

Trauma
and
Traumatic
Loss

edited by
Brett T. Litz

© 2004 The Guilford Press
A Division of Guilford Publications, Inc.
72 Spring Street, New York, NY 10012
www.guilford.com

All rights reserved

No part of this book may be reproduced, translated, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, microfilming, recording, or otherwise, without written permission from the Publisher.

Printed in the United States of America

This book is printed on acid-free paper.

Last digit is print number: 9 8 7 6 5 4 3 2 1

Library of Congress Cataloging-in-Publication Data

Early intervention for trauma and traumatic loss / edited by Brett T. Litz.
p. cm.

Includes bibliographical references and index.

ISBN 1-57230-953-9 (alk. paper)

1. Psychic trauma—Treatment. 2. Post-traumatic stress disorder—
Treatment. I. Litz, Brett T.

RC552.P67E256 2004

616.85'2106—dc22

2003017547

About the Editor

Brett T. Litz, PhD, is an Associate Professor in the Department of Psychiatry at Boston University School of Medicine and the Department of Psychology at Boston University, as well as the Associate Director of the Behavioral Sciences Division of the National Center for Posttraumatic Stress Disorder at the Boston Department of Veterans Affairs Medical Center. Dr. Litz is also Principal Investigator on several research studies funded by the National Institutes of Health and the Department of Defense to explore the efficacy of early intervention strategies in trauma, and he is currently studying adaptation to traumatic loss as a result of 9-11. In addition to conducting research on early intervention for trauma, Dr. Litz studies the mental health adaptation of U.S. military personnel across the lifespan, the assessment and treatment of post-traumatic stress disorder, and emotional numbing in trauma.

- Ursano, R. J., Fullerton, C. S., Epstein, R. S., Crowley, B., Kao, T., Vance, K., Craig, K. J., Dougall, A. L., & Baum, A. (1999). Acute and chronic posttraumatic stress disorder in motor vehicle accident victims. *American Journal of Psychiatry*, 156(4), 589-595.
- U.S. Department of Transportation. (2000). *National Highway Traffic Safety Administration: "Crashes, Fatalities, Injuries and Costs," 2000, 1999, 1998* [On-line]. Available: www.transportation.gov.

15

The Challenge of Providing Mental Health Prevention and Early Intervention in the U.S. Military

CARL ANDREW CASTRO
CHARLES C. ENGEL, JR.
AMY B. ADLER

The military specializes in preparing individuals to encounter potentially traumatic events. These traumatic events may occur in the context of combat and peacekeeping missions (e.g., Adler, Litz, & Bartone, in press; Southwick, Morgan, Nicolaou, & Charney, 1997; Stretch et al., 1996; Thomas & Castro, in press) or even during humanitarian missions (e.g., Gifford, Jackson, & DeShazo, 1993; McRae-Bergeron et al., 1999), when exposure to traumatic events is initially unexpected. Such traumatic events may include the perpetration of violence, witnessing violence, being victimized by violence, or some combination thereof. Military personnel also risk training or other work-related accidents and are targets of terrorist violence. Exposing military personnel to such critical incidents has the potential to affect their physical health

The views expressed in this chapter are those of the authors and do not necessarily represent the official policy or position of the Department of Defense or the U.S. Army Medical Command.

and psychological well-being, and thereby their readiness for subsequent military operations. Thus, for the military, providing effective early intervention following exposure to potentially traumatizing events in order to minimize their impact on well-being is a top priority. Although selection and training are also key components to helping military personnel cope with these potentially traumatic events, early intervention programs are critical for optimizing the coping of service members in the wake of such events.

Providing these services in the military, however, presents some unique challenges. First, preventive and early intervention services need to be administered on a large scale. Finely tailored, highly individualized programs of intervention are not likely to be well suited given the complexity and size of the U.S. military. The successful delivery of mental health services needs to be geared toward the entire population, must work within the military chain of command, and must consider the role of stigma (Britt, 2000) and the subsequent consequences of using mental health services on military careers (Hoge, Lesikar, et al., 2002). Besides the risk of encountering traumatic events, the military is also distinguished by a particular, if not idealized, sense of community. In the U.S. military, such concepts are frequently referred to as "taking care of our own" to describe the military's sense of commitment to the service member (Plummer, 1997). One natural extension of this cultural concept is the role of the Veterans Administration in providing care across the military life cycle of service members; the saying from "cradle to grave" now takes on a literal meaning.

It is within this context that we discuss the challenges involved in providing mental health prevention and early intervention programs to U.S. military personnel, always keeping in mind that we must balance the requirement for efficacious interventions given the risk of encountering potentially traumatic events with the cultural expectations that care will be provided. We begin by first discussing the important issue of how to evaluate the effectiveness of prevention and early intervention in military populations. Next, we critically review the several programs that the U.S. military has used or currently uses that fall within the prevention and early intervention framework. Specifically, we discuss (1) the selection and psychological screening program, (2) the psychological debriefing initiative, (3) the concept of "PIES," which has shaped how the U.S. military provides mental health services on the battlefield for at least the past 60 years, and (4) the emerging importance of command consultations for affecting the establishment of commandwide prevention and early intervention programs. Although our discussion is limited to the U.S. military, it is our hope that mental health care providers from the both the civilian sector as well as from other militaries will find our experiences, both our successes and our failures, useful.

