasize high intrinsic motivation, defined in terms of patriotism, the desire to perform a given mission, and commitment to the work and organization. Initiative and self-sufficiency are also emphasized in one way or another by almost all of the accounts.

Notably, aspects of character or conscientiousness, such as integrity, moral courage, and dependability, have emerged as consistent predictors of

TABLE 17.1. Subject Matter Expert Derived Critical Attributes for Successful Performance of High-Demand Operational Jobs

Domain	Facet	Attribute	WWII clandestine operatives <sup>a</sup>	U.S. Army Special Forces soldiers <sup>b</sup>	U.S. Air Force Special Duty <sup>c</sup>	Norway Naval Special Forces <sup>d</sup>	NASA astronauts <sup>e</sup>
Security	Operational security	<ul style="list-style-type: none"> <li>Maintain operational security.</li> <li>Avoid calling undue attention to oneself.</li> </ul>	X		X		
Information processing	Observing and reporting	<ul style="list-style-type: none"> <li>Report important information accurately and concisely.</li> <li>Retain important information under pressure.</li> <li>Extract important information under pressure.</li> <li>Absorb new information quickly.</li> <li>See beyond the surface appearance.</li> </ul>	X			X	
Effective intelligence and reasoning	Planning	<ul style="list-style-type: none"> <li>Plan and organize activities and resources to meet objectives.</li> <li>Prioritize multiple critical tasks in a timely fashion.</li> </ul>	X	X			
	Adaptability	<ul style="list-style-type: none"> <li>Act promptly to changing demands; modify plans to fit situation.</li> </ul>	X	X	X	X	X
	Problem solving	<ul style="list-style-type: none"> <li>Find novel ways to use resources at hand in solving problems; think outside the box.</li> <li>Think creatively.</li> </ul>	X		X		X
	Judgment	<ul style="list-style-type: none"> <li>Assess risks, likely outcomes, and possible repercussions in problem-solving situations.</li> <li>Carefully weigh courses of action.</li> <li>Be operationally patient—make the right decision.</li> </ul>	X	X		X	X
	Decisiveness	<ul style="list-style-type: none"> <li>Make decisions in real time, under pressure, and meet operational deadlines.</li> <li>Commit to a course of action.</li> </ul>			X		

	Communication	<ul style="list-style-type: none"> <li>• Listen effectively.</li> <li>• Communicate well with others.</li> </ul>	X		X
Emotional stability	Composure	<ul style="list-style-type: none"> <li>• Demonstrate presence of mind; think and act promptly under stress.</li> <li>• Be comfortable in high-pressure situations.</li> <li>• Remain calm, composed, and in control of feelings and emotions under stress (fear, isolation, fatigue, detention).</li> </ul>		X	X
	Stress resilience	<ul style="list-style-type: none"> <li>• Be emotionally resilient, sturdy.</li> <li>• Tolerate difficulties and frustrations well.</li> <li>• Be effective in an emergency or during periods of stress.</li> </ul>	X	X	X
	Confidence	<ul style="list-style-type: none"> <li>• Be confident of abilities.</li> </ul>			X
	Initiative	<ul style="list-style-type: none"> <li>• Be ambitious, motivated to advance and achieve.</li> <li>• Display initiative.</li> </ul>	X	X	X
Initiative, motivation and drive	Motivation	<ul style="list-style-type: none"> <li>• Be self-motivated and directed.</li> <li>• Be self-sufficient and comfortable working alone.</li> <li>• Be motivated by challenges.</li> </ul>	X	X	X
	Perseverance	<ul style="list-style-type: none"> <li>• Persist; complete tasks despite boredom/distraction, hardship.</li> <li>• Sustain a high level of effort over long periods of time despite hardships.</li> </ul>	X	X	X
	Self-discipline	<ul style="list-style-type: none"> <li>• Maintain self-discipline and self-control.</li> </ul>		X	X
	Dependability	<ul style="list-style-type: none"> <li>• Follow through on duties.</li> <li>• Be reliable.</li> </ul>	X	X	X
Character	Integrity	<ul style="list-style-type: none"> <li>• Own up to errors.</li> <li>• Accept responsibility for actions.</li> </ul>	X	X	X
	Moral courage	<ul style="list-style-type: none"> <li>• Do “the hard right thing.”</li> </ul>	X	X	
	Cooperation	<ul style="list-style-type: none"> <li>• Put group goals ahead of individual goals.</li> <li>• Share credit and accept blame.</li> </ul>	X	X	X
					(continued)

TABLE 17.1. (continued)

Domain	Facet	Attribute	WWII clandestine operatives <sup>a</sup>	U.S. Army Special Forces soldiers <sup>b</sup>	U.S. Air Force Special Duty <sup>c</sup>	Norway Naval Special Forces <sup>d</sup>	NASA astronauts <sup>e</sup>
Physical ability	Fitness/stamina	• Maintain physical readiness.	X	X	X	X	X

<sup>a</sup>Fiske et al. (1997); <sup>b</sup>Kilcullen et al. (1999); <sup>c</sup>Patterson et al. (2004); <sup>d</sup>Hartmann et al. (2003); <sup>e</sup>Galarza and Holland (1999).

on-the-job performance for modern-day selection programs in the United States (see, e.g., Barrick & Mount, 1991).

Two attribute areas in only two accounts are family stability and leadership, including supervising and motivating others (Galarza & Holland, 1999; Kilcullen et al. 1999). Though it is tempting to see these attributes as unique to the samples in which they are described, psychologists familiar with selecting high-demand operational personnel can easily appreciate their importance for success, regardless of the specific mission. In fact, in her discussion of personality competencies for high-reliability occupations, Flin (2001, p. 254) asserts that “stress-resistance, decision making, and leadership skills are essential attributes.”

## PERSONALITY ATTRIBUTES OF HIGH-DEMAND OPERATIONAL PERSONNEL

The “Big Five” personality model has emerged as a useful framework for organizing and characterizing personality, especially in predicting job performance (Barrick & Mount, 1991, 1993). It offers a comprehensive yet parsimonious strategy that is replicable across different theoretical and assessment approaches (measures and sources), cultures, and languages. The Big Five factors are *emotional stability*, including stress tolerance, resilience, and freedom from negative emotionality; *extraversion*, which includes sociability, ambition, dominance, positive emotionality, and excitement seeking; *openness to experience* or *intellectance*, which includes creativity, unconventionality, broad-mindedness, and receptiveness to inner life; *agreeableness*, an interpersonal stance of cooperation, trustfulness, compliance, and affability; and *conscientiousness*, including dependability, striving for achievement, organization, and planning.

Hogan and Lesser (1996) use the Big Five as a way of framing the personality requirements for selecting personnel in hazardous occupations. Based on their review, they propose that emotional stability, conscientiousness, and openness to experience might be important predictors of success in hazardous occupations.

Using the NEO Personality Inventory—Revised (NEO-PI-R; Costa & McCrae, 1992), a popular measure of the Big Five, Callister, King, Retzlaff, and Marsh (1999) show that USAF flight students are higher than the normative population in extraversion and lower in agreeableness. They are also higher than the normative sample on several facets of conscientiousness, such as achievement striving, dutifulness, and competence. In an earlier work, Bartram (1995) found British student pilots to be higher than the normative population on Big Five dimensions of emotional stability and extraversion.

