Workforce Health and Safety

EMS Psychological Health & Well Being: A Paradigm Shift

National EMS Advisory Council

September 17, 2019

CAPT Scott Salvatore, USPHS

Board Certified Psychologist/EMT

Lead, Psychological Health

U.S. Dept of Homeland Security

Scott.Salvatore@hq.dhs.gov

AST2 Joe Glaser-Reich

USCG Helicopter SAR Swimmer/EMT

Psychological Health Detailee

U.S. Dept. of Homeland Security

Joseph.Glaser-Reich@hq.dhs.gov

Homeland Security

The Paradigm Shift

- EMS personnel face intense pressures on the job that affect their health, well being, and job performance.
- We assume EMS personnel are generally healthy, fit, and engaged upon academy graduation.
- Today, we'll examine impact of occupational stress and the critical imperative for moving upstream to promote primary prevention, resilience and performance enhancement interventions.

Thriving or Surviving: Current State of EMS Health

- 2015 JEMS: published survey found 37% of EMS practitioners endorsed contemplating suicide (*samples of convenience v. random samples*)

- 2016 NAEMT: survey on EMS Mental Health Services (2200 respondents) revealed **37% of EMS agencies had no mental health support services** & **42% had no health and wellness services** and **9% "Don't Know"**

- 2018 EMS Deaths by Suicide: Arizona
  - After demographic adjustment, EMTs had more than double the suicide rate of non-EMTs

Thriving or Surviving: Current State of EMS Health (cont.)

- As a comparison, police officers encounter 10 to 900+ “traumatic” or “severely stressful” events

- Trauma/Critical Incidents lead to Burnout:
  - Behavioral syndrome characterized by emotional exhaustion, cynicism, and lower professional efficacy

- 2018 SAMHSA Technical Report:
  - 30% of First Responders develop behavioral conditions such as PTSD, and Depression
  - 50% of deaths are due to stress and exhaustion
  - Substance abuse: 50% male firefighters report binge or hazardous drinking

Cumulative Impact on EMS Personnel

- Increased risk of cardiovascular disease
- Higher risk of coronary event
- PTSD: 15-20% prevalence; 7-19% LE
- Low fitness, weight gain, obesity
- Early retirement
- Premature death

Volunteer v. Career (Firefighters)

- Significantly elevated levels of depression, PTSD, and suicidal symptoms
- Significant structural barriers to mental health care (e.g. cost, availability, or resources)
- Potentially more stringent selection process

Risk Factors

- **Pre-incident:** family psychiatric history, cumulative exposure to critical incidents within past year, occupational stressors, *past personal traumas*
- **Peri-incident**: nature of the trauma (line of duty killing, death of fellow responder, child, physical assaults most impactful), perceived threat to self, partner, and others
- **Post incident**: *dissatisfaction with agency support*, poor social support outside of EMS work, legal/media, physical injuries, avoidant coping, stigma/fitness concerns

Protective Factors

- Strong social connectedness & emotional support--most significant protective factor
- Positive attitude, compassion, and tolerance from supervisor and colleagues for discussing events and expressing emotions
- Positive coping, wellness/resilience skills and hobbies
- Mental health wellness-checks, early intervention and evidence-based treatment

The Issue of Stigma & Help Seeking Behavior

Stigma:

- Mark of disgrace associated with a particular circumstance, quality, or person
- Negative view associated with a person or group when their characteristics or behaviors are viewed as different or inferior to societal norms
- Reduces someone from a whole person to a tainted, discounted one

Types:

- Self
- Career (security clearance and fitness)

Security Clearance Myths

- Over 99% of individuals in DHS with psychological conditions obtain or retain their security clearance
- A DHS review of approximately 11,000 background investigations in FY15 resulted in only 0.2 percent of security clearances being denied or revoked due to psychological conditions
- Those revoked had additional concerns: financial, legal, etc.