EVALUATING EARLY INTERVENTION IN THE MILITARY

There are a number of questions and issues to consider when evaluating the effectiveness of prevention and early intervention efforts aimed to reduce or eliminate the effects of combat stress. Most of them remain unresolved and serve to highlight that the uncertainty associated with the utility of early battlefield mental health intervention mirrors the chaos and uncertainty of the battlefield. The first issue involves identifying the outcome of interest that will be useful in determining the effectiveness of the intervention program. There is a wide range of potential outcomes of interest when considering early battlefield mental health intervention; historically, discussion has focused primarily on the outcome of greatest interest to the operational commanders, maintaining the fighting strength. Indeed, mental health care providers often state that early intervention is a "force multiplier" in that it allows a large proportion of affected troops that seek or are referred for mental health support to be rapidly returned to battle (see Ingraham & Manning, 1980, for a historical discussion of the rationale for this thinking). Meanwhile, other important effects of battle stress, such as its intermediate and long-term impact on the health, functioning, and quality of life of military personnel, is much less well documented or understood.

Two key questions should be kept in mind when evaluating the appropriateness of implementing a selection or early mental health intervention program. The first question is whether there are any potential adverse effects of the early mental health intervention. The possible harms of early intervention with subsequent return to military duty may include harm to military discipline and unit cohesion when someone is returned to the unit who is functioning but near to psychological decompensation, increased mental and physical harm to the individual returned to duty who faces future combat, stigmatization of the soldier if it is known by others that he has received a mental health intervention, and heightening the expectation of posttraumatic symptoms in someone who might otherwise have done well.

Unfortunately, the question regarding the possibility of harm has received inadequate attention. During the post-World War II, Korean and Vietnam eras, it was presumed that combat trauma was likely to break everyone at some point (see Harris, Mayer, & Becker, 1955; Swank & Marchand, 1946). Over the past two decades, however, it has been clearly shown that while mental health outcomes are a function of the intensity of combat trauma, even under the most intense fighting, the majority of soldiers do not develop posttraumatic stress disorder. One critical implication of the fact that most military personnel do not develop chronic posttraumatic distress after experiencing combat is the potential for ostensibly preventive actions to cause harm among those who

might have done well without the intervention. Although it is an intriguing hypothesis that early mental health intervention on the battlefield may in fact cause harm, we should make it clear that there is currently no evidence to support this possibility. Our point in raising this prospect is that "good intentions" should not be deemed sufficient justification for implementing early intervention strategies.

The second question to consider when deciding on whether a prevention and early intervention program is warranted is one of validation. Simply stated, is there an obligation or duty to provide early intervention when scientific evidence to support efficacy is lacking? The group that stands to gain the most from early intervention is the group at greatest risk of poor outcome and combat trauma. It seems clear that one important obligation is to target early intervention to those who are likely to have poor outcomes. Therefore, effective prognostic indicators besides the combat experience itself are needed. Unfortunately, existing evidence suggests that in the immediate aftermath of a traumatic event, distress is ubiquitous and is consistently but only weakly related to long-term mental health outcomes, a feature that also holds true for other potential predictors of outcome such as premorbid personality, age, gender, occupation, and time in military service (e.g., Rothbaum, Foa, Riggs, Murdock, & Walsh, 1992; see King, Vogt, & King, Chapter 3, this volume). North et al. (1999) have found that lifetime history of PTSD or other major Axis I mental disorders are a strong predictor of postdisaster mental health outcome, perhaps suggesting one way of identifying those most in need of early intervention. Prospective longitudinal studies are badly needed to investigate the use of specific prognostic measures. Substantial uncertainty remains in this area, though it seems fairly certain that our societal need to respond to those traumatized in combat as well as the need of the mental health profession to prove themselves valuable to the military and society will ensure that even in uncertainty, activity will trump passivity.

SELECTION AND PSYCHOLOGICAL SCREENING

Two of the most fundamental methods of early or prevention intervention, selection and screening, are also two of the more controversial interventions. Although it is frequently stated that the extensive effort during World War II to "select out" individuals who were least likely to tolerate the experience of combat was successful, a more detailed look suggests that the mental health screening process was, in fact, a failure, resulting in the exclusion of a large number of men from serving in the war effort (see Perkins, 1955). Indeed, a conservative estimate is that approximately 372,000 men, or the equivalent of 25 divisions

were needlessly excluded from military service due to an excessively narrow psychiatric screening process (Ginzberg, 1959). This loss in manpower is well in excess of all battlefield deaths suffered by U.S. forces during World War II.

A secondary reason for the apparent lack of success in this area has been the absence of normative data from military samples. In World War II, many prediction efforts were highly idiosyncratic, and even today, none have been appropriately validated to see whether particular baseline variables adequately predict militarily important health outcomes in the military context. A crucial requirement for completing this type of study correctly is that baseline data cannot be used to determine the fate of the soldier. For example, if the baseline "screen" is used to decide whether a soldier needs care, and care in some cases leads to administrative proceedings to separate the soldier from the military, an analysis of the baseline measure might suggest it is a good indicator of who leaves military service early, rendering the predictive value of such variables impossible to interpret.