Several studies have contrasted various groups of high-demand operational personnel with normative samples on measures of personality in order to characterize their unique personality attributes. This method highlights the personality homogeneity of the personnel. The most extensive literature involves military pilots. Consistent findings across time and with different personality measures show that military pilots, regardless of gender, are more achievement-oriented, outgoing, active, competitive, and dominant and less introspective, emotionally sensitive, and self-effacing than nonflying counterparts drawn from the general population (Ashman & Telfer, 1983; Callister et al., 1999; Fine & Hartman, 1968; Picano, 1991; Retzlaff & Gibertini, 1987).

There also have been several personality studies of personnel who perform explosive ordnance disposal (EOD). Early reports of personality characteristics of successful bomb disposal operators from the 16 Personality Factor Model (16PF; e.g., Cattell, Eber, & Tatsuoka, 1970; Russell & Karol, 1994) found them to have emotional control, along with low levels of affiliation, and to be more unconventional and less bound by traditional thinking than less experienced peers (Cooper, 1982). Using the Hogan Personality Inventory (HPI) with U.S. Navy EOD divers, Hogan and Hogan (1989) found them to be more self-assured, well-adjusted, agreeable, and adventuresome than referent groups from the general population. Van Wijk and Waters (2001) used the 16PF to describe personality characteristics of South African Navy underwater sabotage device disposal (USDD) operators. According to their findings, USDD personnel are adventurous, assertive, self-assured, emotionally stable, and tough-minded. They do not show the social distance found by Cooper in EOD personnel, a finding that van Wijk and Waters attribute to the emphasis on teamwork in their sample, as well as to differences in the larger population (divers) from which the USDD personnel were drawn. As a whole, the findings suggest that personnel who dispose of explosives are emotionally stable, think unconventionally, are self-assured, and seek adventure. Sociability appears to vary by the sample studied.

In a study of U.S. Naval Special Forces (NSF) candidates, McDonald, Northon, and Hodgdon (1990) found that successful completers of demanding training differed from unsuccessful personnel on four dimensions of the HPI (which taps all of the dimensions of the big five). Successful NSF candidates are more sociable (extraversion), emotionally stable, and likeable (agreeableness) than unsuccessful candidates. Contrasting successful and unsuccessful candidates for Norwegian NSF on the Big Five personality factors, Hartmann et al. (2003) found that both emotional stability and extraversion entered the logistic regression prediction equation. However, extraversion entered negatively, opposite that predicted, and in contrast to the findings of McDonald et al.

Though somewhat variable, the findings do suggest some trends. Personnel in high-demand operational positions, when compared to the general population, are consistently higher in emotional stability and facets of conscientiousness. Results for extraversion and agreeableness vary with the population under study. Openness to experience does not figure prominently in the findings.

Although the broad dimensions of the Big Five are helpful in examining general similarities and differences among high-demand personnel, much can be learned about the core, as well as unique personality attributes for different positions, by looking at different facets of these domains. To illustrate, we compare the patterns of normative differences on the NEO-PI-R for two samples: USAF flight students (Callister et al., 1999) and elite military personnel undergoing evaluation for high-stress, nonstandard positions (cf. Picano, Roland, Rollins, & Williams, 2002). The average age for the latter sample is 32 years. All were extensively prescreened and passed medical, physical, occupational, and psychological standards.

As Table 17.2 shows, candidates for high-demand positions differ from the general population in similar ways on a number of personality dimensions that suggest core personality features or attributes for high-demand operational personnel. They appear to be resilient, dominant, assertive, and energetic. Reliable and responsible, they are competitive, with a strong drive for mastery and achievement. Tough-minded, they can be unsympathetic to the needs of others and manipulative when necessary. These characteristics are consistent with previous findings and expectations, although these two samples differ on a number of dimensions that might suggest personality attributes unique to their duties. For example, compared to the general population, flight students are more outgoing, gregarious, and receptive to inner emotional life, with more traditional values. Elite soldiers, relative to the general population, are lower in negative affectivity and more emotionally closed, methodical, and disciplined. It should be remembered that these findings pertain to candidates and not to successful incumbents, though self-report personality tests have not been robust predictors of success in training for flight students (Martinussen, 1996) or for other high-stress, nonstandard military duties in our own assessment center (Picano, Roland, Rollins, & Williams, 2002).

## SUMMARY

Our purpose in this chapter is to highlight an important role for operational psychologists in identifying and using core psychological attributes among individuals who participate in high-demand, high-risk operational occupations. The picture that emerges from studies of personality, as well

TABLE 17.2. Differences from the General Population on the NEO-PI-R for Two Samples of High-Demand Operational Personnel

Domain	Male USAF flight students (n = 1,198)	Elite male U.S. soldiers (n = 340)
Neuroticism	Lower in vulnerability	Lower in vulnerability anxiety impulsiveness depression self-consciousness anger
Extraversion	Higher in excitement seeking assertiveness activity gregariousness positive emotions	Higher in excitement seeking assertiveness activity
Openness to Experience	Higher in actions fantasy feelings ideas	Higher in actions
	Lower in values	Lower in fantasy feelings aesthetics
Agreeableness		Higher in trust
	Lower in trust straightforwardness compliance tender-mindedness modesty	Lower in straightforwardness compliance tender-mindedness
Conscientiousness	Higher in achievement striving competence dutifulness	Higher in achievement striving competence dutifulness self-discipline deliberation

*Note.* Higher is greater than or equal to the 60th percentile for the normative sample. Lower is lower than or equal to the 40th percentile for the normative population.

as from rationally developed *a priori* criteria, is of an individual with exceptional stress tolerance, emotional stability, and physical fitness; a high degree of intrinsic motivation, initiative, and competitive drive; exceptional reliability and integrity; and capacity for sound judgment and reasoning under stress. Tough-minded and independent, these individuals may be more or less gregarious and interpersonally skilled. Although these core attributes may be helpful in the design of A&S programs for high-demand operational personnel, they are probably best considered necessary but insufficient for any one occupational group because of unique demands and functions. Nevertheless, such core attributes can serve as the basis for establishing essential attributes for any high-demand operational position.

There is less convergence around the methods for assessing essential psychological attributes for high-demand personnel. Procedures range from the use only of psychological testing—to select out candidates without the requisite emotional stability—to the more complex and demanding assessment centers with structured interviews, psychological testing, and individual and group exercises to select in the best-qualified applicants.

Regardless of the nature of the program, there are some important considerations for assessment in specialized selection programs, all of which were identified by the OSS staff over 60 years ago (OSS Assessment Staff, 1948). These include the principle of “multiform procedures,” defined as the use of many different kinds of evaluation techniques such as interviews and various tests; the use of “lifelike” tasks, with operational fidelity, that elicit essential attributes for the job, as well as an assessment of the candidate’s potential for training; and the development of an integrated formulation of the applicant’s personality (Fiske et al., 1997). Unfortunately, as Handler (2001) notes, these recommendations seem to have been forgotten after the emergence of the structured self-report personality test, which contributes little on its own to predicting success in high-demand occupations (Martinussen, 1996). In addition, following Campbell and Fiske (1959), each A&S process should strive for a clear end-state composed of a set of constructs for the types of traits or characteristics judged to be important, along with a clear understanding of their interrelatedness, and use a variety of independent methods to assess and predict success.

