

# Behavioral Health Leadership: New Directions in Occupational Mental Health

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**Abstract** The impact of stress on mental health in high-risk occupations may be mitigated by organizational factors such as leadership. Studies have documented the impact of general leadership skills on employee performance and mental health. Other researchers have begun examining specific leadership domains that address relevant organizational outcomes, such as safety climate leadership. One emerging approach focuses on domain-specific leadership behaviors that may moderate the impact of combat deployment on mental health. In a recent study, US soldiers deployed to Afghanistan rated leaders on behaviors promoting management of combat operational stress. When soldiers rated their leaders high on these behaviors, soldiers also reported better mental health and feeling more comfortable with the idea of seeking mental health treatment. These associations held even after controlling for overall leadership ratings. Operational stress leader behaviors also moderated the relationship between combat exposure and soldier health. Domain-specific leadership offers an important

step in identifying measures to moderate the impact of high-risk occupations on employee health.

**Keywords** Leadership · Deployment · Occupational health · Combat operational stress control · Afghanistan · Soldiers · PTSD · Anxiety · Depression · Care seeking

## Introduction

High-risk occupations are associated with significant levels of psychological and physical stress, particularly for those exposed to high levels of stressors (see Table 1) [1, 2•]. Individuals in these occupations are likely to encounter potentially traumatic events as part of their work, and studies have documented the link between experiencing such incidents and mental health problems among rescue and recovery workers [3], police [4], and military personnel [5]. Indeed, the rates of mental health problems in the military have been studied extensively, particularly among service members on combat deployments [5–8].

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## Mental Health Problems and Combat Deployment

For many service members, deployments are associated with an increase in mental health problems, including posttraumatic stress disorder (PTSD; [5]), depression [9], anxiety [5–7], and anger/aggression [7, 10, 11]. Other consequences include increased alcohol intake [12], relationship problems [13], unhealthy behaviors, risk-taking [14], and sleep problems [15, 16].

Rates of mental health problems are related to the extent of combat experiences [5, 6]. This effect is important particularly when determining prevalence rates for a population of deployed personnel. For example, in a prospective study of more than 50,000 military personnel who deployed to Iraq or

**Table 1** Occupations at high-risk for traumatic event exposure

Military
Police
Firefighters
Ambulance workers/first responders/paramedics
Health care professionals (intensive care/mental health workers)
Train drivers
Journalists
Sailors
Bank/postal workers
Industrial workers

Note: Adapted from a recent review by Skogstad, Skorstad, Lie, Conradi, Heir and Weisæth [2••]

Afghanistan, Smith et al. [17] found prevalence rate of *new onset* PTSD ranged from 7.6 to 8.7 % for deployers who reported any level of combat exposure, 1.4–2.1 % for deployers who did not report combat exposure, and 2.3–3.0 % for non-deployers. Rates are also related to the timing of assessment. For example, when symptoms are assessed at post-deployment, symptom levels may increase over time [7, 18–20].

Besides the well-documented link between combat deployment and mental health problems, service members also report stigma-related concerns about accessing mental health care [5, 21]. Indeed, those with the most mental health symptoms are the most likely to report such concerns [5, 22] and many report a range of barriers associated with seeking care [23]. There is also a documented gap between the identification of problems and treatment seeking that is driven by a range of factors including attitudes, preferences, and discomfort with treatment providers [24•, 25].

### Occupational Health Model

Seeking mental health care is one of several strategies that may reduce the impact of deployment-related stressors on the mental health of service members. Such strategies are best understood within an occupational health model which explicitly recognizes that the stressor-strain link occurs within a larger organizational context. This organizational context can influence the stressor-strain link, and is important because organizational factors that have the potential to ameliorate the impact of occupational stressors can be identified. Through such identification, these factors can be targeted for training.

