

## Enhancing Mental Readiness in Military Personnel

**Megan M. Thompson & Donald R. McCreary**

Defence Research & Development Canada  
1133 Sheppard Ave West  
Toronto M3M 3B9  
CANADA

[Megan.Thompson@drdc-rddc.gc.ca](mailto:Megan.Thompson@drdc-rddc.gc.ca) [Don.McCreary@drdc-rddc.gc.ca](mailto:Don.McCreary@drdc-rddc.gc.ca)

### **ABSTRACT**

*With psychological injuries accounting for between 10-50% of operational casualties, there is consistent evidence that adequate psychological preparation for deployments is a vital operational requisite. Beyond the psychological costs to soldiers, empirical results also indicate that the stressors found in military contexts can contribute to errors in judgement and performance, reducing operational effectiveness. Thus, the development of training programs that successfully prepares personnel for the psychological rigors of operations, in addition to the physical and technical demand, are important for operational effectiveness and maintaining the well-being of individual military personnel.*

*Although many militaries provide stress management briefings, the ultimate effectiveness of these briefings can be hampered by at least three factors. First, these presentations are typically a fairly academic discussion of a generic stress model presented in lecture formats that are totally distinct from operational training. This may make the lessons inherent in stress briefings seem unrelated to soldiers' experiences. Second, there is virtually no practical training associated with traditional stress management briefings. A final, yet fundamental issue is, of course, the existence of the pervasive stigma associated with mental health issues. All of these factors may contribute to a general resistance toward, and/or denial of, the relevance of this information. Despite these individual and cultural pejoratives that undermine the acceptance of this training, militaries must address the issue of developing psychological resiliency in their personnel. The challenge, then, is to incorporate the important principles of stress management into training in ways that are engaging and relevant to military audiences, and that do not cause psychological reactance due to stigma-related attitudes.*

*In this paper we explore how the psychological literature on stress and coping might inform military training programs to enhance "mental readiness" [1, p. 743] as a method to develop the baseline psychological resiliency of military personnel. Accordingly, mental readiness training involves an integrated approach, infusing the principles of emotional, cognitive and behavioral control in the context of realistic military training. More specifically, in selected training situations, instructors would note physiological and cognitive responses to stress, how these responses may affect soldiers' reactions, and the decisions made and the course of action taken, as well as how these factors interact. Trainers also would provide instruction in the techniques of maintaining cognitive and emotional control in situ, demonstrating these techniques as required until a specific level of proficiency is achieved. In this way, the valuable lessons and training points of stress management are more intrinsically applicable and salient to soldiers, the techniques more contiguously practiced, and the benefits of these techniques more immediately experienced in operationally relevant contexts. Thus, integrating these principles and tools into relevant training opportunities encourages the reflexive application of mental readiness responses in the same way that technical proficiencies become reflexive in military contexts. We review two studies that have particular application to a mental readiness approach. We conclude with a discussion of specific*

Thompson, M.M.; McCreary, D.R. (2006) Enhancing Mental Readiness in Military Personnel. In *Human Dimensions in Military Operations – Military Leaders' Strategies for Addressing Stress and Psychological Support* (pp. 4-1 – 4-12). Meeting Proceedings RTO-MP-HFM-134, Paper 4. Neuilly-sur-Seine, France: RTO. Available from: <http://www.rto.nato.int/abstracts.asp>.

*training issues relevant to mental readiness preparation, and the placement of mental readiness training in the continuum of military mental health training, services and programs.*

## **INTRODUCTION<sup>1</sup>**

Modern military operations, ranging from traditional warfighting through the range of peace support missions, encompass varied doctrinal and tactical differences. Combat missions primarily involve the control of fear and fear-related thoughts, but also the control of reckless behavior in order to maintain operational effectiveness [2, 3]. Peace support operations also include the control of anger and frustration, in addition to the control of fear. However, all military missions are similar in that decisions and actions continue to involve often life-threatening or life-altering consequences and regularly occur against a backdrop of psychological stressors, including danger and risk, time pressure, and uncertainty [4]. Beyond the psychological costs to individual soldiers, and left out of battle rates for units, empirical results also indicate that the stressors found in military contexts can reduce operational effectiveness. This impairment includes attentional lapses, narrowing of perceptual focus, short-term memory impairment, and biased information processing, which separately, and in combination, can contribute to errors in judgement and performance [2, 4, 5, 6, 7]. Thus, despite technological advances, humans remain the central element in military operations and are required to maintain emotional, cognitive, and behavioral control to ensure their own safety, the safety of their comrades, and to maximize operational effectiveness.