Projective personality measures, available to the staff of the OSS and long since abandoned by selection psychologists, appear to be again showing some promise in assessing high-demand operational personnel (Hartmann et al., 2003; Picano, Roland, Williams, & Rollins, *in press*). Finally, the five factor model (FFM) has helped make the dizzying array of personality attributes available for assessment more comprehensible by casting them within its nomothetical net, and it has somewhat simplified the problem of developing an integrated formulation of personality. How-

ever, reliance on the FFM also raises the possibility of oversimplification by ignoring other potentially useful formulations of personality (see, e.g., Block, 1995). In closing, we urge the assessment of essential personality attributes by using tests and techniques that tap a wide array of personality characteristics, as well as the use of different measures and methods to assess similar constructs. It is only in consistent findings across different models and methods that an accurate portrait emerges of individuals who successfully engage in high-demand operational occupations.

## REFERENCES

Anastasi, A. (1988). *Psychological testing* (6th ed.). New York: Macmillan.

Ashman, A., & Telfer, R. (1983). Personality profiles of pilots. *Aviation, Space, and Environmental Medicine*, 54, 940-943.

Barrick, M. R., & Mount, M. K. (1991). The Big Five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*, 44, 1-26.

Barrick, M. R., & Mount, M. K. (1993). Autonomy as a moderator of the relationship between the Big Five personality dimensions and job performance. *Journal of Applied Psychology*, 78, 111-118.

Bartram, D. (1995). The predictive validity of the EPI and 16PF for military flying training. *Journal of Occupational and Organizational Psychology*, 68, 219-236.

Block, J. (1995). A contrarian view of the five-factor approach to personality description. *Psychological Bulletin*, 117, 187-215.

Braun, P., & Wiegand, D. (1991). The assessment of complex skills and of personality characteristics in military services. In R. Gal & D. Mangelsdorff (Eds.), *Handbook of military psychology* (pp. 37-61). New York: Wiley.

Butcher, J. N., Dahlstrom, W. G., Graham, J. R., Tellegen, A. M., & Kaemmer, B. (1989). *MMPI-2: Manual for administration and scoring*. Minneapolis: University of Minnesota Press.

Callister, J. D., King, R. E., Retzlaff, P. D., & Marsh, R. W. (1999). Revised NEO personality inventory profiles of male and female U.S. Air Force pilots. *Military Medicine*, 164, 885-890.

Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, 56, 81-105.

Cattell, R. B., Eber, H. W., & Tatsu, M. M. (1964). *Handbook for the 16 PF*. Champaign, IL: Institute of Personality and Ability Testing.

Cooper, C. (1982). Personality characteristics of successful bomb disposal experts. *Journal of Occupational Medicine*, 24, 653-655.

Costa, P. T., Jr., & McCrae, R. R. (1992). *Revised NEO Personality Inventory: Professional manual*. Odessa, FL: Psychological Assessment Resources.

Fine, P. M., & Hartman, B. O. (1968). *Psychiatric strengths and weaknesses of typical Air Force pilots*. (SAM-TR-68-121). Brooks AFB, TX: USAF School of Aerospace Medicine

Fiske, D. W., Hanfmann, E., MacKinnon, D. W., Miller, J. G., & Murray, H. A.

(1997). *Selection of personnel for clandestine operations: Assessment of men*. Laguna Hills, CA: Aegean Park. (Original work published 1948)

Flin, R. (2001). Selecting the right stuff: Personality and high-reliability occupations. In R. Hogan & B. R. Roberts (Eds.), *Personality psychology in the workplace* (pp. 253–275). Washington, DC: American Psychological Association.

Fogg, L. F., & Rose, R. M. (1995). Use of personal characteristics in the selection of astronauts. *Aviation, Space, and Environmental Medicine*, 66, 199–205.

Galarza, L., & Holland, A. (1999). *Critical astronaut proficiencies required for long-duration spaceflight* (SAE Technical Paper 1999-01-2097). Washington, DC: Society of Automotive Engineers.

Handler, L. (2001). Assessment of men: Personality assessment goes to war by the Office of Strategic Service Assessment Staff. *Journal of Personality Assessment*, 76(3), 558–578.

Hartmann, E., Sunde, T., Kristensen, W., & Martinussen, M. (2003). Psychological measures as predictors of training performance. *Journal of Personality Assessment*, 80, 87–98.

Hilton, T. F., & Dugin, D. L. (1991). Pilot selection in the military of the Free World. In R. Gal & D. Magelsdoff (Eds.), *Handbook of military psychology* (pp. 81–101). New York: Wiley.

Hogan, J., & Lesser, M. (1996). Selection of personnel for hazardous performance. In J. Driskell & E. Salas (Eds.), *Stress and human performance* (pp. 195–222). Hillsdale, NJ: Erlbaum.

Hogan, R., & Hogan, J. (1989). Noncognitive predictors of performance during explosive ordnance training. *Military Psychology*, 1, 117–133.

Kilcullen, R. N., Mael, F. A., Goodwin, G. F., & Zazanis, M. M. (1999). Predicting U.S. Army Special Forces field performance. *Human Performance in Extreme Environments*, 4, 53–63.

Martinussen, M. (1996). Psychological measures as predictors of pilot performance. *Internal Journal of Aviation Psychology*, 6, 1–20.

McDonald, D. G., Norton, J. P., & Hodgdon, J. A. (1990). Training success in U.S. Navy Special Forces. *Aviation, Space, and Environmental Medicine*, 61, 548–554.

Mountz, T. (1993). Special warriors, special families and special concerns. In F. W. Kaslow (Ed.), *The military family in peace and war* (pp. 121–129). New York: Springer.

OSS Assessment Staff. (1948). *Assessment of men*. New York: Rinehart.

Patterson, J. C., Brockway, J., & Greene, C. (2004). *Evaluation of an Air Force special duty assessment and selection program* (Contract F41624-00-6/1001/0001). San Antonio, TX: Conceptual MindWorks.

Picano, J. J. (1991). Personality types among experienced military pilots. *Aviation, Space, and Environmental Medicine*, 62, 517–520.

Picano, J. J., Roland, R. R., Rollins, K. D., & Williams, T. J. (2002). Development and validation of a sentence completion test measure of defensive responding in military personnel assessed for non-routine missions. *Military Psychology*, 14, 279–298.

Picano, J. J., Roland, R. R., Williams, T. J., & Rollins, K. D. (in press). Sentence

completion test verbal defensiveness as a predictor of success in military personnel. *Military Psychology*.

Resnick, R. J. (1997). A brief history of psychology—expanded. *American Psychologist*, 52, 463–468.

Retzlaff, P. D., & Gibertini, M. (1987). Air Force pilot personality: Hard data on the right stuff. *Multivariate, Behavioral Research*, 22, 383–389.

Russell, M., & Karol, D. (1994). *16PF* (5th ed.). *Administrator manual* (2nd ed.). Chicago: Institute for Personality and Ability Testing.