In the Soldier Adaptation Model [26] and Occupational Health Model for the Military [27•], both individual and organizational factors are identified as variables that influence the stressor-strain link. Individual-level variables reflect an individual's background, experiences, and coping style; organizational-level variables reflect unit climate, training,

leadership, and organizational policy. By including these organizational-level variables, factors can be tested for their utility in reducing the impact of occupational stress on individuals.

While there are many different potential ways to address the organizational context, one starting point that is rooted in the organizational psychology literature is to focus on leaders. Formal leaders serve as a model for behavior, possess power within an organization to reinforce, discipline or correct behaviors, and make decisions that can add or detract from stressors [28]. Leaders influence a variety of outcomes and there is an extensive body of research in the field of organizational psychology that has documented the link between leadership and important outcomes.

### Leadership

Numerous studies have identified the impact of leadership on employee performance [29], and the emerging scientific literature has identified the impact of leadership on employee mental health as well [30, 31]. General leadership can be theorized as two primary styles—transformational and transactional [32]. Overall, transformational leadership is relatively general and addresses relationship-based behaviors whereas transactional leadership is relatively narrow and focuses on domain-specific tasks and behaviors. While there are different dimensions of leadership [33], leadership research examining effects of positive leader behaviors has typically studied transformational leadership. Transformational leadership is conceptualized as four sets of behaviors: (1) idealized influence, in which leaders behave in ethical ways; (2) inspirational motivation, in which leaders set high standards and a vision that motivates employees; (3) intellectual stimulation, in which leaders support questioning and innovative thinking; and (4) individual consideration, in which leaders focus on individual achievement and development [29, 32, 34]. Studies on transformational leadership have repeatedly demonstrated an association with employee outcomes of importance to organizations such as reduced job stress [35] and increased job satisfaction, job attitudes, and employee wellbeing [30, 36, 37].

As Kelloway and Barling [31] noted, studies have demonstrated that leadership development and training results in improved perceptions of leadership, employee attitudes, and job performance [38]. While most studies looking at the impact of training and development show reliable change in perceptions of leadership, these studies do not examine the impact of such interventions on the health and well-being of subordinates.

Studies have begun, however, to target specific leadership domains. That is, rather than focus on training general

leadership skills consistent with transformational leadership, researchers have begun to identify specific leadership behaviors that target specific organizational outcomes.

### Domain-Specific Leadership

By examining specific leadership domains, researchers are attempting to identify a more precise link between leadership behaviors and outcomes of importance to an organization. This domain-specific approach can then inform the development of domain-specific leadership training, which, in turn, may increase the effectiveness of such training and address organizational priorities.

The first domain to be assessed was related to safety climate (see Clarke, [39••], for a review). Initially, studies demonstrated a relationship between transformational leadership and perceptions of safety climate [40] and safety records [41–43], including injury rates [44, 45].

Research consistently found that transformational leaders who promoted safety tended to have enhanced safety climates and improved employee work performance [46–49]. Based on these results, studies examined the impact of leadership training in safety on organizational outcomes. For example, Mullen and Kelloway [50] randomly assigned health care managers to training in safety-specific transformational leadership, general transformational leadership, and a no-training comparison condition. The safety-specific training resulted in more improved safety attitudes and behaviors relative to the other two conditions.

The concept of domain-specific leadership has since been adapted to measure health-specific leadership [51•]. Health-specific leadership was selected as a subject of focus because previous studies had identified the importance of leadership in developing a health-oriented work culture [52, 53].

Gurt, Schwennen, and Elke [51•] developed and tested the concept of health-specific leadership. In their study of German tax administration employees, the authors examined the relationship of two leadership concepts: general leadership and health-specific leadership, defined as a leader's explicit consideration of and concern with employee health. While neither type of leadership had a direct effect on health outcomes, the study found that the general leadership-strain relationship was mediated by work climate variables whereas health-specific leadership was related to both perceptions of a health-oriented climate and increased role ambiguity. This study attempted to expand the area of domain-specific leadership and while the predicted relationships were not found as they were with the safety-specific leadership domain, the study did demonstrate the importance of considering and testing the link between both general leadership and domain-specific leadership. Nevertheless, it is not clear why the results were not in the expected direction — it may be that the particular occupation studied did not explicitly prioritize health-specific leadership

as part of the organization's culture and that partly accounted for the relationship with role ambiguity.