Given the importance of these psychological features, the simple answer would seem to be to select only those individuals who are born with the ‘right stuff’ to excel in the face of stressors associated with military missions. Yet, despite the considerable effort [ e.g., 8], time, and money spent on military psychological screening programs at the recruit level, stress injuries continue to account for between 10 percent and 50 percent of operational casualties [1, 3, 4, 9, 10, 11, 12]. Moreover, even if the definitive psychological selection criteria in this regard were to be established, in many countries the pool of recruits is so small that their militaries simply do not have the luxury of screening out all potentially vulnerable candidates. Furthermore, the recruiting doctrines of many countries must maintain a careful balance between military requirements and human rights challenges from applicants who may take issue with particular exclusion criteria. Therefore it often falls to the training systems to provide the requisite skills that will ensure the best possible protection for all military personnel.

## **Military Training**

Military training has traditionally focused on skill acquisition, and the development of technical proficiency, discipline, strength, endurance, and teamwork. Lectures and briefings provide basic knowledge, while demonstrations and repeated drills hone specific proficiencies. Certainly practice, particularly the overlearning involved in repeated drills, can have psychological benefits, reducing the novelty of, and thus the uncertainty associated with, the technical aspects of these tasks, thereby increasing confidence. Overlearning can decrease soldiers’ interference from competing responses [2, 13, 14] and may be particularly important in complex tasks [15]. Nonetheless, in this approach important psychological lessons are at best implicit, and “the individual is left to his own devices in learning to control thoughts and emotions. Yet it is evident that emotions and thoughts can affect behavior and may be elements critical to the acquisition of proficiency” [16, p. 53]. While many individuals learn these implicit yet vital mental lessons over time, the remaining people will have varying degrees of difficulty

---

<sup>1</sup> We would like to thank LCol Peter Haindl, and the training staff at the Peace Support Training Centre, Canadian Forces Base Kingston who have provided the first author with excellent opportunities to observe peace support training. Their example has significantly informed and influenced our thinking about the infusion of mental readiness concepts into operationally relevant training contexts. This paper is based on the chapter Thompson, M.M., & McCreary, D.R. (2006). Enhancing mental readiness in military personnel. In T.W. Britt, A. Adler, & C.A. Castro (Series Eds.) & A. Adler, T.W. Britt, & C.A. Castro (Vol. Eds.), *Military life: The psychology of serving in peace and combat: Vol. 2. Operational demands and adjustment* (pp. 54-79). New York: Praeger Press.

acquiring these psychological skills. At best, this can delay their skill acquisition, and at worst this will leave them and their colleagues consistently at risk, and potentially limit their ability to remain in the military [17, 18].

In recognition of the adverse effects that stress-related reactions may have on operations, many militaries recently have begun to address this issue via the development of stress management briefings. Routinely given by military mental health professionals, these lectures, which typically are one to four hours in length, cover the stress-strain relation, the general principles of stress, common deployment stressors and general information on various effective and ineffective coping strategies [14, 19]. Although these lectures may be a positive development in terms of beginning to acknowledge and address the notion of stress in military operations, the ultimate effectiveness of these lectures may be limited by several factors.

First, similar to the civilian population, military personnel often hold strong stereotypes that psychological problems reveal inherent character weakness [20, 21]. Indeed, this mindset may be particularly prevalent in military cultures that explicitly value physical fitness, toughness and courage. This mindset sets the stage for negative attitudes that work against the messages provided in stress briefings. Second, the use of mental health professionals to deliver these lectures may entrench the resistance to this information even further. That is because, as important as their skills are, military mental health professionals are seen as treating the already injured, not providing training that enhances operational effectiveness. Stress briefings also are made more distinct because they are often given separately from the rest of military and predeployment training. Hence, the important lessons contained in stress management briefings, especially those tied to operations, may be more easily rejected if not given by military personnel who are perceived to have applicable operational experience. Third, the typical lecture format may not be engaging for soldiers, and the lessons may therefore seem to be of little relevance [14]. Nor does the lecture/briefing approach provide specific training on the techniques that could be put to effective use during stressful situations, or if they do they are only demonstrated quickly during the lecture. This again limits the person's ability to generalize these practical techniques to real world settings they may encounter while deployed. Despite these significant obstacles, militaries must address the issue of developing the baseline psychological resiliency of their personnel as there is consistent evidence that such resilience helps ensure health and well-being and is a vital operational requisite.