Russell, T. L., Crafts, J. L., Tagliareni, F. A., McCloy, R. A., & Barkley, P. (1994). *Job analysis of Special Forces jobs* (ARI Research Note 96-76). Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences.

Santy, P. A., Holland, A. W., & Faulk, D. M. (1991). Psychiatric diagnoses in a group of astronaut applicants. *Aviation, Space, and Environmental Medicine*, 62, 969–973.

Stolrow, J. P. (1994). The assessment and selection of Special Forces qualification course candidates with the MMPI. *Dissertation Abstracts International*, 55(6), 2413B.

Suedfeld, P., & Steel, G. D. (2000). The environmental psychology of capsule habitats. *Annual Review of Psychology*, 51, 227–253.

Turnbull, G. (1992). A review of pilot selection. *Aviation, Space, and Environmental Medicine*, 63, 825–830.

Vane, J. R., & Motta, R. W. (1984). Group intelligence tests. In G. Goldstein & M. Hersen (Eds.), *Handbook of psychological assessment* (pp. 100–116). New York: Pergamon.

Van Wijk, C., & Waters, A. H. (2001). Psychological attributes of South African Navy underwater sabotage device disposal operators. *Military Medicine*, 166, 1069–1073.

Yoakum, C. S., & Yerkes, R. M. (1920). *Army mental tests*. New York: Henry Holt.

## CHAPTER 18



# Future Directions of Military Psychology

JOHN A. RALPH  
MORGAN T. SAMMONS

In the December 1989 issue of *Proceedings*, a professional magazine devoted to topics important to the Navy, two Navy psychologists penned an article entitled “Unloading the Walking Wounded.” The authors argued that personality disorders are unlikely to change through either psychotherapy or military discipline, and they suggested several procedures to either prevent personality-disordered individuals from entering the military or removing them from the military once they are discovered. “Let’s face it,” they stated, “it’s time that we screen better for personality disorders in the enlistment process and unload those with such disorders before they endanger themselves or others (Derrer & Gelles, 1989).

Nearly 13 years later, in that same magazine, LCDR David Jones, a Navy psychologist serving aboard the USS *Enterprise*, and his senior medical officer, CDR John Lee, write of their experiences in managing these same “walking wounded.” Rather than unloading them, Jones and Lee emphasized personal accountability in treating these sailors and made it their goal to retain as many as possible. Recognizing that it is part of the military’s culture to give individuals a chance to improve themselves and make a fresh start, they gave these sailors every possible resource to do so; but they also emphasized that “wanting out of the military or demonstrating immaturity do not absolve people from accountability.” As a result, in

2001 the *Enterprise* had the lowest rate of administrative separations of any carrier in the Atlantic Fleet (Jones & Lee, 2002).

The difference in these accounts illustrates the evolution in military psychology that has occurred over the last decade. Gone are the days in which mental health providers were thought to be working against the interests of military line units. Psychologists are no longer seen as individuals who take valuable soldiers and sailors away from their commands simply because these personnel are unwilling to fulfill their service obligations. Rather, military psychologists today are more engaged than ever in the pursuit of operational readiness. They are less likely than in previous years to be working from the sterile confines of a military hospital. They are more likely to be attached to operational units, and they are proving that effective mental health intervention is both cost-effective and essential in increasing personnel readiness.

As illustrated throughout this volume, the military is on the cutting edge of several new trends in psychology today. It was the first organization to allow prescription privileges for appropriately trained psychologists. The Air Force's suicide prevention program was hailed in 2003 as a "model program" by the President's New Freedom Commission on Mental Health (2003). The Operational Stress Control and Readiness (OSCAR) program now being developed in the Marine Corps and the emphasis by all services on integrating psychology into primary care services illustrate the extent to which the military is leading the way in the efficient provision of mental health care in both traditional and nontraditional settings. Finally, advances in technology, especially in telemedicine, are enabling military psychologists to provide effective care around the globe, a particularly important development in light of the global war on terror (GWOT).

As we look to the future, these trends are likely to continue to transform the practice of psychology in the military in significant ways. In particular, all indicators point to an increase in the extent to which psychologists will become directly attached to operational units in the pursuit of operational readiness. Such readiness will be achieved through the provision of quality mental health services that emphasize the prevention of psychological disorders, the acceptance and destigmatization of mental health service provision in deployed military settings, and the integration of behavioral health with other medical disciplines.

## PSYCHOLOGICAL INTERVENTION IN OPERATIONAL SETTINGS

In the mid- to late 1990s, the military's perpetual struggle to recruit and retain qualified personnel reached a critical phase. Fiscal year 1998 marked the first time in nearly a decade that the Department of Defense did not

meet its recruiting goals. The Navy in particular fell far short of expectations, meeting only 88% of its initial goal in 1998 (U.S. General Accounting Office [GAO], 2000). In addition to (and perhaps indirectly because of) these recruiting difficulties, an increasing number of enlistees were failing to complete their first terms of service. In a 1999 report, the GAO estimated that approximately one-third of all enlistees in the previous 10 years had failed to complete the service obligations specified in their enlistment contracts. In 1993 alone (the first year for which 4-year attrition data were available), over 72,000 enlistees left the service early, resulting in over \$1.3 billion in wasted recruiting and training costs (U.S. GAO, 1999a). This number increased in 1994, when a record 36.9% of all enlistees left the service prior to the end of their obligated terms.

Early attrition posed special problems for the Navy, which was dealing with increasing difficulty in retaining sailors assigned to ships overseas. Individuals deemed unsuitable for service while deployed, either for medical, mental health, or other reasons, were required to be flown from remote locations such as the Persian Gulf, often with an escort, at costs that could exceed \$10,000 per returnee. These costs did not include the potential compromise to mission readiness of unplanned personnel attrition, nor did they include the hidden costs associated with lost productivity, increased workload, and reduced morale among those left behind.

Historically, significant numbers of these medical evacuations, or "medevacs," were the result of psychological difficulties, most commonly depression, anxiety, Axis II traits, or adjustment disorders (Wood, Koffman, & Arita, 2003). Suicidal ideation was not uncommon. To counteract these trends, the Navy introduced in 1998 its Specialists at Sea program, through which active-duty clinical psychologists and physical therapists were assigned as permanent members of the crew of each of the Navy's 12 aircraft carriers. The goal of this program was to provide care to sailors "at the deck plates," allowing them to receive treatment while continuing to perform the vital work for which they had been trained.