There are indeed significant ethical concerns involved when using the results from mental health screens to select people out of military service or to select out military personnel from military missions. Recently, some have proposed to collect "baseline health data," on childhood abuse, borne out of perceived deficiencies in individual-level predeployment health status data among U.S. troops deployed to the 1991 Gulf War. The suggestion has been that early life abuse experiences will be useful for predicting who succeeds in the military and perhaps who develops medically unexplained symptoms such as those experienced by many after Gulf War deployment, the so-called Gulf War syndrome. Some would argue that the practice of selecting people out of military service based on past life experiences is a discriminatory practice, an argument bolstered by the fact that the rate of reported child sexual abuse among women is considerably higher than among men (National Center on Child Abuse and Neglect, 1992). Still others might suggest that there is an ethical obligation to select such people out to protect them from poor health outcomes.

The U.S. military's screening program today does not aim to "select out" personnel from service or military deployments, although certainly it may be viewed as both a mental health prevention and early intervention program. Developed in 1996, the current screening program can be applied to large military populations easily and unobtrusively. Further, the screening can be implemented during routine duties in garrison and prior to, during, or after a deployment. Although it has changed considerably since its inception, the basics of the screening process have remained the same. A primary screening survey, which includes a range of mental health scales, is administered to each service member; the survey is scored on-site. If an individual scores above a pre-

scribed cutoff, the person is briefly interviewed by a mental health specialist who determines need for follow-up. In a review of the program, Wright, Huffman, Adler, and Castro (2002) discuss key programmatic changes that have occurred, including an expansion of the symptoms for which military personnel are screened, a change in the cutoffs used to identify those in need of an on-site interview, and a refinement of the brief interview process.

While many countries have integrated screening in either predeployment or postdeployment processing, some screening is regarded as relatively perfunctory whereas other screening programs are regarded as more credible (Thompson & Pastó, 2003). The U.S. screening program provides individuals with the chance to refer themselves for mental health care, identifies those in need of follow-up mental health evaluation, and projects patient load both in garrison and on deployment. The results from the screening are also part of a larger database and can be used to identify trends or compare screening results across deployments (e.g., Adler, Wright, Huffman, Thomas, & Castro, 2002; Martinez, Huffman, Adler, & Castro, 2000).

In many respects, the current screening program is a significant advancement in the delivery of preventive mental health services in the military. It is designed to bring mental health services to military personnel rather than wait for military personnel to seek out services. Clearly, mental health screening is emerging as a standard tool to ensure readiness. It is even being used for soldiers who experienced combat while deployed to Afghanistan as part of Operation Enduring Freedom to determine the need for follow-up mental health care. Whether screening works as a means of early intervention or prevention, however, has not yet been systematically evaluated. Nevertheless, screening is one more example of how the military's requirement for a particular mental health service has prompted a reaction from the mental health community before the empirical evidence supporting the intervention is available.

PSYCHOLOGICAL DEBRIEFING

One of the most widely used and controversial methods of early intervention is psychological stress debriefing, a semistructured review of a critical incident, typically extremely traumatic in nature. In debriefing, the goal is to provide participants a confidential setting that facilitates the cognitive and emotional processing of the event. In the military setting, a critical distinction is made between *psychological debriefing* and an *after-action debriefing*, a guided review of an operational mission in which the goal is to identify key information for the development of lessons learned for future operations.

Often confused as an early variant of the psychological debriefing were the *after-action* debriefings conducted by S.L.A. Marshall (1947) as a method of collecting military information for historical records (see Shalev, 2000). The first systematic psychological debriefing paradigm rightly belongs to the French, who developed the concept of far-forward treatment for psychological casualties during World War I, which was subsequently adopted by the British (see Salmon, 1929). During World War II and Korea, the United States adopted a similar far-forward "treatment" paradigm, where treatment involved talking about the horror and terror of the most recent battle and emphasizing that the powerful emotions resulting from battle such as fear, grief, guilt, and remorse were common (Baker, 1975). Also emphasized in these early psychological debriefings was the expectation that the soldier would soon return to battle. Noticeably absent from this debriefing approach was a discussion of the distant past, relations with one's family, and distant future planning.

In contrast, Marshall's historical debriefings did not specifically address the psychological aspects of combat at all, including the soldiers' emotional reactions to it. It is for this reason that Marshall's historical debriefing paradigm is categorized within the after-action debriefing framework. What Marshall's historical debriefing approach did suggest, however, is that these early psychological debriefings could be conducted on nonpsychiatric casualties who just returned from combat. The addition of the historical or informational aspect of the debriefings led to the hypothesis that psychological debriefings would create an opportunity for the correction of misperceptions about the event. Further, obtaining social support from fellow soldiers was now possible as the debriefings were conducted within the existing social group, namely, the military unit.

Mitchell and Everly (1996) developed one of the best known methods of psychological debriefing, critical incident stress debriefing (CISD). CISD is one component of the critical incident stress management (CISM) system; it refers to a specific process by which a group of individuals is guided through a series of stages in discussing a particular traumatic or series of traumatic events that they witnessed or participated in, but were not direct victims of the event (Everly & Mitchell, 2000).

Now considered the standard of care for small units exposed to potentially traumatizing events in the military (e.g., Harvey, 2002; Martin & Belenky, 1993), and integrated into the training and doctrine of military stress response teams (e.g., Dinneen, 1994; Harvey, 2002), psychological debriefing is met with considerable skepticism in the scientific community (e.g., Rose, Bisson, & Wessely, 2001). There is a disturbing lack of sound empirical evidence supporting its effectiveness and its potential for harm. Although well-designed

studies support the therapeutic benefits of self-disclosure (Pennebaker & Susman, 1989) and anecdotal evidence suggests that debriefing may be beneficial (e.g., Dyregrov & Mitchell, 1992; Robinson & Mitchell, 1993), there is a dearth of controlled studies examining the impact of debriefing.