EMS Cultural Impediments

- Command climate that discourages getting help: “suck it up or get over it” mentality
- Responder mentality of self reliance, toughness, control, strength, heroic protector
- Fear that they will be the brunt of jokes
- Concern that leaders or peers won’t select or trust them for future assignments/promotion.

Stigma Reduction

Experts have emphasized the importance of stigma-reduction programs that include:

- Selection of leaders and change agents who are credible and similar to the communities of interest
- Leaders who are willing to share personal stories of trauma impact, mental health issues, and treatment recovery (Vulnerable Strength)
- All-hands communication messages that are varied, delivered over time, and include a quality outcome component

The Mental Health and Wellness Paradigm Shift

- Addressing psychological health and well-being from recruitment/training to retirement
- From secondary and tertiary interventions to proactive primary prevention and resilience and performance optimization
- Common language that resonates
- Develop policies, dedicate funding to enhance EMS personnel health and well-being

Health & Performance Continuum

Homeland Security

PEAK PERFORMANCE

Characteristics

- Quality Sleep
- Focused Attention
- Sustained Energy
- Engaged
- Optimistic
- Physically Fit
- Flexible
- Self-confident
- Quality Relationships
- Emotionally Balanced

How to Maintain

- Sleep Optimization
- Well-balanced Diet
- Social Connectedness
- Regular Exercise
- Enjoyable Hobbies
- Communication Skills
- Spiritual Practice
- Mindfulness
- Yoga
- Martial Arts

DECREASED PERFORMANCE

Characteristics

- Sleep Loss
- Decreased Focus
- Reduced Energy
- Displaced Sarcasm
- Pessimistic
- Fatigue
- Inflexible
- Self-doubt
- Reduced Social Activity

How to Improve

- Peer Support Program
- EAP Consultant
- Spiritual Practice
- Marital Enrichment
- Psychological First Aid
- Communication Skills
- Sleep Hygiene
- Well-balanced Diet
- Social Engagement
- Mindfulness

POOR PERFORMANCE

Characteristics

- Disturbed Sleep
- Poor Focus
- Binge Drinking
- Sadness
- Displaced Anger
- Aggressive Behavior
- Moral Injury
- Guilt
- Relationship Issues

How to Improve

- Peer Support Program
- EAP Consultant
- Chaplain Services
- Marital Enrichment
- Psychological First Aid
- Sleep Hygiene
- Well-balanced Diet
- Social Engagement
- Mindfulness

IMPAIRED PERFORMANCE

Characteristics

- Sleep Deprivation
- Inability to Focus
- Increased Absenteeism
- Substance Use Disorder
- PTSD
- Depression
- Feelings of Hopelessness
- Insubordination
- Suicidal Thoughts

Professional Services

- Brief Psychotherapy
- Family Therapy
- Marital Counseling
- Medication Therapy
- Federal Employee Health Benefit
- Additional Counseling
- Primary Care Physician
- Dietician
- Personal Trainer

Information and resources to improve your performance can be found at:

dhs.gov/employees

Psychological Resilience Defined

- Resilience Video: https://www.youtube.com/watch?v=UNQhuFL6CWg
- **Military/RAND**: ability and process to withstand, recover and grow in face of stressors and changing demands
- **APA**: process of adapting well in the face adversity, trauma, or ongoing stress — family and relationship problems, serious health conditions, workplace and financial stressors
- Defined in the context of individuals, families, organizations, societies, and cultures

Resilience Skills – Can they learned?

