Technical Evaluation of HFM-SYS-302, "Evidence-Based Leader Interventions for Health and Wellness"

Carl Castro, Colonel (retired), Ph.D.
Director, Center for Innovation and Research on Veterans and Military Families
Associate Professor of Social Work
Director of Social Change and Innovation
USC Suzanne Dworak-Peck School of Social Work
University of Southern California,
669 W 34th St, Los Angeles, CA 90089
UNITED STATES OF AMERICA

carl.castro@usc.edu

ABSTRACT

The NATO Symposium entitled, "Evidence based Leadership Intervention for Health and Wellness," was held in Berlin, Germany, from 9-10 April 2019. The purpose of the symposium was to consolidate current evidence-based leader interventions that support military personnel health and wellness from a holistic perspective in order to optimize and group functioning in operational and non-operational settings." The symposium consisted of 17 individual presentations and two keynote presentations. Topics included: Morale and cohesion, job attitudes, climate and attitude surveys, total health and wellness, coping and resilience, technology and fatigue. Overall, the symposium achieved its goals. However, there were noticeable gaps in presentations focused on leader-based interventions that have been undertaken in the operational setting, more specifically the research conducted by numerous nations during combat operations in Iraq and Afghanistan. Recommendations in how NATO, specifically the Human Factors and Medicine panel, can capitalize on the efforts of this NATO activity are provided.

1.0 INTRODUCTION

Evidence-based recommendations to military and civilian leaders are important. Leaders will make decisions in the absence of evidence. So, it is incumbent on military scientists to anticipate actions that leaders to take and have the proper evidence to hand to advise leaders on evidence-based actions to consider.

2.0 THEME

The theme for the symposium taken from the "Symposium Theme" section of the approved technical activity proposal states the following: "breakthroughs in the domains of leadership, organizational justice, motivation, work engagement, organizational commitment, workplace wellbeing and job related burnout, among others, have influence models of health to include an increasing number of psychosocial factors. The result is a greater appreciation for a more holistic (or total) view of health and wellness in the workplace that has triggered action in public and private organizations, including the military…Accordingly, a current examination of evidence-based leader interventions to support service personnel health and wellness from a more holistic perspective is required."

3.0 PURPOSE AND SCOPE OF MEETING

The stated objective of the symposium was to "bring together leading academics and military experts from a variety of health disciplines to consolidate current evidence-based leader interventions that support military

personnel health and wellness from the a holistic perspective in order to optimize and group functioning in operational and non-operational settings."

Key topic areas included:

- Total health and wellness in a military context (scope, e.g., physical, psychological, spiritual, family, etc.)
- Risk and protective factors for health and wellness in a military context
- Current leader initiatives/practices to support personnel health and wellness
- Evidence-based leader interventions and tools for health and wellness at the individual, group and organizational levels
- Gaps in evidence-based leader interventions for health and wellness in the military
- Barriers to establishing/identifying evidence-based leader interventions for health and wellness in the military
- High risk groups. Where military leader interventions for health and wellness are most necessary

4.0 EVALUATION

4.1 Keynote 1

Kevin Kelloway. Focus on transformational leadership. In Canada, employers held responsible for stress-related disorders, especially workplace violence and aggression/harassment. Of disability claims, 30-40% stress related, but account of 70% of costs for insurance providers. Three pillars. Prevention, Intervention and Accommodation.

Prevention. Leaders can be the cause of stress. There is a lack of evidence-based leader interventions. Some evidence that training in transformational leadership, operationalized by the training of five skills, increased subordinates perceptions of leaders and improved the leaders own health.

Intervention. Indicators of employee mental health issues or signs of struggle (SOS): emotional outbursts, withdrawal, absence and performance.

Accommodation. What support do employees need to stay employed? Very little research on what approaches are best. Issues of privacy and retaliation were not addressed. Both of these issues tie into the issue of stigma around mental and behavioural health issues.

4.2. Morale

4.2.1 Background

It is generally accepted that the establishment of unit and personal morale is the responsibility of the leader. Yet, the empirical evidence to support the importance of morale and cohesion is generally lacking, although there have been a few studies showing the relationship between cohesion and mental health status (anxiety and depression).