In a review of the existing controlled studies, a Cochrane collaboration review of the randomized controlled trials of one-session debriefing (Rose et al., 2001) concludes that there is no evidence supporting debriefing; and there is, in fact, evidence suggesting it may be detrimental to psychological well-being. The studies cited in the review, however, did not apply the psychological debriefing procedures in the way in which it was originally intended—with groups of preexisting work teams (Weisaeth, 2000) and with individuals who were not physically harmed during the incident (see Everly & Mitchell, 2000; Mitchell & Everly, 1996). Furthermore, the studies cited do not report the specific psychological debriefing model used nor analyze the content of the debriefings as a manipulation check (see Litz, Gray, Bryant, & Adler, 2002, for a complete critique and additional review).

Despite the frequent use of psychological debriefing across a range of militaries from other nations (Adler & Bartone, 1999), surprisingly little research, randomized controlled studies, or otherwise, has examined the impact of debriefing on military personnel. Deahl et al. (2000) conducted the only randomized controlled study of soldiers that was identified in the literature. In a study of male soldiers returning from peacekeeping duty in Bosnia, 106 soldiers were randomly assigned to a debriefing or a nondebriefing control group condition. At the 6-month follow-up, soldiers in the debriefed group had lower anxiety and a higher score on a measure of alcohol problems than those in the nondebriefed group, but the nondebriefed soldiers reported a greater drop in traumatic stress. This complex pattern of results is further complicated by the fact that both groups actually had very low rates of psychological symptoms and thus meaningful comparisons are difficult. Furthermore, the degree to which the peacekeeping events were experienced as potentially traumatizing is unclear. Deahl, Srinivasan, Jones, Neblett, and Jolly (2001) emphasized, however, the importance of outcomes other than traumatic stress in debriefing effectiveness research.

There are a handful of other studies that addresses the impact of psychological debriefing on military personnel. Although not randomized controlled trials, they represent the present state of research on this topic. Shalev (1994; also reported by Shalev, Peri, Rogel-Fuchs, Rusano, & Marlowe, 1998) examined the impact of psychological debriefing on the adjustment of 39 Israeli soldiers exposed to combat along the Lebanese border over a 2-year period. Soldiers were assessed before and after units were debriefed using the historical

group-debriefing model. Results indicated that debriefing was followed by a significant decrease in anxiety among those soldiers who were the most anxious, and a significant increase in self-efficacy among those soldiers who had the lowest self-efficacy. Shalev concluded that debriefing was effective for those soldiers who avoided thinking about the incident and who were anxious. Without a control group, there remains the possibility that the soldiers would have improved over time on their own. The Shalev study is unique, however, in that the debriefing occurred in existing military units. Combat evaluation scores, an assessment of unit functioning, did not change immediately after the debriefing, but there were no follow-up assessments to measure any long-term effects (Shalev et al., 1998).

In a quasi-experimental study of the effects of debriefing on a small group of military personnel, Eid, Johnsen, and Weisaeth (2000) compared the health and attitudes of Norwegian personnel who responded to a serious car accident in a tunnel. Nine soldiers who inadvertently became involved in the rescue efforts were provided a group psychological debriefing following the event; nine firefighters who also responded to the scene were not. Two weeks later, the debriefed soldiers had lower traumatic stress scores and reported learning more about themselves from the accident than the professional rescue workers. Whereas this study suggests there may be positive results from debriefing, the fact that the two groups were not comparable prior to the intervention phase limits the internal validity of the study, as the authors acknowledge.

In another nonrandomized control study, Swedish peacekeepers deployed to Bosnia who had a ventilation session, or “defusing,” with their group leader reported better postdeployment adjustment than soldiers who reported support only from peers or from a formal psychological debriefing (Larsson, Michel, & Lundin, 2000). The study did not assess the content of the actual intervention and the analysis included soldiers who reported no traumatic experiences at all (65% reported no traumatic event).

In a survey study of more than 1,000 U.S. peacekeepers assessed 1 to 2 months after their return from a 6-month deployment on a peacekeeping mission in Kosovo (Adler, Dolan, & Castro, 2000), respondents were asked whether they had received a debriefing during their deployment. Soldiers who reported having experienced at least one potentially traumatizing deployment-related event and reported that they received a debriefing had lower posttraumatic stress symptoms than those who did not report being debriefed. In contrast, soldiers who reported having experienced no high-impact event and who were debriefed reported higher posttraumatic stress symptom scores than those who had not received a debriefing. The study is limited by the fact

that the data are retrospective and there was also no control over the kind of debriefing the soldiers reported receiving (see also Orsillo, Roemer, Litz, Ehlich, & Friedman, 1998).

The need for well-designed studies assessing the effectiveness and procedures of psychological debriefing is critical, especially given the frequency with which psychological debriefing is used in the U.S. military. Until that time, however, various other forms of early intervention, such as “therapy by walking around,” are being proffered as effective early mental health intervention paradigms. Unfortunately, these “improved” mental health intervention procedures are equally untested and unvalidated.