- **Key Tenant: Yes!**

  Resilience skills can be learned

- ***Resilience training in the workplace from 2003 to 2014: A systematic review***

  Journal of Occupational and Organizational Psychology (2015), 88, 533–562, 2*015*

Resilience Promoting Factors

Rand Study: Promoting Resilience in the Military (2011)

- Examined 21 Resilience Promoting Factors

4 Levels:

- Individual - Optimistic thinking, realism, behavioral control
- Family - Family support
- Organization - Leadership support / positive command climate
- Community - Belongingness or social connectedness

Skills: Cognitive, Emotional, Physical, Social

U.S. Customs and Border Protection

Resiliency Programs

In Office of Human Resource Management

Resilience Domains & Tenets

Introduction of Resilience Skills

CBP Component Academy; New Employee Orientation; Resilience Training Assistant Course

- Overview of Resilience
- Gratitude
- Values-Based Goals
- ABC
- Balance Your Thinking
- Check Your Playbook
- Capitalizing on Strengths
- Mindfulness
- Spiritual
- Physical
- Good Listening & Active Constructive Responding
- Interpersonal Problem Solving

U.S. Customs and Border Protection

Uniformed Services University

About the SOCAT Program

- ***Developed*** by clinical, social, sports, operational, and organizational psychologists and SOF consultants
- ***Goal***: enhance cognitive ability to facilitate dynamic decision making and adaptation to life changes
- ***Audience***: service members, partners, and providers
- Pilot testing this year (2019)

Building Mastery of Rational-Thinking and Emotional Regulation through Problem-Solving (REPS)

U.S. Navy Recruit Training Command

Content:

- Comprehensive and holistic (mind, body, soul)
- 10 hour character development training
- Daily mindfulness exercises
- Targeted sports psychology training

Development:

- *Character curriculum*:
  - 6 chaplains
- *Development and Implementation (First year)*:
  - one chaplain,
  - one psychologist
  - one SEAL
- Scaled to team of 14 to set up Warrior Toughness School House

DHS Mindfulness Pilot – Case Study

- PURPOSE:
  - Support and enhance DHS workforce resilience, health and performance through evidence informed training that maximizes personnel readiness

- TRAINING GOALS:
  - Increase resilience, mindfulness, stress management skills, quality of life, and occupational and operational performance

UCSD Center for Mindfulness

What is Mindfulness?