4.2.2 Summary of Morale Presentations

Diverse groups, such as LGBT service members', health is uniquely associated with morale and cohesion. Such that, anxiety was moderated by unit cohesion but not morale and PTSD and depression were moderated

by cohesion, but not morale.

A new model of morale was presented, entitled, Needs, Affect, and Motivation Model of Morale, which postulates that psychological needs is related to individual morale, which in turn is related to both individual functioning and group morale, the latter which is related to group functioning, with a positive feedback loop of individual and group functioning to psychological needs. Based on this model, various profiles of morale emerged: low morale-amotivated, slightly low morale-motivated, average morale and high morale, which differentially predict organizational citizenship behaviours and psychological distress. These findings indicated that morale is indeed a complex, psychological process that has important implications for military unit and individual readiness.

4.2.3 Analyses of Morale Presentations

Leaders and service members struggle to define what morale is. The Needs, Affect, and Motivation Model of Morale is the most sophisticated theoretical framework of morale developed, and represents a major advancement on our understanding of military morale. While a single item of morale performed satisfactorily, the Needs, Affect and Motivation Model of Morale provided greater predictive power. This finding aside, when brevity is paramount much utility may be gained from the use of the single item to measure morale.

That morale may differ among vulnerable/high risk groups has been known for some time. In particular, the morale of combat troops who have been engaging in combat operations for prolonged periods of time have shown low levels of morale, including veterans from World Wars I and II, and more recently in combat operations in Iraq and Afghanistan. Efforts are desperately needed to determine how best to sustain the morale of these service members. In addition, research assessing how morale may differ among diverse groups such as women service members and LGBT service members is also needed, although some work is underway.

While it is widely believed that leaders can influence morale and/or unit cohesion as a means for improving the health, wellbeing and readiness of service members, there is scant empirical evidence for how exactly leaders are to achieve this feat. Indeed, the existing scientific evidence only suggests an association, not a causal relationship. Whether an intervention designed to increase morale and cohesion is possible remains unknown.

4.3. Job Attitudes

4.3.1 Background

This section of papers focused on the impact of leader behaviours on job satisfaction and health. General leader behaviours have been shown to be related to health and wellbeing of their subordinates, including more specific constructs such as organizational justice.

4.3.2 Summary of Job Attitude Presentations

The impact of Leadership Behaviour and Leadership Satisfaction on Occupational Health Management and Job Satisfaction/Wellbeing is mediated by Socio Psychological Health, Military-Family Adaptation, Justice and Learning indices. By age, the Socio Psychological Health, Military-Family Adaptation display an inverted U-shape relationship, with the Justice and Learning indices declining as a function of age. Socio Psychological Health is related to Occupational Health Management. Overall, wellbeing is most influenced by learning. All Leadership behaviours are highly correlated with health. Military Family Adaptation is very important on leadership influence on health.

Organizational Justice during a military deployment is believed to be important for health and wellbeing. The focus was on the perception of leaders from the perspective of the subordinates. Conceptually, organizational justice is about fairness in three primary domains: distribution of rewards and resources, the processes for the distribution of resources, and the interactions that the procedures are enacted through. When preparing for a low-risk deployment, rumours and stories are central to the formation of justice.

4.3.3 Analyses of Job Attitude Presentations

It is not necessarily organizational culture that creates challenges for leaders, but the overall complexity of the challenges that leaders face. What is still unknown is how the perceptions of service members towards leadership and organizational justice are formed and by which processes these perceptions emerge. It is important to determine if there are important differences between low risk and high risk deployments. The distribution of rewards, such as medals and military coins are a perennial issue involving deployments.

Fairness Paradox: "People want to be treated fairly, yet uniquely."

4.4 Climate and Attitude Surveys

4.4.1 Background

Leaders are expected to create a positive Organizational climate within the organizations that they lead. It is believed that the climate of the organization determines job satisfaction and intentions to remain in the organization. This challenge is magnified by the fact that the military consists of numerous broad –based occupations, ranging from war fighting to administration.