The program was a huge success. In nearly every carrier battle group, the number of psychological medevacs was dramatically reduced. The experience of LCDR Jones aboard the USS *Enterprise* is just one example of the effectiveness of an embarked psychologist. The experience of the USS *John F. Kennedy* (JFK) is another typical example. In 1999, the last time the JFK deployed without a psychologist, 28 sailors were medevaced from the Mediterranean Sea and Persian Gulf for psychological reasons. During the next deployment, in 2000, the first with a psychologist aboard, no sailors were medevaced for psychological reasons (Smith, 2002). Similar results were reported during the 1999 deployment of the USS *Carl Vinson*, from which it was estimated that each prevented medevac saved the Navy a minimum of \$4,400 (Wood et al., 2003). This figure is almost certainly an

underestimate. It ignores the cost of losing personnel with valuable expertise, as well as the morale cost when remaining crew members, many of whom are also under significant stress, are forced to perform extra work to make up for the personnel shortfalls. The Specialists at Sea program continues to be one of the best examples in recent times of the powerful effect of early mental health intervention on productivity, operational costs, and morale. It also suggests that psychologists can be employed effectively in other settings throughout the military services to enhance readiness. Navy psychologists are now a permanent part of a ship's company aboard all carriers. The success of this program has led to new initiatives to expand the availability of psychological services in other underway platforms, such as large-deck amphibious ships, which serve as the centerpiece of the Navy's new Expeditionary Strike Groups (ESGs). ESGs were created to produce an entity that combined expeditionary capability (the ability to land large numbers of fighting forces on foreign soil) with the sea power of other battle groups. They were first deployed in 2003. In their current configuration of an amphibious assault ship (LHA or LHD) with five accompanying vessels (including amphibious transport dock ships, cruisers, guided missile destroyers, frigates, and an attack submarine), they will support approximately 8,000 personnel, including the ship's company and Marine or other expeditionary detachments. Thus, the "catchment area" served by the medical department of the ESG approaches the size of a carrier battle group, suggesting that psychologists attached to ESGs may have an effect on reduction in personnel attrition proportionate to that realized by their services on carriers. At this writing, two psychologists have been sequentially deployed to an ESG, CAPT Ralph Bally and LCDR Richard Bergthold. It seems clear, then, that the emerging trend in the Navy is for clinical psychologists to be attached to every deployed naval force, not only to provide quality mental health care to deployed sailors, but also to increase the battle readiness and personal effectiveness of Sailors and Marines while reducing operating costs.

As detailed in Chapter 9 and throughout this volume, the presence of psychologists in other operational settings has also increased in recent years. In the Navy alone, psychologists are now assigned to special operations forces, at SERE school (see Chapter 11, this volume), and even in Guantanamo Bay to provide services to those detained as part of the war on terrorism. As the pace of operations continues to increase in response to world events, the trend toward operational psychology will only become stronger. Whereas previous generations of military psychologists have practiced predominantly in military hospitals and outpatient clinics, this role will almost certainly diminish. More and more, uniformed psychologists will be serving among the troops, on land and at sea, where they are most needed.

## NORMALIZATION OF MENTAL HEALTHCARE IN MILITARY SETTINGS

In addition to their emphasis on operational readiness, military psychologists are as focused as ever on the provision of high-quality patient care. In fact, the military is where much of the most progressive work in psychology is taking place. Furthermore, many of the military's new mental health initiatives are based on affecting change in the military culture, by making the need for mental health support an expected part of high-stress military environments. There is no better example than the suicide prevention program adopted by the U.S. Air Force in 1995 (see Chapter 7, this volume). By targeting several empirically identified risk factors for suicide and strengthening protective factors, Air Force personnel were able to reduce suicide rates from 15.8 per 100,000 in 1995 to 3.5 per 100,000 in 1999. After moderate increases in 2000 and 2001, Air Force suicide rates have hovered between 9 per 100,000 and 11 per 100,000 for the past few years. (U.S. Department of Health and Human Services [DHHS], 2002). Of particular importance were efforts to change the cultural norms and beliefs that had discouraged help-seeking behavior in the past. Throughout the chain of command, efforts were made to encourage support of those personnel who were experiencing heightened life stress and to encourage those experiencing difficulties to actively seek the support of others. The Air Force Chief of Staff himself made numerous pleas in this regard, noting that seeking mental health care is unlikely to hurt one's career, and in fact will probably help one's career by improving performance efficacy (Centers for Disease Control and Prevention, 1999).

This normalization of the need for mental health services represents an important change in military command climates. Because of the success of the Air Force suicide prevention program, similar initiatives have been adopted in other services as well. For instance, by reducing the stigma associated with seeking mental health care and focusing on the theme of "taking care of each other," the Navy has reduced suicide rates since 1998, averaging only 10 to 11 suicides per 100,000 per year (Kennedy, 2003). The Marine Corps has also made efforts to reduce barriers to the seeking of treatment. The Marines now attempt to portray help seeking as a sign of strength and as a way to support the operational team, much like asking for fire support when threatened by an enemy (Gaskin, 2003). Although the Marine Corps has generally had a suicide rate somewhat higher than that of other services (approximately 13 per 100,000 over the last few years), this, too, is decreasing, which may be due in part to efforts at normalizing help seeking.

Perhaps one of the most ambitious attempts to reduce stigma and improve the readiness of fighting forces has been the Marine Corps

OSCAR program. Although OSCAR is aimed at war fighters either in garrison or deployed in combat, its emphasis on early intervention and preventive measures is closely linked to the community psychology movement that flourished in the last decades of the 20th century. Just as community preventive efforts have been demonstrated to reduce the consequences of risky behavior in high-risk civilian populations, OSCAR seeks, through the application of community psychology preventive models, to reduce the risk of psychological morbidity attendant to the experience of combatants—primarily acute and posttraumatic stress disorders (PTSD).

OSCAR was initiated in 2000 with the 2nd Marine Division at Camp LeJeune, North Carolina. The program was inspired and implemented by CDR Jack Pierce, a Navy psychiatrist who had recently come onto active duty after spending many years as a psychiatrist with the Veterans Administration. In surveying the provision of mental health services at Camp LeJeune, CDR Pierce was struck by several factors: First, the rate of unplanned losses for mental health reasons was (and continues to be) high, representing the second most common form of unplanned attrition from the corps. Second, the division psychiatrist, with the assistance of one psychiatric technician, was solely responsible for providing all mental health services to the entire division. This was also the case with the other two Marine divisions. Most mental health service provision subsequently took place at the hospital associated with the division. This often entailed a long waiting period for an initial appointment and a loss of productive time by Marines who had to travel to and from the hospital for their treatment (often with an escort). Hospital-based providers were generally unfamiliar with the Marine's operational responsibilities, chain of command, and stresses unique to the Marine's unit. Communication between the provider and line elements was therefore often uncertain, and recommendations were frequently ignored. Treatment by the sole division psychiatrist was also problematic: Because in general these providers employed a traditional, office-based approach, often only small numbers of Marines were seen, and few, if any, preventive or outreach efforts were undertaken.

OSCAR envisioned five fundamental changes in mental health service provision in the Marine divisions. First, mental health services would become more *operational* in nature—aimed at understanding the needs of the fighting Marine in the context of the operational environment. Second, services would become *expeditionary*: providers would deploy when the units they were responsible for deployed and would return with the unit, thereby providing continuity of service across the deployment cycle. Third, mental health assets at the divisions would be expanded, not only by the addition of more licensed mental health providers (psychologists and psychiatrists), but also by the addition of *peer counselors* in the form of staff noncommissioned officers (SNCOs). SNCOs could avoid the formalities of

an enlisted–commissioned officer communication, which often creates distance in the relationship, and as experienced personnel managers they could also provide a unique perspective on the challenges faced by individual Marines in their units. SNCOs could also serve as effective liaisons to the noncommissioned chain of command. Fourth, OSCAR called for a heavily *preventive, community-outreach-based* approach. In most interactions between OSCAR personnel and Marines, the traditional doctor–patient relationship would not apply. Instead, the focus would be on individual and group interventions to ensure that Marines received, in accordance with their experiences and place in the deployment cycle, appropriate primary, secondary, or tertiary preventive services. Finally, OSCAR sought to *destigmatize* mental health services. In the past, line commanders tended to have a rather jaundiced view of mental health services, and Marines (save for those seeking discharge for psychiatric reasons) generally avoided such services. An approach that closely involved line commanders and both deemphasized psychopathology and focused on improved functionality would, it was thought, be better accepted by both the line and individual Marines.