BATTLEFIELD MENTAL HEALTH INTERVENTION: “PIES”

The prevailing wisdom informing battlefield mental health intervention in the U.S. military today is the notion of Proximity—Immediacy—Expectancy—Simplicity, simply known as “PIES” (see Table 15.1). Though the acronym was first coined after the Korean War (Artiss, 1963), as noted earlier, it was Salmon who developed the concept for the U.S. military, based on the French and the British experience in World War I. While the British evacuated their psychiatric casualties back to Britain to be rehabilitated in sanitariums, the French treated their casualties near the lines in a military environment. The French were able to return 70% of their psychiatric casualties to duty, the British less than 5% (Baker, 1975).

TABLE 15.1. PIES: Basic Principles of Early Mental Health Intervention in Combat

Acronym	Principle	Description
P	Proximity	Supportive intervention in combat should occur as close to the battle and the soldier's unit as possible.
I	Immediacy	Support should occur as soon as possible after a psychiatric casualty is recognized.
E	Expectancy	Support should avoid pathologizing symptoms or medicalizing existing disability. Instead, the soldier is informed that this is a normal part of the combat experience, that they are “fatigued,” and that they will respond well enough within days to return to their unit.
S	Simplicity	Support is based on “simple” and largely nonmedical principles: rest (occasionally with sedation), nutrition, and physical reactivation (i.e., “three hots and a cot”).

The objective of PIES is to ensure that mental health support is readily and immediately available for those troops facing the most intense combat. The preference is to avoid “pathologizing,” diagnostic labels such as acute stress disorder, psychosis, or posttraumatic stress disorder in favor of “battle fatigue” or “combat exhaustion” in an effort to normalize the experience in the eyes of both the affected soldier and his unit members. “Treatment” is similarly nonmedical and usually consists of 24–72 hours of rest, nutrition, and modest physical activity. Reported rates of successful return to duty have varied widely from a high of 90% to less than 40% (Collins, 1972; Peterson & Chambers, 1952; Shephard, 2001). Although the capacity for soldiers to remain with the unit for their full combat tour is unknown, during the Korean War it was estimated that 90% of the neuropsychiatric casualties treated under the PIES paradigm returned to combat and only 10% experienced a second breakdown (Peterson & Chambers, 1952). The theoretical principles behind PIES are to preserve supportive relationships between affected soldiers and unit members, to prevent soldiers from seeing themselves as ill or disabled, and to bolster their self-esteem by facilitating their capacity to fulfill their obligation to their unit and country.

Although PIES has essentially become reified in military mental health circles, there are reasons to question its goals and its effectiveness. There are no controlled clinical trials to support or refute its efficacy (some might argue for obvious reasons). Clearly, the immediate goal of PIES, returning people to the battle, is consistent with military objectives. In the absence of scientific evidence of efficacy, however, many have criticized the manner in which military psychiatrists have seemingly justified PIES by offering anecdotes suggesting that the approach is in the interest of the soldier because it improves the long-term mental status of treated soldiers. Indeed, it has been argued that the entire notion of PIES is specious in an age when battlefields are highly mobile or when guerrilla tactics render the “front line” indefinable (see Ingraham & Manning, 1980).

COMMAND CONSULTATION

Command consultation is another method of early intervention in the military that has not been specifically examined in randomized controlled trials. Similar to the concept of executive coaching (McCauley & Hezlett, 2001), command consultation is an interactive process in which a professional, usually from outside the command, provides support to a military commander in addressing particular issues or problems (see Thompson & Pastó, 2003, for a review). The consultant's approach can be formal or informal but generally in-

volves some type of assessment, planning, implementation, and evaluation (Lenz & Roberts, 1991). The nature of that process is guided by the inherent power of the commander to accept or reject a particular recommendation. In addition, proximity to and experience in the theater of operations enhance the consultant's credibility.

Although there is evidence that military commanders often employ command consultation, some commanders may be reluctant to accept it because of concerns regarding confidentiality, the general stigma associated with mental health interventions (Thompson & Pastó, 2003), and lack of clarity about the role and services of such consultants. In addition, because command consultation covers such a wide spectrum of possible topics and interventions, the term itself has become excessively broad and difficult to conceptualize within the framework of an empirical study.

One type of command consultation of note is consultation following potentially traumatic events. Indeed, as a component of the CISM framework, command consultation is considered an integral part of a response to a critical incident (Everly & Mitchell, 2000). Several forms of command consultation were conducted, for example, following the terrorist attack on the Pentagon in September 2001. These included consulting with the Army Surgeon General about the best way to structure both on-site and follow-up mental health interventions, and the utility of a brief survey in assessing the impact of the trauma over time. Consultants also worked with senior military leaders at the Pentagon on effective ways to confront the emotional aftermath of the terrorist attack and provided them individualized support in the wake of the tragedy (Hoge, Engel, et al., 2002).

In responding to a potentially traumatic event, the role of a consultant from the mental health field is tailored to the specific situation. Nevertheless, there appear to be several consistent themes. The consultant serves as an outside support for organic mental health assets, provides suggestions for intervention management to the senior medical and operational leadership, and provides the senior leaders directly affected by the event an opportunity to discuss concerns they may have about their own experiences. Despite the importance and potential need for such services, again, there is no empirical evidence supporting this approach.

Another way in which command consultation may serve as a prevention tool is the use of human dimensions research teams to provide confidential and tailored feedback to commanders about their specific units. This feedback, typically based on soldier survey responses and interviews, consists of a personalized brief with mean scores on scales that provide comparisons to other units. The leaders are provided a personal code which allows them to

compare their unit's score to those of other units. By providing feedback in real time, that is, before the mission is completed, it is hoped that the leaders can take the appropriate and feasible corrective mid-course action as a first preventive step (see, e.g., Castro, Bienvenu, Huffman, & Adler, 2000; Thomas & Castro, in press).