4.4.2 Summary of Climate and Attitude Surveys Presentations

Organizational climate consist of many dimensions, including polices, justice, job stress, social psychological, equal opportunities, and motivation of military personnel. Negative job satisfaction had the strongest relationship to intention to leave the organization. Image of the military institution, career development model and social policy predicted 64% of a service member's job satisfaction, which is linked to intentions to leave the military.

Corporate Health Management is concerned with workplace health promotion, occupational safety and leadership and organization for both military personnel and civilians. The development of "snap shots" that easily convey the health of an organization can be valuable in assisting leaders in where to focus their efforts.

4.4.3 Analyses of Climate and Attitude Surveys Presentations

Indeed, organizational climate variables are related to many important organizational outcomes, such as job satisfaction, commitment to the organization, and intention to leave the military. However, therein lies the challenge. With so many important organizational variables identified, senior leaders in charge of organizations are challenged with determining where to focus their efforts. There is a lack of evidence that leaders actually use such information to improve the health of their organizations. Such data also has the possibility of being misused to ruin careers and for litigation purposes.

4.5 Total Health and Wellness: An Assessment to Solutions Approach

4.5.1 Background

This set of presentations are based entirely on the Canadian model of Total Health and Wellness. It's an

attempt to align and integrate strategies, policies and programs that related to health and wellness.

4.5.2 Summary of Total Health and Wellness: An Assessment to Solutions Approach Presentations

There exists a relationship between work environment and individual health and wellbeing. There are both work and personal life dimensions that must be considered in the assessment. Interventions include assess, promote, empower, prevent, care and support. Adopts a multi-level approach, including external influences. Provides a visualization of all the important domains that impact health and wellness.

An example given focuses on the psychosocial domain. Basically the model is a stressor-strain-moderator approach. A number of theoretical frameworks were consulted that drove the development of this framework, including theories such as motivation-hygiene theory, self-determination theory, and positive psychology among others. Interventions focused on stressor reduction and increased level of positive experiences at work.

Identify psychological health profiles using latent profile analyses. The findings suggest that there are 2-4 psychological profiles, with the most parsimonious designation being 2 profiles. These profiles include: normative (55%), thriving (5%), coasting (6%), and struggling (34%). Levers for improve may include: meaningful work, organizational support, relatedness, and job stress.

4.5.3 Analyses of Total Health and Wellness: An Assessment to Solutions Approach

The model included a comprehensive approach to health and wellness, including input and buy in from key stakeholders. The model presented confuses determinants and outcomes. For example, morale is generally not viewed as an outcome, nor is engagement. These constructs are typically viewed as mediators/moderators. The goal was to take a strategic approach, yet the measures included individual-level measures. Importantly, no evidence exists for whether intervening in the modifiable constructs actually are the cause of the adverse outcomes so any interventions targeting these potentially modifiable constructs will lead to improvement. However, they are important points to begin such intervention efforts.

4.6 Keynote Talk 2

Amishi Jha. Brain mechanisms of attention, stress and mindfulness training. Stress, mood and threat can disrupt attention. Mindfulness training provides a cognitive advantage on cognitive, social and emotional domains. Biases and misconceptions prevent mindfulness training from being expanded into military settings. Mindfulness includes focused attention and open monitoring: involve attention, monitor for mind wondering and refocus when the mind wanders. Mechanisms of mindfulness include: attentional orienting, meta-awareness and decentring.

4.7 Coping and Resilience

4.7.1 Background

There is a rich and extensive research literature on the effects of coping, with positive coping behaviour attenuating the adverse effects of a variety of stressors. The concept of resilience within the military context is relatively new, being introduced approximately 15 years ago. Surprisingly, however, there is still is not an agreed upon definition of resilience that is widely accepted. This makes research into this area extremely difficult.

4.7.2 Summary of Coping and Resilience Presentations

Mindfulness is paying attention on purpose, in the present moment, non-judgementally. Acceptable to fighter pilots. Trained both pilots and spouses to prevent mismatch in discussing the topic. In one of four studies, only one had a control group, a wait-list control, which is not ideal. All the others lacked any type of control what so ever.