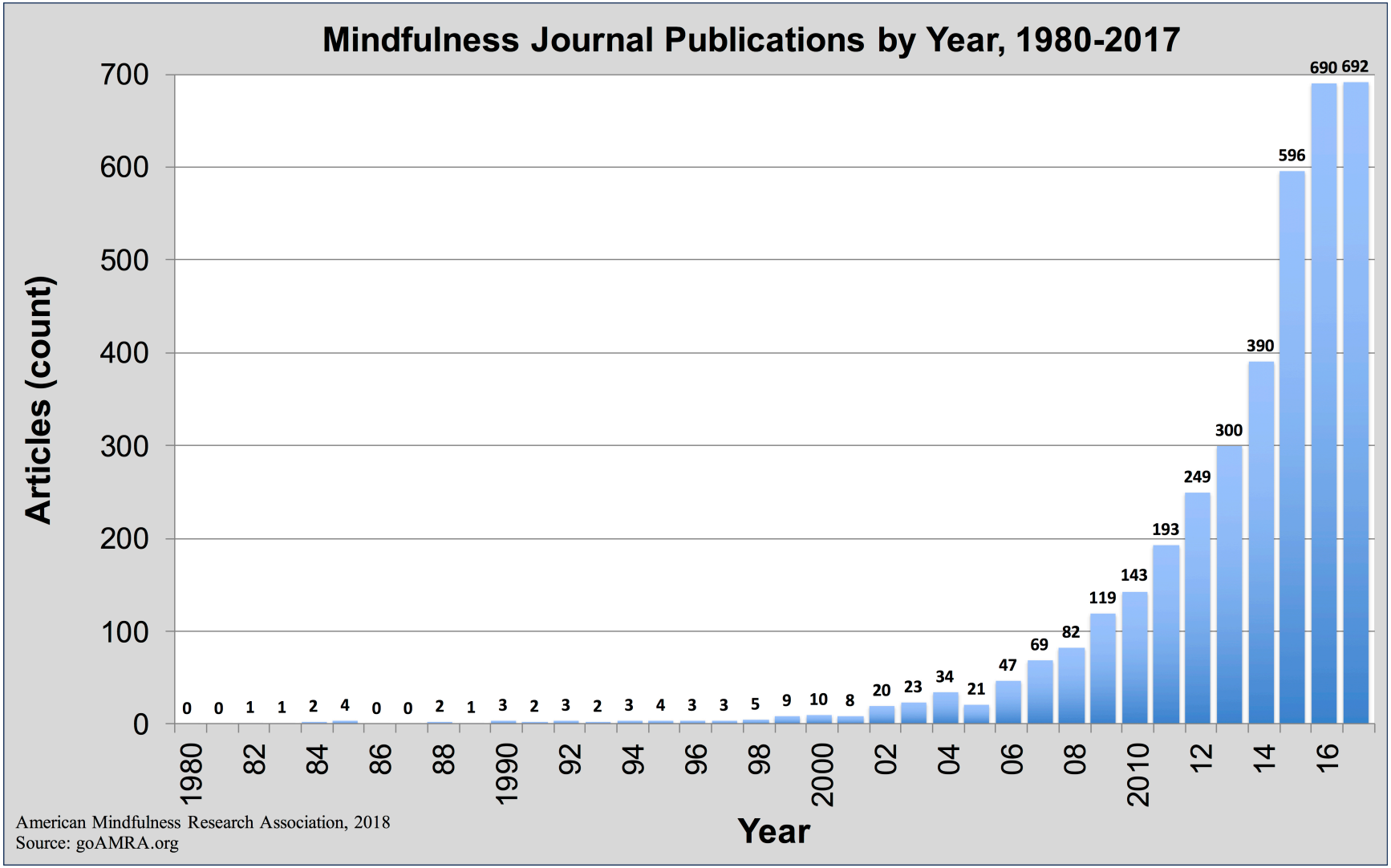
https://www.youtube.com/watch?v=dSsAEWkmBFU

- **Mindfulness Skills**
  - *Paying attention, on purpose, in the present moment, without judgment*
  - Cultivates the ability to 'let go'
  - Responding and self-regulation versus reacting
  - Increases attention and focus and awareness of self & others

- **Mindfulness Highlights**

Benefits (enhances resilience, performance & proven to reduce stress)
Efficacious (science-backed, over 700 studies to date, DOD/VA Practice Guideline)
Skill-based (a learned and portable skill v. education/awareness only training)
Scalable ('train the trainer' model & can be incorporated in DHS Basic & Advanced Academies)

Mindfulness Empirical Evidence



Mindfulness ROI

Where Being Taught

- **U.S. Military:**
  - Marine Corps
  - Navy
  - Army
  - Special Operations
- **Corporations:**
  - Google
  - Nike
  - Apple
  - Intel, and more
- **University:**
  - Duke
  - Stanford
- **Sports Teams/High Performing Athletes**
- **Law Enforcement/First Responders**

Mindfulness ROI

- Reduction in worker stress and health costs
- Increase in productivity
- Law Enforcement exhibited decrease in operational stress and anger
- Enhanced stress response skills

Research-based Outcomes:

- **35%** reduction in worker stress
- **7%** reduction in health costs
- **$3000** productivity gain per employee

DHS UCSD Course Offerings

Two-year contract provides a "menu" of offerings to enhance resilience, stress reduction skills, leadership, and peak performance:

- **M**indfulness **P**erformance **E**nhancement **A**wareness & **K**nowledge (*m*PEAK)-2 ½ Day Intensive + 4 Virtual Sessions
- Mindfulness Based Resiliency Training (MBRT) – 2 ½ Day Intensive plus optional f/u
- Mindfulness Based Stress Reduction (MBSR) – 2 Day Intensive plus optional f/u
- Mindful & Emotional Intelligence Leadership – 1-2 Day Intensive
- Mindfulness Self-Compassion Training – 2 Day Intensive
- Coach Training – 3 Day Intensive plus f/u