### **MENTAL READINESS TRAINING**

How then do we set about to increase the baseline psychological resiliency of military personnel? Such an approach would need to promote stress awareness, education, and, importantly, stress training in ways that will be meaningful and immediately relevant to a majority of military personnel, without engaging strong stereotypes that can undermine the important messages inherent in this type of training. Our thinking about this delicate balance has led to us to propose a 'mental readiness' approach, a term we adopt from Armfield [1], that would merge important principles of stress management directly into meaningful training situations. Mental readiness training then would involve the largely seamless integration of psychological coping principles into dynamic military training environments, with message delivery by trainers with technical and operational experience and credibility. In this way, the lessons and training points associated with mental readiness are more intrinsically applicable and salient to soldiers on both physiological and psychological levels, the techniques are practised in situ, and the benefits of these techniques are more immediately pertinent to and contiguously experienced in operationally relevant contexts. This is because the basic tools of stress management should not be taught as distinct and therefore somehow dissimilar from 'normal' responses to 'normal' military situations – to be used only after events occur and stress symptoms emerge. Rather, they should be integrated into all relevant training opportunities so that they become reflexive in the same way that technical proficiencies are reflexive. Similarly, the notion of mental readiness should be thought of as a trainable skill that can be acquired and developed, much like physical fitness, as opposed to the traditional view of the psychological, as static

aspects of personal temperament, character and strength. These goals can only be accomplished if the techniques to develop mental readiness are well integrated and ingrained in the overarching arsenal of responses available to military personnel.

### **Cognitive Behavioral Paradigm**

The foundation of mental readiness training is the cognitive-behavioral paradigm. This approach emphasizes the importance of each individual's appraisals of a stressful event, instead of simply the presence or absence of the stressor itself. One of the most influential theories within this paradigm is the Transactional Model, in which stress is defined as the result of an imbalance or mismatch between environmental demands and the person's perceived coping resources [22, 23]. According to this model, an individual will make an initial or primary appraisal that an event is either challenging (and thus is perceived as neutral or positive) or threatening (and is thus perceived as negative). If perceived as threatening, the person then makes an assessment, termed a secondary appraisal, as to whether he or she has the coping resources to successfully manage and prevail in the situation [23]. Where a perceived match between the requirements of an event and coping resources occurs, equilibrium is restored. In a case of a perceived mismatch, equilibrium remains elusive.

Although fundamentally cognitive in nature, physiological and emotional components are also integral to the transactional model. For instance, when the perceived imbalance between individual resources and environmental demands is high, physiological (e.g., heart and breathing rate, sweating, etc.) and psychological (e.g., attention, anxiety, etc.) systems become increasingly activated [16, 18]. Because they truly are interactive systems, increased physical, emotional, or cognitive arousal can increase arousal in the remaining systems through feedback loops [24]. Within limits, people are able to cope with the increased arousal associated with the imbalance between perceived resources and environmental demands. Indeed, these circumstances are fundamental to the learning and mastery of new behaviors [16]. However, when the imbalance between events and resources becomes too great, a person's arousal exceeds their optimum threshold. In this case, they are most focused on decreasing their arousal, often through the most immediately accessible or well-learned means, even if those means inhibit and interfere with effective learning, mastery, and adaptation to stressful environments.

Certainly the precepts of the transactional model are consistent with military stress research and theory. For example, there is consistent evidence that the appraisals and the coping strategies of military veterans have strong influences on their mental health outcomes [10, 11, 25, 26]. Gal's [27] model of combat stress considers soldiers' cognitive interpretations and assessments of the combat situation to be central. These interpretations mediate individual, unit, and mission-related antecedents and subsequently determine each soldier's cognitive, emotional and behavioral responses. The more recent Soldier Adaptation Model (SAM, [28]) also identifies individual-level factors (e.g., coping styles) as an important moderator in the stress-well being relation for soldiers.

We have suggested that mental readiness must be operationally relevant, should clearly show the links between physiological, psychological systems and the importance of control of these systems to maximize performance and should be operationally or at least occupationally relevant. When exploring the psychological literature for studies that represent this philosophy, Epstein's seminal research on the fundamental process of stress adaptation in the context of skydiving is immediately relevant. In a series of inventive studies, Epstein and colleagues [29, 30, 31] demonstrated the distinct patterns of physiological and psychological reactivity in novice versus experienced parachutists. For instance, they showed that on non-jump days, both novice and experienced parachutists had low patterns of physiological reactivity (assessed via galvanic skin responses [GSR]) to neutral words on a word association task, with higher levels of reactivity to words that were increasingly associated with skydiving [30]. The pattern of reactivity among novice and experienced parachutists differed in important ways, however, on jump days. Novices produced a similar, although much more elevated, pattern on jump days. On the other hand, when

tested shortly before a jump, experienced parachutists showed the greatest reactivity to words of *intermediate* relevance to parachuting with less reactivity to words of both low and high relevance, demonstrating an inverted-V response. Moreover, the pattern was developmental: as parachutists increased their number of jumps, their GSR reactivity was increasingly displaced from the most jump-related words toward the more neutral words, indicating that this reactivity was associated with experience, rather than merely a function of self-selection [29]. Importantly, these effects were only seen on jump days; recall, on control days, experienced parachutists reacted in a manner similar in shape to that of novices. Similarly, other research showed that experienced parachutists showed highest levels of GSR reactivity early in the actual jump sequence (e.g., arriving at the airport and just after takeoff, for fear and GSR ratings respectively) whereas novices' reactivity levels peaked immediately before stepping out of the airplane [30, 31].