Road to mental readiness is a skills-based program to build resilience with the aim towards improving performance. Efforts are underway to move behavioural health skills outside of the classroom by using leaders to facilitate the use of these stress-coping skills among their subordinates. Stress skill training is embedded in military training. Findings presented lacked a rigorous experimental design, making reaching any firm conclusions impossible.

It is important to distinguish between individual resilience and team (or unit) resilience, which appears to be defined by the outcomes of interest. That is individual=level data was collected by asking about team-level phenomena.

4.7.3. Analyses of Coping and Resilience

If mindfulness works everywhere in every place, then it starts to becomes somewhat like prayer in religion. What are the negative effects of mindfulness? If there are no adverse effects, then the positive effects are possibly placebo. Further, mindfulness, as presented, is a one-size fits all approach. Mindfulness programs don't seem to be tailored to individual differences or to the context in which the individual works or performs.

Similar to mindfulness training, resilience training also employs a one-size fits all approach. Neither approach adopts an individual-centred approach. Scientific rigor is for the most part lacking in the research conducted to date.

4.8 Influencing Health and Wellness through Technology and Incentives

4.8.1 Background

Technology is being leveraged by many militaries to enhance the capability of their forces. This has been especially true in the mental and behavioural health arena for decades.

4.8.2 Summary of Influencing Health and Wellness through Technology and Incentives Presentations

The use of a mobile app to individualize the Road to Mental Readiness to enhance the program's effectiveness. Skills include: tactical breathing, self-talk, goal setting, visualization, attention control and memory. Increases use of skills learned outside of the classroom.

The use of a reward-based approach to improving workplace health and wellbeing. Lack of data on the workplace environment. So, a web-based app was deployed to survey workers health and wellbeing, among many other organizational variables. Receive points for engaging in health-promoting behaviours that can be redeemed for movie tickets, plane tickets, t-shirts, etc. Commanders provided a profile map of their unit.

Focus is on the use of incentives to improve physical fitness. In Canada there is only a minimum standard and the belief was that the physical minimum standard was too easy and they wanted a more difficult test. The minimum standard consist of 5 tasks. Additional tasks were added to get at mobility and load carry abilities. Body composition and cardiovascular were added. Waist circumstance was measured. Provides

measures of operational fitness and health-related status.

4.8.3 Analyses of Influencing Health and Wellness through Technology and Incentives

The development of an app as its first source appears to be different than when a paper-based program is translated to an app. Consideration needs to be given to the former to maximize the use of the technology. In other words, attempts to make the app exactly like the paper version must be avoided in order to take full advantage of the technology.

Other uses of technology include serious gaming, AI and machine learning among others.

The use of single items to assess major health and wellbeing organizational constructs is problematic.

Nutrition was absent from the analyses, which would appear to be especially important for addressing the issue of body composition, i.e., waist circumference.

4.9 Fatigue

4.9.1 Background

Sleep and fatigue have been topics of military interest since time immemorial. No doubt this is due to the catastrophic events that can occur due to fatigue such as air craft crashes, friendly fire causalities, among others. A culture within the military that sleep is for the lazy. The operational impact of inadequate sleep is well documented. Inadequate sleep is also related to decision-making, mental health, health risk behaviours, and affect dysregulation.

4.9.2 Summary of Fatigue Presentations

Pilot and driving fatigue remains a major issue, including truck drivers, airline pilots and ship crews; often resulting in major accidents and fatalities. Goal was to develop a single measure of sleep fatigue, referred as monotony intolerance, which was successfully achieved.

Soldiers receive the opposite pattern of sleep compared to civilians. Domain-specific leadership includes topics such as safety, sleep, mental health, etc. SLEEP acronym: set conditions, lead by example, educate, encourage, and prioritize and plan. Use of caffeine and nap (15 min) combined to feel more rested. GRT showed that leader sleep training improved knowledge, attitudes and behaviours towards improved sleep, and they liked the training, although a wait-list design was used.

4.9.3 Analyses of Fatigue

It is disheartening to learn that the military still has not addressed this important issue. Perhaps more work needs to be done in the area of “sleep banking.” There is, of course, the issue of performance enhancement drugs to also sustain alertness. This latter topic was noticeable absent, yet a topic that NATO should be monitoring.