Finally, an emerging area of command consultation that remains largely unexplored is that of health risk communication, which has been defined as "an interactive process of exchange of information and opinion among individuals, groups, and institutions. It involves multiple messages about the nature of risk and other messages, not strictly about risk, that express concern, opinions, or reactions to risk messages or to legal and institutions arrangements for risk managers" (National Research Council, 1989). In the arena of clinical care, the field of risk communication has focused largely on helping patients understand the risks and benefits associated with medical therapies and diagnostic tests in an effort to enhance their ability to make good health decisions. Population-based approaches to risk communication have been adopted by government agencies and industry in an effort to collaborate more effectively with communities impacted by potentially hazardous exposures. Anecdotes abound regarding positive outcomes associated with effective risk communication (e.g., efforts by the maker of Tylenol to address public concern after some packages were tainted with cyanide) and negative outcomes associated with poor risk communication (e.g., the Exxon-Valdez disaster). These strategies remain unproven in careful studies but are the source of great interest among military medical experts attempting to mitigate the medical and psychosocial impact of what some have termed an "inherently dirty battlefield" (see Freeman, 2002). There is a long history of important but largely medically unexplained somatic consequences of war and trauma, including entities such as "soldier's heart," "nostalgia," "shell shock," "DaCosta's syndrome," and "Gulf War syndrome." More recent civilian concerns after terrorism have also revealed the need to carefully target communications regarding health risk (e.g., "World Trade Center syndrome," and persistent ailments among U.S. postal workers concerned regarding possible exposures to items containing anthrax or even to mail that has undergone irradiation to eliminate any residual anthrax spores).

The impact of command consultation, its role in early intervention, and the degree to which it provides support in the event of a critical incident need to be examined empirically. Although anecdotal evidence suggests it may be useful, there are no case-control studies demonstrating the impact of command consultation on performance, health, or other militarily relevant outcomes.

THE FUTURE OF MENTAL HEALTH PREVENTION AND EARLY INTERVENTION

Providing mental health prevention and early intervention is a challenge because although combat is indeed both terrifying and horrifying even for those who perform exceedingly well (Murphy, 1956), most combat veterans do not develop significant mental health problems requiring intervention. Paradoxically, Audie Murphy, America's most decorated World War II veteran, apparently suffered from PTSD, suggesting that successful performance in combat alone does not "protect" one from subsequent mental health problems. In this chapter, we briefly reviewed the key prevention and early intervention programs, initiatives, and strategies adopted by the U.S. military to meet this challenge, paying particular attention to the evidence that merits their implementation. Surprisingly, there is very little systematic (i.e., scientific) evidence to support their use (or disuse).

Clearly, there is a need to conduct systematic, randomized control studies to determine the effectiveness (and safety) of our current mental health prevention and early intervention programs. Furthermore, these studies need to be prospective and longitudinal. Such studies will tell us not only whether our programs work but, more important, how our programs can be improved to meet the needs of the military personnel who are confronted with the stressors of combat, as well as other potentially traumatic events. Undoubtedly, such studies will be extremely difficult to conduct. However, only by relying on the findings of scientifically based studies in developing mental health prevention and early intervention programs will we be able to move beyond our reliance on personal experiences, opinions, and retrospective assessments to determine the best course of action. Our combat veterans deserve no less.