The OSCAR program was, as noted above, partially implemented at Camp LeJeune in 2000. Four additional SNCOs were added to the division psychiatrist's staff; however, no billets existed for other licensed providers. In 2002, an outside analysis of the program was requested, and in early 2003 the Centers for Naval Analysis (CNA) reported that preliminary evidence, though sparse, suggested cautious extension of the project (Grefer & Harris, 2003). Also in 2003, CDR Pierce, then stationed with the Medical Officer of the Marine Corps at Henderson Hall, was successful in convincing the Marine Resources Oversight Council, a flag-level body that has oversight of all Marine Corps programs, to implement the OSCAR project on a 2-year pilot basis with all three Marine divisions. The assistance of the Bureau of Medicine (BUMED) in identifying appropriate providers and establishing billets was sought, and a BUMED/USMC integrated project team was established to delineate the parameters of the project. Six additional billets for licensed providers (three psychologists and three psychiatrists) were temporarily assigned to the project and then distributed to each division. In addition, the USMC gave each division additional SNCOs and established a firmer liaison between division chaplains and OSCAR personnel.

The impact of the OSCAR program and its long-term efficacy have not yet been established. The pilot is scheduled to be completed in 2006. Core outcomes by which the program will be measured are reduced unplanned attrition for mental health reasons, through either medical boards or administrative separations; reduction in suicidal behavior (numbers of suicidal gestures, attempts, or completed suicides) in units served by OSCAR;

reduced reliance on hospital-based mental health service providers; and improved community mental health, as measured by such indices as reduction in domestic violence and alcohol-related incidents. These data should be sufficient to decide if OSCAR and similar community-based programs will truly represent a new form of mental health service for the fighting force.

These trends toward a normalization of mental health treatment will probably continue, particularly as military stressors intensify in response to world events. Throughout the military, there is the realization that stress in operational settings is expected and that it is “business as usual” to seek assistance in dealing with it. There are now dozens of psychologists working with Army and Marine units on the ground in Iraq and in numerous other operational settings, as previously noted. These psychologists are trained in crisis response and traumatic stress, and each of them is involved in providing services to minimize the likelihood that chronic stress disorders will emerge. Inherent in their work is the *expectation* that unusual circumstances can be expected to result in unusual levels of stress and anxiety, and mental health intervention is appropriate not only in dealing with this acute stress but also in preventing the development of chronic difficulties.

Since 9/11, there has also been the expectation that large populations will need proactive psychological intervention if exposed to terrorist attacks or other mass casualties (see Chapter 16, this volume). The best illustration of this as conducted by military psychologists is *Operation Solace*, a proactive behavioral health response to the terrorist attack on the Pentagon (Hoge et al., 2002). This project, initiated at the direction of the Army Surgeon General, brought together Army psychiatrists, psychologists, and social workers to, among other things, “provide behavioral health services for active duty service members, Pentagon employees, and family members to minimize the long-term behavioral health impacts of the Pentagon attack.” It is important that this project focuses on not only the traditional psychological disorders that often follow traumatic events (like depression and PTSD) but also the medically unexplained physical symptoms (MUPS) that frequently arise after extended combat actions or other traumatic experiences.

Recognizing that in the military there are traditionally several barriers to mental health access, such as work demands and the fear that treatment could negatively affect one’s career, participants in *Operation Solace* went directly to the workplace, making informal contact with each individual in a position to be affected by the trauma. They did this through “forward deployed behavioral health professionals” (Hoge et al., 2002, p. 46), including psychologists, who conducted preclinical interventions throughout the Pentagon. These interactions were informal and supportive, and because they were preclinical, they did not necessitate documentation in

medical records. Providers eventually started referring to this intervention as "therapy by walking around." Although informal, this supportive contact was effective in breaking down the barriers to mental health access. It also helped to identify those who might be in need of additional treatment; it allowed workers to make informal "referrals" of those about whom they were concerned; and because it involved all employees, it reduced any stigma or fear associated with speaking to a mental health professional. Operation Solace also employed informal care managers, who made contact with employees as soon as they entered the primary care system with a medical problem possibly related to 9/11 or the numerous other military stressors that evolved from 9/11. The goal of these care managers was to maximize access to mental health services and prevent the development of MUPS among the population most at risk (Hoge et al., 2002).

As the military becomes increasingly involved in combat operations related to GWOT, proactive, preclinical techniques like Operation Solace will have to be increasingly utilized. It is no small challenge to apply these principles effectively in combat. In fact, the results of a recent survey of Army personnel in Iraq suggest that there are still significant problems in effectively applying what we know about the treatment of traumatic stress. This survey was conducted between August and October 2003 by the Army's Operation Iraqi Freedom Mental Health Advisory Team (MHAT). Although they found that "the forward elements of the OIF behavioral healthcare system demonstrated great effectiveness in helping soldiers deal with combat and operational stressors," they also suggested that there was significant room for improvement. Among the findings was that 17% of soldiers were suffering from traumatic stress, depression, or anxiety at a level that could be characterized as "functionally impaired." Of that group, about three-fourths said they had received no help at any time in Iraq from a mental health professional, a doctor, or a chaplain. Access to mental health care was again a problem, in that only one-third of soldiers who reported that they wanted help actually got it. Another significant barrier was the perception that leadership might treat differently those seeking mental health care, a belief of 63% of surveyed respondents who met screening criteria for a mental disorder (Hoge, Castro, Messer, McGurk, Cotting, & Koffman, 2004). From April through December 2003, 23 soldiers killed themselves in Iraq or Kuwait, a rate of 17.3 suicides per 100,000 soldiers and a significant increase over the 2003 Army-wide rate of 12.8. Perhaps most important, about half of mental health providers whose mission was "combat stress control" reported that they did not receive enough prewar training in combat stress (Operation Iraqi Freedom Mental Health Advisory Team, 2003).

Of course, some of these problems could not have been avoided. At the time of this survey, the situation in Iraq was particularly difficult and dan-

gerous, so reduced morale and heightened stress would be expected. However, the problems identified by MHAC can also be partially attributed to a lack of proper preparation. Psychologists in the future must strive to overcome the common barriers to mental health access. They must also be diligent in obtaining the proper resources and training to effectively apply appropriate interventions. Programs like Operation Solace show us that a salient challenge for the future will be to optimize our ability to provide care under maximally trying circumstances.