Mindfulness Pilot Phases

- Phase 1: Law Enforcement
  - CBP, ICE, USSS, USCG

- Phase 2: Non Law Enforcement & Focused Populations
  - DHS Veterans and Families
  - DHS Training Academies (FLETC)

- Phase 3: Pilot Scaling (Coach Training) and Program Evaluation

UCSD Center for Mindfulness

Barriers to Implementation

- Securing and protecting funding
- Organizational level leadership support
- Provider and station level support
- Demonstration of efficacy – measurement challenges

- Operational tempo, finding time for training
- UCSD Trainer availability
- Competing training priorities, only so much time in a day

UCSD Center for Mindfulness

Testimonials

"I thought that the class brought me to a better realization of humility and gratefulness. Identifying our own weaknesses and being given tools to address them only helps us be more available to those who depend on us. I found that the training was a fantastic opportunity to self-reflect and fix or at least develop a plan to fix what is broken."

-- Agent, United States Border Patrol (USBP)

"I wish I had this course 30 years ago, at the beginning of my career. Training like this will go a long way in helping law enforcement personnel perform, develop resilience and positive coping tools."

-- Officer, Customs & Border Protection (CBP)

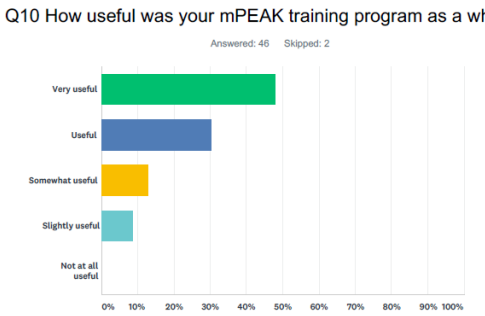
UCSD Center for Mindfulness

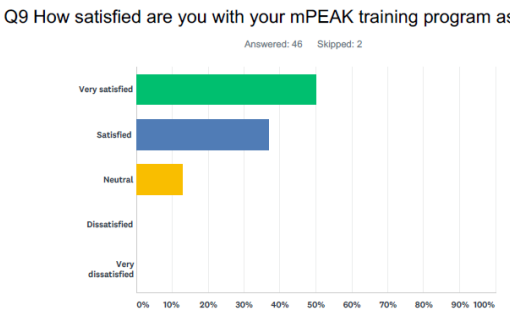
Rave reviews about both courses…we'd really like to pursue getting all of our 255 members through the training.

--CDR, Executive Officer, U.S. Coast Guard San Diego

Preliminary Pilot Data

U.S. Customs and Border Protection:





CBP, USSS, and USCG Connor-Davidson Resilience Scale

- 10-item measure of resilience using a 5-point response scale.
- Higher scores are associated with positive psychological health outcomes.

Pre: 30.7

Post: *36*

UCSD Center for Mindfulness

Five-Facets Mindfulness Questionnaire (Observing)

- 39 item, 5-point self-report scale that assesses mindfulness in daily life activities.

Pre: 3.00

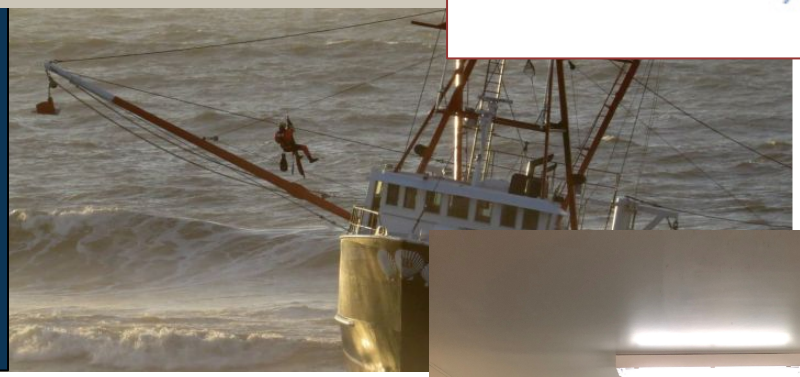
Post: *3.97*

U.S. Coast Guard

Contemplative**Studies**

Penn
Master of Applied
Positive Psychology

FULBRIGHT



I wish I could tell you, with data points, the impact of Work life and specifically Mindfulness. I use it, I have three guys that use it, and I know two have gone from grounded to Fit for full duty because of it.