In contrast to the tax administration work context in the Gurt et al. [51•] study, high-risk occupational contexts associated with elevated rates of mental health problems often explicitly prioritize health. In the military, for example, organizational leaders are tasked with supporting and promoting the mental health of their service members. Mental health-specific leadership offers an alternative perspective on supporting the adjustment of individuals in high-risk occupations.

### Mental Health-specific Leadership

Based on this initial foray into health-oriented leadership and the well-documented effect of combat experiences on and mental health problems, the Walter Reed Army Institute of Research (WRAIR) has begun exploring the concept of mental health-specific leadership. The first target to be studied focused on sleep leadership, or leadership behaviors that deliberately promote good sleep patterns and sleep conditions for unit members. Sleep is explicitly identified as a priority within the organization through the Army Surgeon General's performance triad [54, 55] and training aids are available to small-group leaders, demonstrating the organization's belief that leaders have a responsibility to promote healthy sleep.

Early results from a Walter Reed Army Institute of Research (WRAIR) cross-sectional survey of US Soldiers deployed to Afghanistan found that domain-specific leadership behaviors promoting sleep were associated with greater sleep quantity over and above transformational leadership behaviors [56•]. This finding is important because it confirms that while general leadership skills are important, focusing on specific leader skills addressing discrete organizational targets can expand the way in which leaders can influence the health of subordinates.

Following the results on sleep leadership, the WRAIR team expanded its understanding of mental health-specific leadership skills. Mental health-specific leadership skills, defined as behaviors displayed by leaders that target mental health outcomes in subordinates, cover a range of candidate behaviors. In the section below, we describe one example of mental health leadership behaviors. This example centered on leader behaviors promoting stress management on a combat deployment and how such behaviors related to health-related outcomes in a sample of 2072 US soldiers from one maneuver Brigade deployed to Afghanistan in 2013 (representing a consent rate of 89 %). In this sample, 95.7 % were male; 51.8 % were junior enlisted, 33.4 % were non-commissioned officers, and 14.4 % were officers.

In reviewing the results, we describe how these behaviors (1) reflect an organizational value reinforced by policy and training, (2) correlate with more general leadership behaviors,

and (3) account for variance in health-related outcomes, seeking mental health care, and resilience.

### Combat Operational Stress Control Leadership Behaviors: Emerging Results

The Army's manual on combat operational stress control (COSC) for leaders and soldiers provides information on strategies to address stress associated with deployment. The manual (see especially Sect. 2.1) identifies a set of leader behaviors or actions that are designed to reduce or ameliorate combat stress reactions of subordinates. Six survey items were derived from the COSC manual and represent a selection of behaviors that a subordinate might be able to observe in their leaders (see Table 2 for list of items and frequencies).

We noticed several aspects about these COSC-related leader behaviors. First, they have high internal reliability suggesting they combine to create a single construct ( $\alpha=.91$  and  $.94$  for COSC at the immediate supervisor-level and mid-level leadership, respectively). Second, while the individual behaviors correlated with a measure of general leadership [57–59], the scale did not correlate as highly with general leadership ( $r=.54$  and  $.56$  for immediate and mid-level supervisors, respectively), suggesting that general leadership and COSC-specific leadership did not represent the same construct, but rather that both were related to other independent sets of behavior. Third, when we controlled for general leadership behavior as well as standard covariates (rank and combat experiences), COSC-related leadership behaviors still explained variance in mental health symptoms, including PTSD symptoms measured by the PTSD Checklist (PCL [60];  $\Delta R^2=.01$ ,  $\beta=-0.97$ ,  $p<.001$  for immediate supervisor leaders;  $\Delta R^2=.01$ ,  $\beta=-0.06$ ,  $p=.001$  for mid-level leaders), and depression symptoms measured by the nine-item Patient Health