REFERENCES

- Adler, A. B., & Bartone, P. T. (1999). International survey of military mental health professionals. *Military Medicine*, 164(11), 788-792.
- Adler, A. B., Dolan, C. A., & Castro, C. A. (2000). U.S. soldier peacekeeping experiences and wellbeing after returning from deployment to Kosovo. In *Proceedings of the 36th International Applied Military Psychology Symposium* (pp. 30-34). Split, Croatia: Ministry of Defense of the Republic of Croatia.
- Adler, A. B., Litz, B. T., & Bartone, P. T. (in press). The nature of peacekeeping stressors. In T. W. Britt & A. B. Adler (Eds.), *Psychology of the peacekeeper: Lessons from the field*. Westport, CT: Praeger.
- Adler, A. B., Wright, K. M., Huffman, A. H., Thomas, J. L., & Castro, C. A. (2002). Deployment cycle effects on the psychological screening of soldiers. *U.S. Army Medical Department Journal*, 4/5/6, 31-37.
- Artiss, K. L. (1963). Human behavior under stress—from combat to social psychiatry. *Military Medicine*, 128, 1011-1015.
- Baker, S. L. (1975). Traumatic war neurosis. In A. M. Freedman, H. I. Kaplan, & B. J. Sadock (Eds.), *Comprehensive textbook of psychiatry II* (2nd ed., pp. 1618-1624). Baltimore, MD: Williams & Wilkins.
- Britt, T. W. (2000). The stigma of psychological problems in a work environment: Evidence from the screening of service members returning from Bosnia. *Journal of Applied Social Psychology*, 30, 1599-1618.
- Castro, C. A., Bienvenu, R. V., Huffman, A. H., & Adler, A. B. (2000). Soldier dimensions and operational readiness in U.S. Army forces deployed to Kosovo. *International Review of the Armed Forces Medical Services*, 73, 191-200.
- Collins, J. L. (1972). Military psychiatry. *Journal of the National Medical Association*, 64, 32-34.
- Deahl, M. P., Srinivasan, M., Jones, N., Neblett, C., & Jolly, A. (2001). Commentary: Evaluating psychological debriefing: Are we measuring the right outcomes? *Journal of Traumatic Stress*, 14(3), 527-529.
- Deahl, M., Srinivasan, M., Jones, N., Thomas, J., Neblett, C., & Jolly, A. (2000). Preventing psychological trauma in soldiers: The role of operational stress training and psychological debriefing. *British Journal of Medical Psychology*, 73, 77-85.
- Dineen, M. (1994, April). *Helping individuals and communities cope with overwhelming psychological trauma*. Garmish-Partekirschen, Germany: Army Medical Department Training Symposium.
- Dyregrov, A., & Mitchell, J. T. (1992). Work with traumatized children. *Journal of Traumatic Stress*, 5, 5-17.
- Eid, J., Johnsen, B. H., & Weisaeth, L. (2000, September). *Group psychological debriefings: Does it make a difference?* Paper presented at the meeting of the International Conference on Human Dimensions During Military Deployments, Heidelberg, Germany.
- Everly, G. S., & Mitchell, J. T. (2000). *Critical incident stress management: Advanced group crisis interventions—A workbook*. Ellicott City, MD: International Critical Incident Stress Foundation.
- Freeman, C. D. (2002). Risk communication: The leadership tool for the 21st Century. *U.S. Army Medical Department Journal*, 1/2/3, 40-43.
- Gifford, R. K., Jackson, J. N., & DeShazo, K. B. (1993). *Report of the human dimensions research team Operation Restore Hope*. Unpublished report, Walter Reed Army Institute of Research.
- Ginzberg, E. (1959). *The lost divisions*. New York: Columbia University Press.
- Harris, F. G., Mayer, J., & Becker, H. A. (1955). *Experiences in the study of combat in the Korean theater: I. Psychiatric and psychological data*. Washington, DC: Walter Reed Army Institute of Research.
- Harvey, S. C. (2002). Debriefing/decompression: Psychological support for OEF casualties. *U.S. Army Medical Department Journal*, 10/11/12, 14-20.