## CHANGES IN THE PROVISION OF MENTAL HEALTHCARE IN MILITARY SETTINGS

The implementation of psychological services in operational settings and the increased normalization of the receipt of such services are dramatic advances likely to shape the future of military psychology for many years. However, important changes are also occurring in nonoperational settings in the military. Foremost among these is the integration of psychological services into primary care. Although the necessity of providing psychological services in medical settings has been discussed for nearly 40 years, much of the growth in health psychology has occurred in the last 10 years, and to a large extent the military is leading the way. An excellent example of the integration of clinical psychology in primary care is the Tripler Health Psychology Model, introduced by James, Folen, Porter, and Kellar (1999). Just as Operation Solace was a proactive approach in providing mental health services after a mass casualty, the Tripler model, conducted at Tripler Army Medical Center in Honolulu, offers a proactive approach under more typical circumstances.

In the past, mental health providers have been located far from their referral sources, primarily to maximize patient confidentiality. In the Tripler model, however, mental health providers are integrated into primary care activities and are physically located among primary care providers (James, Folen, Porter, et al., 1999). Not only does this improve patient access (which is particularly important for the elderly and for patients with physical limitations, pain patients, etc.), but it also raises the exposure of mental health services, increasing the extent to which they are effectively used. This integration also increases the likelihood that psychologists will be involved in policy making and command consultations. The Tripler model has been employed successfully in a variety of cases, including a wellness program (called LEAN) that targets obesity, hypercholesterolemia, essential hypertension and type II diabetes (James, Folen, Page, et al., 1999), and tobacco cessation (Faue, Folen, James, & Needles, 1997). In fact, health psychologists at Tripler have broadened their scope of practice

to the extent that they now serve as primary case managers during hospitalization and aftercare, independently admitting and discharging patients (James & Folen, 1999).

In recent years the Navy has moved toward adopting a similar program. The Navy's Behavioral Health Integration Project (BHIP) was introduced in 2003 to institutionalize behavioral health in the primary care setting. By being physically located with primary care providers, psychologists are able to provide brief therapies to prevent or reduce mental health problems that are commonly seen in primary care. This allows for more coordinated treatment and more timely referrals. It also reduces the number of appointments at specialty mental health clinics, a major benefit because of the increasing demands on Navy mental health providers.

The implementation of BHIP was based not only on the success of similar interventions in the Army but also on data such as those reported by Strosahl (2002). Strosahl pointed out that 70% of mental health patients are also in need of primary care services and that 70% of all primary care visits are primarily for psychosocial concerns. He also reported that general practitioners traditionally prescribe 67% of psychopharmacological drugs and 80% of antidepressants, and psychologically distressed patients are twice as likely as nondistressed patients to utilize many health services. For these reasons, the integration of primary care with behavioral health has been shown empirically to result in better patient care, lower costs, and increased patient satisfaction (Strosahl, 2001). For further information about clinical health psychology and behavioral medicine, see Chapter 5 (this volume).

A better-known program that allows for the effective provision of mental health services at reduced costs is the Department of Defense Psychopharmacology Demonstration Project (PDP). This project was initiated in 1991 at the Uniformed Services University of the Health Sciences (USUHS) and Walter Reed Army Medical Center (WRAMC) as a result of a congressional mandate requiring the services to train psychologists to use psychotropic agents (Laskow & Grill, 2003). Although the program was the subject of intense scrutiny and fierce political opposition, over the course of its lifespan, from 1991 to 1998, it produced 10 psychologists trained to prescribe. The program was evolutionary in nature. In the planning phase, a separate curriculum, based largely on the training of physician's assistants in psychopharmacology, was proposed. This and other alternatives proved to be politically inexpedient. As a result, the first cohort of students received the first 2 years of a traditional medical school curriculum, followed by a 1-year psychiatric residency (Sammons & Brown, 1997). This curriculum was not felt to be optimal, as it simply mimicked the medical school experience and did not impart a truly psychological model of the use of psychotropic drugs. As a result, the program was

refined two times, at the end of which students were exposed to approximately 1 year of didactic material followed by a variety of inpatient and outpatient experiences (Sammons & Brown, 1997).

Though the program did train 10 psychologists, all of whom went on to practice independently and by all accounts ably demonstrated the benefits that accrued from combining a pharmacological and a psychological education, it was not an unqualified success. Several enrollees left the program, 2 to attend medical school. The program was also criticized by the GAO as being too costly (U.S. GAO, 1999b), though others were quick to point out that the cost estimates used by the GAO were spuriously inflated because they included not just the costs of training but also the costs of evaluating the program, which amounted to nearly 50% of the total sum (Newman, Phelps, Sammons, Dunivin, & Cullen, 2000). It should also be noted that although critical of the cost, the GAO found that all trainees were performing well in their roles as independent prescribers of psychotropics.

The PDP succumbed to political pressure, and in 1997 the National Defense Authorization Act included language specifically prohibiting further funds for its continuation. Although those psychologists trained continued their practice in the military, no further training has taken place as of this writing. At present, however, the Navy has established, in conjunction with Tripler Army Medical Center, a fellowship program in health psychology that will include a significant psychopharmacology component. Simultaneously, Air Force psychology is sending one fellow for outservice specialty training in psychopharmacology. In the Navy, the practice of psychopharmacology is specifically delineated as a clinical privilege, to be granted to those with appropriate training.

Though the PDP was of relatively short duration, its legacy cannot be understated. This was the first organized attempt to train psychologists to add pharmacological agents to their therapeutic armamentarium (whereas other programs training nonmedical providers had existed in the past, these either did not exclusively train psychologists or led to a nonpsychology degree, e.g., the doctorate in mental health). It can also be stated with relative certainty that few other military medical training programs of any type have had effects as far-reaching as the PDP. The PDP attracted attention to the profession on a national level and was the basis for the development of numerous civilian programs to train licensed psychologists to prescribe. As of this writing, approximately 10 civilian training programs for psychologists exist, and two states (New Mexico and Louisiana) and one territory (Guam) have passed legislation enabling psychologists to prescribe. The PDP, then, served as the cornerstone of a national movement to expand the scope of practice of licensed psychologists—a movement that will have significant effects on the future of the profession for decades to come.

The integration of mental health with primary care and the expanding number of prescribing psychologists illustrate the extent to which the military is taking the lead in the efficient provision of empirically proven, cost-effective psychological services. The environments in which this is taking place also necessitate the active use of new technology, particularly in the area of telehealth. Recent advances in telecommunications now allow for the effective delivery of healthcare over long distances. The implications of this new technology were summarized by Jerome, DeLeon, James, Folen, Earles and Gedney (2000). Since this time, telehealth has been used effectively in military settings, particularly for psychologists serving in remote locations where consultation with other providers is difficult. Military mental health providers now routinely perform distance consultations with patients in remote bases where an expanded range of mental health services is lacking (e.g., Naval Air Station, Keflavik, Iceland). Similar consultations may also occur between shore-based providers and afloat components, though they have to this point been limited by bandwidth issues.

Technological barriers (notably, the ability to transmit high-quality real-time images without overtaxing transmission systems), patient and provider acceptance, and privacy concerns remain as very real issues to be dealt with before telehealth is accepted as a routine form of military mental health treatment. Although technological barriers can be expected to diminish with successive generations of equipment, more human issues must also be addressed. Fundamentally, it remains unknown if telehealth, or any other form of distance service provision, will replace the face-to-face interaction that is the heart of the therapeutic interaction (Sammons & DeLeon, 2004). That said, the military is leading the way in charting new mechanisms of medical service provision, like telepsychology, teleradiology, and other related fields.