Questionnaire (PHQ-9 [61];  $\Delta R^2=.01$ ,  $\beta=-0.05$ ,  $p<.001$  for immediate-level;  $\Delta R^2=.01$ ,  $\beta=-0.547$ ,  $p<.001$  for mid-level leaders). COSC-specific leadership behaviors were also associated with feeling more comfortable talking to a mental health provider (rated by a single item with response options reflecting levels of agreement — ‘strongly disagree’ to ‘strongly agree’), ( $\Delta R^2=.03$ ,  $\beta=0.21$ ,  $p<.001$  for immediate;  $\Delta R^2=.02$ ,  $\beta=0.16$ ,  $p<.001$  for mid-level) and resilience as measured by a six item self-report scale [8], ( $\Delta R^2=.03$ ,  $\beta=0.12$ ,  $p<.001$  for immediate;  $\Delta R^2=.04$ ,  $\beta=0.15$ ,  $p<.001$ , for mid-level).

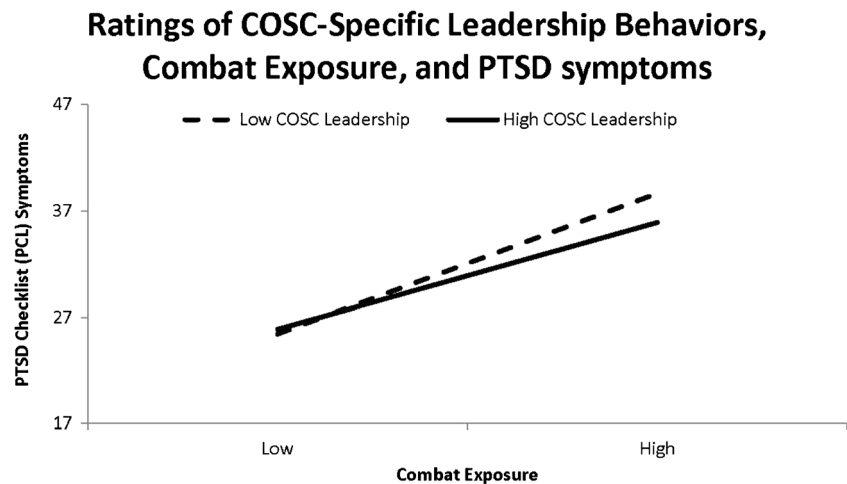
Furthermore, combat experiences interacted with COSC-specific leadership such that soldiers who reported higher levels of combat experiences and rated their leaders as high in COSC leadership skills also reported fewer mental health problems than those who rated their leaders as low in such skills, even after controlling for rank and general leadership. Consistent with the study's analysis of depression symptoms, the frequency of PTSD symptoms was significantly predicted by the interaction of combat experiences with COSC-specific leadership skills ( $\beta=-0.18$ ,  $p<.001$ , for immediate supervisor-level COSC leadership;  $\beta=-0.16$ ,  $p<.001$  for ratings of mid-level COSC leadership) such that among those soldiers with high levels of combat experiences, those with leaders receiving low ratings of COSC-specific skills reported more symptoms than those with leaders receiving high ratings in COSC-specific skills (Fig. 1).

These findings are important because they suggest that while engaging in good general leadership behaviors is important, other domain specific leader behaviors are also key to supporting subordinate adjustment and well-being. The significant interaction between leadership behaviors and combat experiences also highlights the importance of accounting for individual experiences when examining the relationship between leadership and health.