5.0 CONCLUSIONS

It is clear that evidence-based leader interventions are highly relevant at all organizational levels and in all contexts. Yet, the number of variables assessed is enormously unwieldy. The foundations of health and wellbeing comprise a number of domains: sleep, exercise, nutrition, sleep and relationships, and perhaps spirituality. Consideration should be considered that focuses on this basic individual-level aspects of wellbeing. Regarding leader and organizational foundations for health and wellbeing, more research and

thinking is needed to reduce the literally hundreds of organizational constructs that have been proposed as important for organizational health and wellbeing.

There appears to be a paucity of causal models related to leader behaviours and health and wellbeing. While focusing on risk and protective factors are interesting from an epidemiological perspective, such an approach is not useful for determining causality. And the determination of causality is critical for the development and validation of interventions. This critical point seemed to be missing throughout most of the presentations.

The symposium included a number of national initiatives underway, yet nearly all of them were focused on initiatives and practices that occur in garrison. There was only a single presentation that focused on service members during and around deployment. While this focus on garrison initiatives that includes civilians might be understandable during times of relative peace, in pulling together all the relevate data, the operation-focused data should be included. There are a number of nations that have developed organizational assessments aimed with providing leaders health and wellbeing metrics for how their deployment service members are performing. This is an important literature that shouldn't be forgotten.

Not surprisingly, there are few true evidence-based leader interventions for health and wellbeing at either the individual, group, or organizational level. The focus currently has been on the development and validation of the tools to assess health and wellbeing, along with the numerous predictors and moderating/mediating variables. For example, leaders might be told that morale in there unit is low, yet not be provided with any evidence-based approaches for how to improve morale. The solutions appear to be left to the leader to figure out for themselves. Thus, the gaps in evidence-based leader interventions for health and wellness in the military are near universal and a major research gap desperately needing attention.

Clearly one of the largest barriers to developing evidence-based leader interventions for health and wellbeing in the military is conducting rigorous, well powered, well-controlled studies. The reasons for this are varied, yet usually lie in the fact that military and civilian leaders are reluctant to support research in which not all the service members received the intervention under study, despite the fact that the intervention being studied has not been proven to be effective.

There are numerous high risk groups where military leader interventions for health and wellness are especially important. The military has focused on those service members deploying to combat, peacekeeping or peace enforcement missions, among others. Other high risk groups may include pilots, shift-workers and early warning personnel. Diverse groups such as women and other minority groups merit attention in this respect as well.

A final note should be provided that touches on other barriers to implementing some of the leader-based interventions discussed and proposed throughout the symposium. Broadly, these barriers include privacy and legal issues, as well as possible career-ending or impeding outcomes.

6.0 RECOMMENDATIONS

The recommendations of this report are focused on actions that may be considered by NATO in advancing the importance of this critical topic to further the health and wellbeing of NATO forces, including both military and civilian personnel and organizations. Particular recommendations are focused on the establishment of technical activities that might be considered by the HFM panel

- Establish a NATO activity to determine if a **brief** unit climate assessment can be created to aid leaders to assess the general health and wellbeing of their units in both garrison and operational deployments, including combat that can be used as a benchmark across NATO countries. Along with benchmarking, determine if interventions can be validated that result in measurable positive

change that supports leader decisions and/or operational effectiveness.

- Establish a NATO activity to develop a unit climate assessment that can be implemented within NATO organizations, including headquarters that comprise multi-national members, including both military and civilian.
- Establish a NATO activity to develop a NATO-focused model of leader intervention model for health and wellness. Consider the inclusion of readiness, broadly defined.
- Establish a series of NATO / nation-led and funded research intervention studies that can overcome the scientific deficiencies and general lack of intervention studies in this area.
- Establish a NATO activity to explore the possibility of developing a holistic / whole person approach to health and wellbeing that includes at a minimum activity/exercise, nutrition, sleep, relationships and spiritual wellbeing.

Additional areas that need to be monitored for future exploitation is the development of an integrated health and wellbeing app / technology.