–ASTC, Air Station Astoria

Leadership's Role in Health & Performance

- Most Effective: Leadership modeling and encouragement

- Challenge: For leaders to demonstrate "**vulnerable strength**," strategically share stories of perseverance during stressful personal or work situations

- https://www.youtube.com/watch?v=X6X3kQMBbb8

Health Promoting Leadership

Leaders' SelfCare and their Health-Promoting Leadership Behavior: Integrating Core Self-Evaluations and Organizational Health Climate in a Moderated Mediation Approach

Christina Köppe^ & Astrid Schütz
University of Bamberg, Germany

Introduction & Objective

Introduction:

Employees all over the world suffer from unfavorable working conditions such as high time pressure or excessive workload. As a consequence, physiological as well as psychological health problems among employees increase.

Leaders can have a great impact on employees' health and well-being[1]. However, general leadership behavior such as transformational practices does not specifically focus on health-promoting actions.

To address this problem, Franke, Felfe, and Pundt (2014)[2] developed the concept of Health-oriented Leadership (HoL). The concept links leaders' self-directed health-promoting leadership (i.e. SelfCare) to their follower-directed health-promoting leadership (i.e. StaffCare). This in turn has an impact on follower health (see Figure 1). Both SelfCare and StaffCare consist of three components: value of health, health awareness, and health behavior [2].

Objective:

In this study, we focused on HoL by investigating the underlying mechanisms (i.e. core self-evaluations, CSEs) and situational conditions (i.e. organizational health climate, OHC) in connecting leaders' SelfCare and StaffCare behavior (see Figure 2). We assume that leaders who actively care about their own health, evaluate themselves in a more favorable light, assess themselves as more capable of performing follower-directed health-promoting leadership behavior, feel more emotionally stable, and experience more control to behave accordingly (i.e. CSE components). Those positive self-evaluations, however, should especially foster follower-directed health-promoting leadership behavior if the organization as such supports that behavior in sharing basic assumptions concerning employee health and well-being.

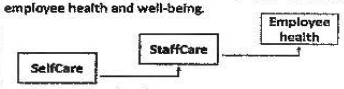


Figure 1. Adapted simplified representation of the HoL concept.

Hypotheses & Model

Hypotheses:

H1: SelfCare is positively related to CSEs.

H2: OHC moderates the relationship between CSEs and StaffCare behavior such that CSEs lead to StaffCare behavior if OHC is high.

H3: SelfCare influences StaffCare behavior through its relationship with CSEs and thus fosters behavior related to StaffCare – especially under high levels of OHC.

H4: SelfCare is directly positively related to StaffCare behavior.

Proposed Model:

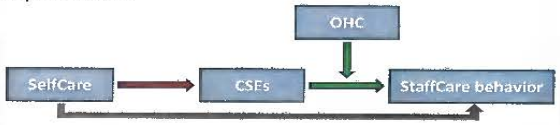


Figure 2. Theoretical model of the relationship between SelfCare and StaffCare behavior.