Most compellingly, the 'novice arousal pattern' reappeared among experienced parachutists under certain conditions, including those that heightened acute concerns about safety.<sup>2</sup> These regressions to novice patterns of reactivity are critical in revealing that an automatic process of stress habituation alone could not account for the reactivity of experienced reactivity. Rather, Epstein concluded that these effects were clearly "a consequence of an active coping process that prepare[d] the [experienced] individual for the upcoming jump . . . [wherein their] anxiety . . . [was] controlled by an active mental process developed by experience . . . [that] effectively constrained the effects of disruptive emotions on essential cognitive preparation and behavioral maneuvers" [16, p. 48].

We believe these studies have direct applicability to the development of mental readiness in military training programs. First of all, Epstein's work shows the links between thoughts, emotions and behavioral responses and the importance of control of these systems to technical proficiency in a compelling way. Second, they detail the stress-coping relation in an environment that involves high risk, technical proficiency (i.e., parachuting), and the control of arousal, all features of the prototypical military context. Third, the participants in these studies were physically fit, highly motivated people, in contrast to people with identified psychological issues (phobics, people diagnosed with PTSD) who are the typical subjects of the majority of traditional stress intervention programs. Fourth, these studies explored the development of coping adaptation in a proactive setting, rather than after a significant coping deficit had been identified. Finally, these results are consistent with the Transactional Model of stress. Novice parachutists perceive a greater gap between the event and their coping resources, leading to a greater degree of arousal. Their focus then is on coping with their emotional and physical arousal, providing them less capacity to systematically attend to the immediate practical requirements and potential realistic dangers at the critical moments of the jump. Experienced parachutists, in contrast, have developed strategies that enable them greater control of their arousal levels, leaving them more cognitive resources for the technical aspects and any relevant danger signs during the jump. The development of these strategies and technical skills enable them to perceive less of a gap between event requirements and their coping resources. Thus, as parachutists gain experience, they appear to be active agents in the construal of events and their cognitive, emotional, and physiological control.

A second pillar of mental readiness approach is the use of highly credible sources of information and models of mental readiness precepts. Just such an innovative application was undertaken by Novaco and colleagues [18] in the context of U.S. Marine recruit training. These researchers developed an experimental training film that followed the first days of training of a small group of recruits, focusing on what the recruits thought, how they felt, and how they learned to cope with the demands of basic training. Consequently, while the videos validated feelings of uncertainty and lack of control in this new and demanding setting, they also modeled potential adaptive cognitions (e.g., reappraisals of the demanding training staff and ways to control self-defeating emotions and cognitions). Moreover, the filmed recruits

---

<sup>2</sup> Examples included reading a report of other parachutists being injured during a jump, when there was a possibility of a main chute malfunction during a jump, or when viewing a film of other parachutists making a jump, and in one case when an experienced jumper fell asleep on the plane's ascent, waking just before the plane reached the jump zone [16].



## Enhancing Mental Readiness in Military Personnel

---

provided especially effective and credible models of successful coping techniques, self-statements, and behaviors.

The training videos then were incorporated into the first days of training of a second cadre of recruits. Specifically, one group of Marines viewed the experimental coping skills video, while a second group saw a film that simply detailed the coming recruit training period. Two additional groups saw the two films in counterbalanced order, and a final group saw no film at all. Results showed that viewing the coping skills films lead to higher expectations of efficacy in relation to a number of specific tasks to be mastered during basic training (e.g., marksmanship, stress endurance, controlling emotions). Hence, the training film provided new recruits with three relevant types of information. First, procedural information indicated what recruits should to expect, sensory information on what they would feel (and what feelings were normal to experience), and instrumental information on effective means to cope with the experience [15, see also 2]. Moreover, all this information was provided to the new recruits by credible sources; that is, people just recently, and successfully, completing the same training.

Importantly, the strongest increases in expectations were evident for recruits with an external locus of control (compared to recruits with an internal locus of control, who showed no changes in their expectations). A similar pattern of results was evident for recruits' perceptions of control in training success. In the groups not viewing the coping skills training video, control perceptions for those with an internal locus of control increased across the training period, but they remained unchanged for those with an external locus of control. This finding is especially notable in that it suggests that this approach may offer an effective intervention for individuals who are not inherently equipped with the adaptive coping skills required for Epstein's natural stress inoculation process [16].