## SUMMARY

It is both an exciting and challenging time to be a military psychologist. The heightened pace of operations since 9/11 has given military psychologists a central role in ensuring that military personnel are ready to perform their operational duties. As military psychologists' operational commitments increase, personnel shortfalls necessitate that we streamline the provision of services without sacrificing their quality. The necessity of providing efficient and effective services in increasingly complex operational and nonoperational environments will undoubtedly be the primary challenge in the future. Specifically, psychologists must continue to demonstrate their efficacy in operational environments. Whether on the ground in Iraq, on aircraft carriers, or in any one of the dozens of operational billets across the

services, psychologists must be able to demonstrate that their work is both cost-effective to the organization and personally beneficial to the individuals served. Psychologists must also maximize their integration into the primary care setting. As operational billets increase, fewer psychologists should be required to staff traditional mental health clinics, as more mental disturbance is either prevented or treated on the front lines. Integration with primary care clinics is an excellent way to do this. This change represents an improvement for both the organization and the patient, and it is an exciting trend for the future.

Finally, psychologists must continue to effectively communicate their ability to enhance battle readiness. Operational readiness is the primary mission of military psychology, and this must be emphasized at every opportunity. Military psychologists must continue to sell mental health as a resource that should be utilized by line units, not something to avoid. Cultural shifts that reduce the stigma associated with mental health care have saved lives, so such changes in command climates must be fostered wherever possible.

## REFERENCES

Centers for Disease Control and Prevention. (1999). Suicide prevention among active duty Air Force personnel—United States, 1990–1999. *Morbidity and Mortality Weekly Reports*, 48(46), 1053–1057.

Derrer, D., & Gelles, M. (1989, December). Unloading the walking wounded. *Proceedings*, 115(12), 71–75.

Fau, M., Folen, R. A., James, L. C., & Needles, T. (1997). The Tripler tobacco cessation program: Predictors for success and improved efficacy. *Military Medicine*, 162, 445–449.

Gaskin, T. A. (2003, November). *United States Marine Corps suicide prevention programs*. Paper presented at the Department of Defense Suicide Prevention Conference, Quantico, VA.

Grefer, J. E., & Harris, D. M. (2003). *Evaluation of the USMC Operational Stress Control and Readiness “OSCAR” pilot program*. Unpublished manuscript, Centers for Naval Analyses, Alexandria, VA.

Hoge, C. W., Castro, C. A., Messer, S. C., McGurk, D., Cotting, D. I., & Koffman, R. L. (2004). Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *New England Journal of Medicine*, 351, 13–22.

Hoge, C. W., Orman, D. T., Robichaux, R. J., Crandell, E. O., Patterson, V. J., Engel, C. C., et al. (2002). Operation Solace: Overview of the mental health intervention following the September 11, 2001 Pentagon attack. *Military Medicine*, 167, 44–47.

James, L. C., & Folen, R. A. (1999). A paradigm shift in the scope of practice for health psychologists: Training health psychologists to be primary care case managers. *Professional Psychology: Research and Practice*, 30, 352–356.

James, L. C., Folen, R. A., Page, H., Noce, M., Brown, J., & Britton, C. (1999). The Tripler LEAN program: A two-year follow-up report. *Military Medicine*, 164, 389-395.

James, L. C., Folen, R. A., Porter, R. I., & Kellar, M. A. (1999). A conceptual overview of a proactive health psychology service: The Tripler health psychology model. *Military Medicine*, 164, 396-400.

Jerome, L. W., DeLeon, P. H., James, L. C., Folen, R. A., Earles, J., & Gedney, J. J. (2000). The coming of age of telecommunications in psychological research and practice. *American Psychologist*, 55, 407-421.

Jones, D. E., & Lee, J. J. (2002, October). Take the tough cases to sea. *Proceedings*, 128(10), 61-64.

Kennedy, K. (2003, November). *Navy suicide prevention: A community approach*. Paper presented at the Department of Defense Suicide Prevention Conference, Quantico, VA.

Laskow, G. B., & Grill, D. J. (2003). The Department of Defense experiment: The Psychopharmacology Demonstration Project. In M. T. Sammons, R. L. Levant, & R. U. Paige (Eds.), *Prescriptive authority for psychologists: A history and guide* (pp. 77-102). Washington, DC: American Psychological Association.

Newman, R., Phelps, R., Sammons, M. T., Dunivin, L., & Cullen, E. A. (2000). Evaluation of the Psychopharmacology Demonstration Project: A retrospective analysis. *Professional Psychology: Research and Practice*, 31, 598-603.

Operation Iraqi Freedom Mental Health Advisory Team. (2003, December 16). *Report chartered by U.S. Army surgeon general and HQDA G-1*, Washington, DC.

President's New Freedom Commission on Mental Health. (2003). *Achieving the promise: Transforming mental health care in America*. Rockville, MD: Author.

Sammons, M. T., & Brown, A. B. (1997). The Department of Defense Psychopharmacology Demonstration Project: An evolving program for postdoctoral education in psychology. *Professional Psychology: Research and Practice*, 28, 107-112.

Sammons, M. T., & DeLeon, P. H. (2004). Whither online counseling: Conceptualizing the challenges and promises of distance mental health service provision. In R. Kraus, J. Zack, & G. Stricker (Eds.), *Online counseling: A handbook for mental health professionals* (pp. xxi-xxvi). San Diego, CA: Elsevier Academic Press.

Smith, D. (2002, November). Taking it to the fleet. *Monitor on Psychology*, 33(10), 52-53.

Strosahl, K. (2001). The integration of primary care and behavioral health: Type II changes in the era of managed care. In N. A. Cummings & W. T. O'Donohue (Eds.), *Integrated behavioral healthcare: Positioning mental health practice with medical/surgical practice* (pp. 45-69). San Diego, CA: Academic Press.

Strosahl, K. (2002). Identifying and capitalizing on the economic benefits of primary behavioral health care. In N. A. Cummings & W. T. O'Donohue (Eds.), *Impact of medical cost offset on practice and research: Making it work for you: A Report of the First Reno Conference on Medical Cost Offset* (pp. 57-89). Reno, NV: Context Press.

U.S. Department of Health and Human Services (DHHS). (2002). *Best practice initiative: Air Force suicide prevention program, a population-based, community approach*. Washington, DC: Author.

U.S. General Accounting Office (GAO). (1999a). *Military attrition: DOD needs to follow through on actions initiated to reduce early separation* (GAO/T-NSIAD-99-80). Washington, DC: Author.

U.S. General Accounting Office (GAO). (1999b). *Prescribing psychologists: DoD demonstration participants perform well but have little effect on readiness or costs* (GAO/HEHS-99-98). Washington, DC: Author.

U.S. General Accounting Office (GAO). (2000). *Military personnel: First-term recruiting and attrition continue to require focused attention* (GAO/T-NSIAD-00-102). Washington, DC: Author.

Wood, D. P., Koffman, R. L., & Arita, A. A. (2003). Psychiatric medevacs during a six-month aircraft carrier battle group deployment to the Persian Gulf: A Navy force health protection preliminary report. *Military Medicine*, 168(1), 43-47.

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