**Table 2** Combat operational stress control (COSC) leadership

Item	% reported as “often” or “always”	
	Immediate Supervisor (Platoon Sergeant)	Mid-level Supervisor (Platoon leader)
Does not judge soldiers who seek behavioral health help	53.4	50.8
Encourages soldiers to seek help for stress-related problems	47.7	47.2
Demonstrates concern for how families are dealing with stress	48.0	46.8
Intervenes when a soldier displays stress reactions such as anxiety, depression or other behavioral health problem	45.2	43.8
Encourages soldiers to express emotions following losses and setbacks during deployment	42.3	42.3
Reminds soldiers after intense experiences that we are here to serve with honor, serve a mission, and serve a greater purpose	49.4	49.4

**Fig. 1** Ratings of Combat Operational Stress Control (COSC)-specific leadership behaviors, combat exposure, and PTSD symptoms controlling for rank and general leadership ratings



### Conclusion and Future Directions

Leaders may be a tremendous resource in providing effective primary prevention strategies for individuals in high-risk occupations. Evidence from the field suggests that there is particular potential for leaders engaging in behaviors explicitly promoted by the organization and considered part of the leader's area of responsibility. The review of the extant literature and results of emerging studies suggest that domain-specific leadership should be a basis for training, and this training should be examined in terms of its impact on health, and other variables of interest to the occupational context such as unit climate and performance. For example, attitudes toward health-care seeking may also be positively impacted by domain-specific leadership behaviors as illustrated with COSC-specific behaviors.

There are several important limitations to note in this emerging line of research. First, it is not likely that mental health-specific leadership will necessarily prevent diagnostic levels of mental health problems. While overall symptoms levels have been associated with mental health-specific leadership in a deployed sample, leadership is not necessarily expected to affect rates of mental health disorders and is not a substitute for mental health care.

Second, ratings of mental health-specific leadership behaviors are by definition behaviors that can be observed by subordinates. Thus, these ratings are limited to those behaviors that subordinates can see. It may be, however, that leaders engage in important actions that the majority of subordinates are not privy to, including behaviors that involve symptomatic individuals, other leaders, or supervisors of leaders. This point is particularly relevant for training programs that are developed based on scales assessing mental health-specific domains; leadership behaviors and attitudes that are not explicitly observed by subordinates may still need to be considered for inclusion in these training programs.

Third, the results are primarily based on cross-sectional studies and these results may underestimate the cumulative impact of positive leadership behaviors on subordinates. Still, in the military context, leaders change with relative frequency, suggesting that cross-sectional analyses may provide a more ecologically valid assessment of the impact of mental health-specific leadership on subordinate well-being.

Future studies should assess the impact of leadership level in mental health-specific leadership. The studies reported here have focused on small group leaders (platoon sergeants and platoon leaders). It may be, as suggested by Kelloway and Barling [31], that the behaviors of senior managers and leaders may also have an important impact on subordinate organizations.

Given the recent findings in Army studies related to sleep leadership behaviors and COSC-specific leader behaviors, there appears to be significant potential for identifying other domain-specific leadership behaviors. Other domains being studied by our team include emotional regulation leadership, post-traumatic growth leadership, medical leadership, and community transformation leadership behaviors. Each of these concepts, while related to one another, appear to be correlating with one another and with general leadership at a moderate level, suggesting that not only are these unique sets of behaviors, but there may be utility in pursuing training intervention studies to determine valid means of enhancing these targeted leadership behaviors.

The idea of identifying leader behaviors that target specific health problems in subordinates offers an important and novel approach to studying leadership. If these kinds of targeted leader behaviors account for mental health levels over and above more standard approaches to leadership, then these behaviors may benefit at-risk personnel and should be tested for efficacy in leadership training programs.



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#### Compliance with Ethics Guidelines

**Conflict of Interest** Amy B. Adler, Kristin N. Saboe, James Anderson, Maurice L. Sipos, and Jeffrey L. Thomas declare that they have no conflict of interest.

**Human and Animal Rights and Informed Consent** This article does not contain any studies with human or animal subjects performed by any of the authors.

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