We believe these studies to be important and entirely consistent with a mental readiness training approach in that they reveal the stress-outcome relationship and the important relations among cognitive, emotional, and physiological control in contexts that should not trigger negative attitudes and psychological reactance to these stress management principles. Indeed, although consistent with the Transactional Model of Stress, we would argue that there is no reason why these lessons need to be explicitly framed in a traditional stress lecture or briefing format. The research findings could be readily integrated into involving and relevant military training programs, in which these issues are raised in the training context by trainers with acknowledged technical and operational experience. Just as importantly, however, combining the two methodologies offers a potential methodology for extracting the self-statements of experienced personnel and feeding these into training programs to promote and accelerate the development of coping skills under stress for novices.

Particular training situations are natural venues for the application of these principles. For instance, many of the more challenging military courses already involve a graduated exposure to more and more realistic training scenarios. What appears to be lacking in many of these current training situations, and what we are advocating here, is an effective integration of, and practice in, the psychological principles of stress and coping (or what we are referring to as mental readiness) into these preexisting training settings. A few examples of relevant training settings might include Nuclear, Biological, Chemical and Radiological hazards training and house to house assaults in combat settings, as well as human rights violations and hostage taking scenarios in peacekeeping and military observer training. In each of these cases, consistent with the mental readiness approach, the instructor would note the physiological responses and how they may affect soldiers' reactions, the decisions made and the course of action taken, as well as how these factors interact. The key here is that training opportunities appropriate to the infusion of mental readiness training require somewhat higher stress levels in order to make training points and techniques salient.

Basic training may well be the perfect place to start this type of training [e.g., 18, 32]. This is the initial 'natural stress laboratory' that people entering military life encounter, typically at an age where they are still quite malleable. Second, recruit training is the perfect setting to begin to integrate social and

organizational goals into situation assessment and selection of optimal coping strategies. Indeed, “[i]f conditions can be specified and structured such that recruits have the opportunity to overcome learning that has resulted in failure [and] a negative self-concept, ... not only might the military have better personnel, but society might receive individuals who are better able to cope with the demands of life” [17, p. 426].

### **Mental Readiness Training, Stress Inoculation Training (SIT) & Stress Exposure Training (SET)**

An issue that we must address concerns the relationship between this proposed mental readiness approach and other techniques based in the cognitive behavioural tradition. By far the most popular of these is Stress Inoculation Training (SIT) [33, 34]. SIT is an intensive, multi-stage process designed to change people’s maladaptive behaviors in stressful situations; to make people more aware of their cognitive processes; and to facilitate coping by teaching more adaptive cognitive sets or habits to replace ineffective or harmful thoughts and behaviors. There is no doubt that SIT has enjoyed great success in the reduction of maladaptive behaviors and phobias [35]. Stress Exposure Training (SET) [2, 36], was developed to expand the scope of SIT beyond its traditional clinical applications in order to enhance the performance of ‘normal’ people in stressful working environments. Despite this important philosophical distinction, the SIT and SET interventions have much in common. Both involve three developmental stages. Similar to SIT, the first phase of SET is educational in which typical reactions to stress are discussed, and the trainees’ own reactions to the situational stressors that are the target of the specific SET intervention are identified. This framework is thought to provide a coherent conceptual system that promotes understanding and facilitates the assimilation of these new experiences [16, 33] and enhances motivation to complete the training [34, 37]. The second stage of both SIT and SET is devoted to the development of specific skills required to ameliorate the effects of the stress. Consistent with SIT, the goal of this phase of SET is to develop the ability to maintain awareness of stress reactions and, via feedback from the trainer, develop cognitive, emotional and behavioral control strategies specific to the stressful environment. The final stage of both SIT and SET involves the practice of the new control strategies in situations that increasingly simulate the stress context.

SIT has been the mainstay of stress management programs, and SET’s explicit focus on optimizing the performance/operational effectiveness of military personnel, should increase its acceptance by trainers and trainees in a military setting. Likewise, the training and rehearsal in specific coping strategies that occurs in both SIT and SET is certainly an improvement over traditional stress briefings alone. Nonetheless, their applications in military contexts have largely been experimental in nature and have not been adopted on a wide-scale. Moreover, to date the experimental tests of both SIT and SET in military contexts have yielded mixed results [see 38, Burke, 1980, as cited in 4<sup>3</sup>, 39, Gerwell & Fiedler, as cited in 40, 41, 36, 42, 43].

Although some sharing features with SIT and SET, in particular its foundation in the cognitive-behavioral tradition, we would argue that the mental readiness approach differs in two important respects. Specifically, mental readiness training has a focus on message and technique delivery that is directly integrated in the context of more intense training situations that have direct operational relevance, with a minimal emphasis on lecture formats concerning stress or the stressor-strain relation. Moreover, we believe that it is imperative for all lessons associated with mental readiness be delivered by training personnel or those with operational experience and credibility, as opposed to the use of mental health professionals as is the case in both SIT and SET.