Method

Subjects:

- Online study with $N = 164$ leaders (101 male, 63 female)
- Age: 47 years ($SD = 9.05$), tenure within the current company: 16 years ($SD = 10.35$)

Applied Questionnaires:

- SelfCare and StaffCare behavior: 12/7 items of the HoL Instrument[2] (Cronbach's α = .85/.83)
- CSEs: 12 item German Core Self-Evaluation scale [3] (Cronbach's α = .82)
- OHC: 2 items of the Organizational Health and Safety questionnaire[4] (Cronbach's α = .78)

Analysis:

- Software: PROCESS macro for SPSS[5]
- Procedure: Following Hayes (2015)[6] for conditional indirect effects covering moderated mediation; variables of the interaction term were mean centered prior to analyses
- Control variables: Sex, age, and tenure

Results

- **H1:** Leaders' SelfCare significantly predicted CSEs ($t = 5.17$, $p < .001$, 95% CI [.23, .50]).
- **H2:** CSEs fostered StaffCare behavior only under high levels of OHC ($t = 2.25$, $p < .05$, 95% CI [.03, .44], see Figure 3).
- **H3:** The conditional indirect effect of SelfCare on StaffCare behavior through CSEs was significant (Index of moderated mediation: .09, 95% BootCI [.02, .18]) showing that the indirect effect is positively moderated by OHC on moderate and high levels of the moderator (see Table 1 for all statistics).
- **H4:** SelfCare was directly positively related to StaffCare behavior ($t = 3.47$, $p < .001$, 95% CI [.14, .52]).

Table 1.

Test of Overall Model

Variable	b	SE b	t	R^2
Step 1: CSEs				.21**
SelfCare	.37	0.07	5.17**	
Step 2: StaffCare behavior				.20**
SelfCare	.33	0.10	3.47**	
CSEs[a]	.24	0.13	1.84	
OHC[b]	.05	0.06	0.88	
OHC x CSEs	.29	0.10	2.25*	
Level of OHC	**Indirect effect**	**Boot SE**	**Boot LLCI**	**Boot ULCI**
Step 3: Conditional indirect effect				
-1 SD	.01	0.04	-.06	.09
Mean	.09	0.05	.01	.19
SD	.17	0.07	.05	.34

Note. $N = 164$. To increase clarity, the control variables have not been included in the table. Sex had significant influence in step 1 and step 2. [a]CSEs = core self-evaluations; [b]OHC = organizational health climate. *$p \leq .05$, two-tailed; **$p < .01$.

Figure 3.

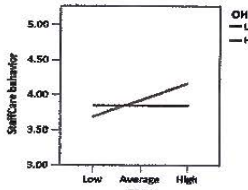


Figure 3. Interaction effect between OHC and CSEs. [a]CSEs = core self-evaluations; [b]OHC = organizational health climate.

Implications

- Trainings should focus on leaders' SelfCare in order to...
  ...help leaders to effectively improve their own health and well-being.
  ...indirectly foster StaffCare behavior.
- Organizations should concentrate on establishing a broad health culture to make health-promoting leadership behavior more likely to occur.

Leaders' self-directed health promotion influences their health-promoting leadership behavior through increased positive self-assessment. However, for leaders to engage in follower-directed health promotion, it is essential that the organization as a whole encourages a climate that values health issues.

References:

[1] Sianton, J., Nielsen, K., Borg, V., & Guzman, J. (2010). Are leaders' well-being, behaviours and style associated with the effective well-being of their employees? A systematic review of three decades of research. *Work & Stress, 24*(2), 107-139.
[2] Franke, F., Felfe, J., & Pundt, A. (2014). The impact of health-oriented leadership on follower health: Development and test of a new instrument measuring health-promoting leadership. *Zeitschrift für Personalforschung* [German Journal of Research in Human Resource Management], *28*(1/2), 139-161.
[3] Stumpp, T., Muck, P. M., Hülsheger, U. R., Judge, T. A., & Maier, G. W. (2010). Core Self-Evaluations in Germany: Validation of a German Measure and its Relationships with Career Success. *Applied Psychology: An International Review, 59*(4), 674-700.
[4] Gurt, J. Uhle, T. and Schwennen, C. (2010). Fragebogen zum Arbeits- und Gesundheitsschutz – Betriebliche Gesundheitsförderung [Health and Safety Management Questionnaire]. In: *Handbuch wirtschaftlicher Testverfahren*, W. Sarges & H. Wottawa (Eds.). pp. 45-54. Pabst: Lengerich.
[5] Hayes, A. F. (2013). *Introduction to Mediation, moderation, and Conditional Process Analysis: A Regression-Based Approach*. New York, NY: The Guilford Press.
[6] Hayes, A. F. (2015). An Index and Test of Linear Moderated Mediation. *Multivariate Behavioral Research, 50*(1), 1-22.