- Hoge, C. W., Engel, C. C., Orman, D. T., Crandell, E. O., Patterson, V. J., Cox, A. L., Tobler, S. K., & Ursano, R. J. (2002). Development of a brief questionnaire to measure mental health outcomes among Pentagon employees following the September 11, 2001 attack. *Military Medicine*, 167(Suppl. 4), 60-63.
- Hoge, C. W., Lesikar, S. E., Guevara, R., Lange, J., Brundage, J. F., Engel, C. C., Messer, S. C., & Orman, D. T. (2002). Mental disorders among U.S. military personnel in the 1990s: Association with high levels of health care utilization and early military attrition. *American Journal of Psychiatry*, 159, 1576-1583.
- Ingraham, L. H., & Manning, F. J. (1980, August). Psychiatric battle casualties: The missing column in a war without replacements. *Military Review*, pp. 19-29.
- Larsson, G., Michel, P., & Lundin, T. (2000). Systematic assessment of mental health following various types of posttrauma support. *Military Psychology*, 12, 121-135.
- Lenz, E. J., & Roberts, B. J. (1991). Consultation in a military setting. In R. Gal & D. Mangelsdorff (Eds.), *Handbook of military psychology* (pp. 671-687). Chichester, UK: Wiley.
- Litz, B. T., Gray, M., Bryant, R. A., & Adler, A. B. (2002). Early intervention for trauma: Current status and future directions. *Clinical Psychology: Science and Practice*, 9(2), 112-134.
- Marshall, S. L. A. (1947). *Men against fire*. Gloucester, MS: Peter Smith.
- Martin, J. A., & Belenky, G. L. (1993, November). *Operation Desert Storm after action stress debriefings*. Proceedings of the 35th annual conference of the Military Testing Association, Williamsburg, VA.
- Martinez, J. A., Huffman, A. H., Adler, A. B., & Castro, C. A. (2000). Assessing psychological readiness in U.S. soldiers following NATO operations. *International Review of the Armed Forces Medical Services*, 73, 139-142.
- McCauley, C. D., & Hezlett, S. A. (2001). Individual development in the workplace. In N. Anderson, D. S. Ones, H. K. Sinangil, & C. Viswesvaran (Eds.), *Handbook of industrial, work and organizational psychology* (Vol. I, pp. 313-335). London: Sage.
- McRae-Bergeron, C. E., May, L., Foulks, R. W., Sisk, K., Chamings, P., & Clark, P. A. (1999). A medical readiness model of health assessment or well-being in first-increment air combat command medical personnel. *Military Medicine*, 164, 379-388.
- Mitchell, J. T., & Everly, G. S., Jr. (1996). *Critical incident stress debriefing: An operations manual for the prevention of traumatic stress among emergency services and disaster workers* (2nd ed.). Ellicott City, MD: Chevron.
- Murphy, A. (1956). *To hell and back*. London: Bartles.
- National Center on Child Abuse and Neglect. (1992). *National child abuse and neglect data system* (No. ACF 92-30361). Washington, DC: Department of Health and Human Services.
- National Research Council. (1989). *Improving risk communication*. Washington, DC: National Academy Press.
- North, C. S., Nixon, S. J., Shariat, S., Mallonee, S., McMillen, J. C., Spitznagel, E. L., & Smith, E. M. (1999). Psychiatric disorders among survivors of the Oklahoma City bombing. *Journal of the American Medical Association*, 282, 755-762.
- Orsillo, S. M., Roemer, L., Litz, B. T., Ehlich, P., & Friedman, M. J. (1998). Psychiatric symptomatology associated with contemporary peacekeeping: An examination of post-mission functioning among peacekeepers in Somalia. *Journal of Traumatic Stress*, 11, 611-625.
- Pennebaker, J. W., & Susman, J. R. (1989). Disclosure of traumas and psychosomatic processes. *Social Science Medicine*, 26, 327-332.
- Perkins, M. E. (1955). Preventive psychiatry during World War II. In J. B. Coates & E. C. Hoff (Eds.), *Preventive medicine in World War II: Vol. III. Personal health measures and immunization* (pp. 171-232). Washington, DC: Office of the Surgeon General, Department of the Army.
- Peterson, D. B., & Chambers, R. E. (1952). Restatement of combat psychiatry. *American Journal of Psychiatry*, 109, 249-254.
- Plummer, M. T. (1997, November). Quality of life is the most visible way of showing commitment to soldiers. *Army*, pp. 14-15.
- Robinson, R. C., & Mitchell, J. T. (1993). Evaluation of psychological debriefings. *Journal of Traumatic Stress*, 6, 367-382.
- Rose, S., Bisson, J., & Wessely, S. (2001). Psychological debriefing for preventing post-traumatic stress disorder (PTSD) (Cochrane review). In *The Cochrane Library* (Vol. 3). Oxford, UK: Update Software.
- Rothbaum, B., Foa, E., Riggs, D., Murdock, T., & Walsh, W. (1992). A prospective examination of post-traumatic stress disorder in rape victims. *Journal of Traumatic Stress*, 5, 455-475.
- Salmon, T. W. (1929). The care and treatment of mental diseases and war neurosis (shell shock) in the British Army. In *The Medical Department of the United States Army in the World War* (Vol. X, pp. 497-523). Washington, DC: U.S. Government Printing Office.
- Shalev, A. Y. (1994). Debriefing following traumatic exposure. In R. J. Ursano, B. G. McCoughey, & C. S. Fullerton (Eds.), *Individual and community response to trauma and disaster: The structure of human chaos* (pp. 201-219). Cambridge, UK: Cambridge University Press.
- Shalev, A. Y. (2000). Stress management and debriefing: Historical concepts and present patterns. In B. Raphael & J. P. Wilson (Eds.), *Psychological debriefing* (pp. 17-31). Cambridge, UK: Cambridge University Press.
- 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.
- Shepherd, B. (2001). *A war of nerves*. Cambridge, MA: Harvard University Press.
- Southwick, S. M., Morgan, C. A., Nicolaou, A. L., & Charney, D. S. (1997). Consistency of combat-related traumatic events in veterans of Operation Desert Storm. *American Journal of Psychiatry*, 154, 173-177.
- Stretch, R. H., Bliese, P. D., Marlowe, D. H., Wright, K. M., Knudson, K. H., & Hoover, C. H. (1996). Psychological health of Gulf War-era military personnel. *Military Medicine*, 161, 257-261.
- Swank, R., & Marchand, W. (1946). Combat neuroses: The development of combat exhaustion. *Archives of Neurology and Psychology*, 55, 236-247.

- Thomas, J. L., & Castro, C. A. (in press). Organizational behavior and the U.S. peacekeeper. In T. W. Britt & A. B. Adler (Eds.), *Psychology of the peacekeeper: Lessons from the field*. Westport, CT: Praeger.
- Thompson, M. M., & Pastó, L. (2003). Psychological Interventions in Peace Support Operations: Current Practices and Future Challenges. In T. W. Britt & A. B. Adler (Eds.), *Psychology of the peacekeeper: Lessons from the field*. Westport, CT: Praeger.
- Weisaeth, L. (2000). Briefing and debriefing: group psychological interventions in acute stressor situations. In B. Raphael & J. P. Wilson (Eds.), *Psychological debriefing: Theory, practice and evidence* (pp. 43-57). Cambridge, UK: Cambridge University Press.
- Wright, K. M., Huffman, A. H., Adler, A. B., & Castro, C. A. (2002). Psychological screening program overview. *Military Medicine*, 167(10), 853-861.

16

Closing Remarks

BRETT T. LITZ

I started this book with a series of chapters that laid the groundwork for understanding the acute psychological impact of trauma and traumatic loss that nearly everyone experiences and the chronic debilitating clinical problems that only a relatively small percentage of survivors will experience. A wealth of information was also provided about the current state of research that has attempted to examine the personal, cultural, and social factors that affect risk for developing chronic posttraumatic mental health problems as well as a roadmap for future research endeavors. Expanding our scientific knowledge is one of the most important challenges for the field. The more conclusive evidence we have about personal liabilities and risk factors for chronic posttraumatic problems, the greater our chances of meaningfully screening people who will have difficulty recovering on their own, and the greater confidence we can have in decisions about how secondary prevention resources should be used. Also, if future research can provide valid and useful information about the interpersonal, community, and cultural factors that affect recovery from trauma and traumatic loss, then ideas can be generated and tested to shift resources and modify practices to foster resilience in the family, school, and other public arenas.

In the next part, a series of chapters provided detailed descriptions of the epidemiology, phenomenology, mental health outcomes, and clinical care