---

<sup>3</sup> especially Table 7.3

## **TRAINING ISSUES RELEVANT TO MENTAL READINESS**

The mental-readiness training approach we are advocating means instructors must pay increasing attention to incorporating lessons concerning cognitive and emotional control and readiness, in addition to technical and physical performance, as part of their teaching. Our intent is not to eliminate the benefits of the expertise of mental-health professionals, but rather to utilize this expertise in a consultative role concerning mental readiness course content. This will require the close coordination of training and mental health personnel. We also realize that our suggestions add a burden to trainers' tasks of developing technical skills, especially in the face of organizational pressures to reduce training time. However, these important mental-readiness lessons will have the most impact and chance of being absorbed if someone who has operational credibility with military personnel teaches them. These fundamental principles of mental readiness will almost certainly fail if trainers do not endorse them implicitly and explicitly.

We also recognize that a proportion of military trainers/instructors will have intuitively adopted these techniques; for instance, encouraging trainees to monitor their physiological, cognitive and emotional reactions, as well as by modeling task-focus and control. These trainers should be considered the gold standard, individuals who have instinctively embedded mental readiness principles within training scenarios. We are advocating that these sorts of lessons and procedures be systematically incorporated within relevant military training courses and scenarios, in addition to traditional procedural and technical aspects of a maneuver or mission.

Finally, military training increasingly uses simulations as a cost-effective method of developing individual expertise. A continuing challenge for military training systems that adopt a mental readiness approach will be determining how to best use simulations, or virtual reality techniques, in order to duplicate stress levels in training that are similar to those of real operations [4]. Especially powerful would be training scenarios taken from, or combining elements from, actual after-action reports. Importantly, at least some scenario-based training must offer the opportunity for the infusion of mental readiness training principles as the scenario unfolds and for debriefing on all aspects of students experience and its potential impact on the decisions made, courses of action chosen by the student. Therefore, *in situ* teaching and practice must reinforce the lessons of the videotapes and simulations.

## **MENTAL READINESS TRAINING AND THE MILITARY MENTAL HEALTH CONTINUUM**

We believe mental readiness training may provide significant preventative mental health benefits, potentially providing a higher baseline resiliency level for military personnel that we believe would reduce the impact of chronic sources of operational and organizational stress. Still, this training clearly should not be considered a panacea for all forms of operational stress, in particular, reactions to extreme trauma such as significant personal injury or maiming, witnessing massacres, and/or the death of friends. Nor is it meant to supplant the important clinical interventions that address such traumas. Nonetheless, as cognitive-behavioral interventions are one of the major modalities used to treat military veterans with PTSD [43, 44], building a proactive training foundation that share some fundamental principles offer promise as a way to reduce the stigma associated with clinical interventions. Therapeutic interventions then become an extension, albeit a vitally important extension, of strategies that person would be familiar with from military training. It may be then that the mental readiness training approach outlined in this chapter could serve as an important precursor to clinical interventions.

Similarly, these training methods would be anticipated to produce maximal benefits only as a part of the continuum of strategies to increase operational effectiveness. That is, the hard won lessons of essential combat psychiatry must be kept in mind and practiced. Rest, basic health and hygiene must be attended to. Further, when stress reactions appear, they must be dealt with early; in other words, the PIES principles



(proximity, immediacy, expectancy) are still essential features of mission-oriented mental health interventions [45]. The highly mobile and technologically advanced modern battlefield has increased the likelihood of network enabled operations, and means that forces will often be distributed over large areas. Thus, approaches emphasizing unit cohesion and ‘buddy aid’ [45] must be refined. Nor should these preventive training programs replace the importance of leadership, which is among the strongest mediating factors in preventing psychological breakdown and increasing operational effectiveness [45, 46, see also 47]. Indeed, consistent with our thinking concerning mental readiness training, unit leaders are among the most important mental readiness models for soldiers. Furthermore, the mental readiness approach of a more thorough integration of these training methods into regular operational training programs underscores that the “prevention of combat stress casualties is primarily a command responsibility” [45, p. 484]. This is not to undermine or diminish the vital consultation role of medical and mental health personnel to commanders during both training and operations. In conclusion then, we see mental readiness training as a promising tool, but only one of many tools that should be available to military personnel to weather the stress of operations and military life.