KAP Kompetenzzentrum für Angewandte Personalpsychologie

^Contact: christina.koeppe@uni-bamberg.de

EMS Advocacy at a National Level

- 2017 Law Enforcement Mental Health and Wellness Act
  - Comparison of DOD/VA Health and Wellness Programs
  - Report on LE Psychological Health & Wellness Programs (11 Case Studies of Best Practice Agencies)
  - Efficacy of annual mental health checks
  - Expansion of peer mentoring programs and crisis lines

- Presumptive PTSD Laws
  - Supports mental health conditions as occupationally related disease and coupled with related workers compensation/treatment

Selected Research

Select Military, Law Enforcement, Health, Work and Stress Studies

Johnson, D.C. et. al. (2014). Modifying Resilience Mechanisms in at risk individuals: A controlled study of mindfulness training in Marines preparing for deployment. American Journal of Psychiatry, 171, 844-853.

Jha, Amishi, Morrison, A.B., Parker, Suzanne, Rostrup, Nina, et. al. (2015). Minds "at attention": Mindfulness Training Curbs Attentional Lapses in Military Cohorts. PLOS, 11, 1-19.

Nassif, T. H., Start, A. R., Toblin, R. L., & Adler, A. B. (November 2017). Combat Exposure and the Role of Mindfulness in Soldier Health at Post Deployment. Poster presented at the annual Association of Military Surgeons of the United States (AMSUS). National Harbor, MD.

Christopher M, Hunsinger A, Goerling, RJ, Bowen S, Rogers BS, Gross CR, Dapolonia E, Pruessner JC. Mindfulness-based resilience training to reduce health risk, stress reactivity,and aggression among law enforcement officers: A feasibility and preliminary efficacy trial *Psychiatry Research 264 (2018) 104–115*

Haase L, May AC, Falahpour M, Isakovic S, Simmons AN, Hickman SD, Liu TT and Paulus MP. A pilot study investigating changes in neural processing after mindfulness training in elite athletes. *Front. Behav. Neurosci.* 9:229 (2015)

Chiesa, A., & Serretti, A. (2009). Mindfulness-based stress reduction for stress management in healthy people: a review and meta-analysis. The journal of alternative and complementary medicine, 15(5), 593-600.

Dane, E. (2011). Paying attention to mindfulness and its effects on task performance in the workplace. Journal of Management, 37(4), 997-1018.

De Vibe, M. F., Bjørndal, A., Fattah, S., Dyrdal, G. M., Halland, E., & Tanner-Smith, E. E. (2017). Mindfulness-based stress reduction (MBSR) for improving health, quality of life and social functioning in adults: a systematic review and meta-analysis.

Eberth, J., & Sedlmeier, P. (2012). The effects of mindfulness meditation: a meta-analysis. Mindfulness, 3(3), 174-189.

Goyal, M., Singh, S., Sibinga, E. M., Gould, N. F., Rowland-Seymour, A., Sharma, R., ... & Ranasinghe, P. D. (2014). Meditation programs for psychological stress and well-being: a systematic review and meta-analysis. JAMA internal medicine, 174(3), 357-368.

UCSD Center for Mindfulness

Thank You!

Questions

Comments

Discussion

End/Extra Slides

DHS Total Fitness: Health & Performance Continuum