## REFERENCES

- [1] Armfield, F. (1994). Preventing post-traumatic stress disorder resulting from military operations. *Military Medicine*, 159, 739–746.
- [2] Driskell J. E., Salas, E., & Johnston, J. J. (2006). Decision making and performance under stress. In T.W. Britt, A. Adler, & C.A. Castro (Series Eds.) & T.W. Britt, C.A. Castro, & A. Adler (Vol. Eds.), *Military life: The psychology of serving in peace and combat: Vol. 1 Military performance* (pp. 128-154). New York: Praeger Press.
- [3] Marshall, S. L. A. (1947). *Men against fire: The problem of battle command in future war*. Oxford, UK: The Infantry Journal Press.
- [4] Orasanu, J. M., & Backer, P. (1996). Stress and military performance. In J. E. Driskell & E. Salas (Eds.), *Stress and human performance* (pp. 89–125). Mahwah, NJ: Erlbaum.
- [5] Leach, J. (1994). *Survival Psychology*. New York: New York University Press.
- [6] Wickens, C. D. (1987). Information processing, decision-making, and cognition. In G. Salvendy (Ed.), *Handbook of human factors* (pp. 72–107). Oxford, UK: John Wiley & Sons.
- [7] Wickens, C. D., & Flach, J. M. (1988). Information processing. In E. L. Wiener & D. C. Nagel (Eds.), *Human factors in aviation* (pp. 111–155). San Diego, CA: Academic Press, Inc.
- [8] Hogan, J., & Lesser, P. (1996). Selection of personnel for hazardous performance. In J. E. Driskell & E. Salas (Eds.), *Stress and human performance* (pp. 195–222). Hillsdale, NJ: Erlbaum.
- [9] 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.
- [10] Litz, B. T., King, L. A., King, D. W., Orsillo, S. M., & Friedman, M. J. (1997). Warriors as peacekeepers: Features of the Somalia experience and PTSD. *Journal of Consulting and Clinical Psychology*, 65, 1001–1010.
- [11] 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.

- [12] Weerts, J. M. P., White, W., Adler, A. B., Castro, C. A., Algra, G., Bramsen, H. M., et al. (2002). Studies on military peacekeepers. In Y. Danieli (Ed.), *Sharing the front line and the back hills* (pp. 31-48). Amityville, NY: Baywood Publishing Company.
- [13] Driskell, J. A., & Salas, E. (1991). Overcoming the effects of stress on military performance: Human factors, training, and selection strategies. In R. Gal & A. D. Mangelsdorff (Eds.), *Handbook of military psychology* (pp.183–193). New York: Wiley.
- [14] Thompson, M. M., & Pastò, L. (2003). Psychological interventions in peace support operations: Current practices and future challenges. In B. T. Litz & A. B. Adler (Eds.), *The psychology of the peacekeeper* (pp. 223–242). Westport, CT: Praeger.
- [15] Keinan, G., & Friedland, N. (1996). Training effective performance under stress: Queries, dilemmas, and possible solutions. In J. E. Driskell & E. Salas (Eds.), *Stress and human performance* (pp. 257–277). Mahwah, NJ: Lawrence Erlbaum Associates.
- [16] Epstein, S. (1983). Natural healing processes of the mind: Graded stress inoculation as an inherent coping mechanism. In D. Meichenbaum & M. E. Jaremko (Eds.), *Stress reduction and prevention* (pp. 39-66). New York: Plenum Press.
- [17] Cook, T. M., Novaco, R. W., & Sarason, I. G. (1982). Military recruit training as an environmental context affecting expectancies for control of reinforcement. *Cognitive Therapy and Behavior*, 6, 409–428.
- [18] Novaco, R. W., Cook, T. M., & Sarason, I. G. (1983). Military recruit training: An arena for coping skills training. In D. Meichenbaum & M. E. Jaremko (Eds.), *Stress reduction and prevention* (pp. 377-418). New York: Plenum Press.
- [19] Deahl, M., Srinivasan, M., Jones, N., 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.
- [20] 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.
- [21] Corrigan, P. (2004). How stigma interferes with mental health care. *American Psychologist*, 59(7), 614–625.
- [22] Folkman, S., & Lazarus, R. S. (1980). An analysis of coping in a middle-aged community sample. *Journal of Health and Social Behavior*, 21, 219–239.
- [23] Folkman, S., & Lazarus, R. S. (1985). If it changes it must be a process: Study of emotion and coping during three stages of a college examination. *Journal of Personality & Social Psychology*, 48, 150–170.
- [24] Mischel, W. (2004). Toward an integrative model for CBT: Encompassing behavior, cognition, affect and process. *Behavior Therapy*, 35, 185–203.
- [25] Solomon, Z., Margalit, C., Waysman, M., & Bleich, A. (1991). In the shadow of the Gulf War: Psychological distress, social support and coping among Israeli soldiers in a high-risk area. *Israeli Journal of Medical Science*, 27, 687–695.

- [26] Solomon, Z., Mikulincer, M., & Benbenishty, R. (1989). Locus of control and combat-related post-traumatic stress disorder: The intervening role of battle intensity, threat appraisal and coping. *British Journal of Clinical Psychology*, 28, 131–144.
- [27] Gal, R., & Manning, F. J. (1987). Morale and its components: A cross-national comparison. *Journal of Applied Social Psychology*, 17, 369–391.
- [28] Bliese, P. D., & Castro, C. A. (2003). The soldier adaptation model (SAM): Applications to peacekeeping research. In T. W. Britt & A. B. Adler (Eds.), *The psychology of the peacekeeper: Lessons from the field* (pp. 185–204). Westport, CT: Praeger.
- [29] Epstein, S. (1962). The measurement of drive and conflict in humans: Theory and experiment. In M. R. Jones (Ed.), *Nebraska symposium on motivation* (pp. 127-206). Lincoln: University of Nebraska Press.
- [30] Epstein, S., & Fenz, W. D. (1965). Steepness of approach and avoidance gradients in humans as a function of experience. *Journal of Experimental Psychology*, 70, 1–12.
- [31] Fenz, W. D., & Epstein, S. (1967). Gradients of psychological arousal of experienced and novice parachutists as a function of an approaching jump. *Psychosomatic Medicine*, 29, 33–51.
- [32] Israelashvili, M. (2002). Fostering adolescents' coping skills—An action approach. *Canadian Journal of Counselling*, 36, 211–220.
- [33] Meichenbaum, D. H. (1985). *Stress inoculation training*. New York: Paradigm.
- [34] Meichenbaum, D., & Cameron, R. (1983). Stress Inoculation Training: Toward a general paradigm for training coping skills. In D. Meichenbaum & M. E. Jaremko (Eds.), *Stress reduction and prevention* (pp. 115–154). New York: Plenum.
- [35] Meichenbaum, D. H., & Deffenbacher, J. L. (1988). Stress inoculation training. *The Counseling Psychologist*, 16, 69–90.
- [36] Johnston J. H. & Cannon- Bowers, J. A. (1996). Training for stress exposure. In J. E. Driskell & E. Salas, (Eds.), *Stress and human performance* (pp. 223-256). Mahwah, N.J.: Erlbaum.
- [37] Pierce, T. W. (1995). Skill straining in stress management. In W. O'Donohue & L. Krasner (Eds.), *Handbook of psychological skills training: Clinical techniques and applications* (pp. 306-319). Neeham Heights, MA: Allyn & Bacon.
- [38] Backer, R. A. (1987). *A stress inoculation training intervention for Marine Corps recruits*. Unpublished doctoral dissertation, California School of Professional Psychology.
- [39] Crago, D. A. (1995). *The use of stress inoculation training with a military population*. Unpublished doctoral dissertation. California School of Professional Psychology.
- [40] Cigrang, J. A., Todd, S. L., & Carbone, E. G. (2000). Stress management training for military trainees returned to duty after a mental health evaluation: effect on graduation rates. *Journal of Occupational Health Psychology*, 5, 48–55.
- [41] Israelashvili, M., & Taubman, O. (1997). Adolescents preparation for military enlistment in Israel: A preliminary evaluation. *Megamot*, 38, 408-420.

## Enhancing Mental Readiness in Military Personnel

---

- [42] Nair, E. (1989). *Stress inoculation in relation to war*. Doctoral Dissertation, University of Nottingham, Ann Arbor, MI: UMI Dissertation Services.
- [43] Sherman, J. J. (1998). Effects of psychotherapeutic treatments for PTSD: A meta-analysis of controlled clinical trials. *Journal of Traumatic Stress, 11*, 413-435.
- [44] Foa, E. B. (1997). Psychosocial treatments for posttraumatic stress disorder: A critical review. *Annual review of Psychology, 48*, 449-480.
- [45] Jones F. D., & Belenky, G. L. (1995). Summation. In F. D. Jones, L. Sparacino, V. L. Wilcox, J. M. Rothberg, & J. W. Stokes (Eds.), *War Psychiatry* (pp. 473-486). Washington, DC: Dept of the Army, Office of the Surgeon General at TMM Publications, Borden Institute.
- [46] Gal R. & Manning, F. J. (1987). Morale and its components: A cross-national comparison. *Journal of Applied Social Psychology, 17*, 369-391.
- [47] Murphy, P. J., & Farley, K. M. J. (2000). Morale, cohesion, and confidence in leadership: Unit climate dimensions for Canadian soldiers on operations . In C. McCann & R. Pigeau (Eds.), *The human in command: Exploring the modern military experience* (pp. 311-331). New York: Kluwer Academic/Plenum.