

Climate Change and Disaster Mental Health: Addressing Burnout and Leveraging Wearable Technology for First Responder and Healthcare Workforce Retention

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Background

- Climate change contributes to increased disasters and burden on communities in constant recovery mode.
- Subsequent chronic stressors, lead to, burnout and mental health concerns of employees in both the healthcare and first responder industries.

Objectives

- To improve understanding of disaster experiences and community disruptions on burnout and mental health. Explore protective factors that can mitigate burnout.

Methods

- Online survey (n= 124), focus groups (n=14)
- Mental Health (PHQ-4),¹Burnout (13 items)²
- What do you do to take care of yourself?

Results

- About half (53%) were <40 years. Majority were partnered (67%), make <\$70,000 per year (58%), male (69%) and white (77%).
- First responders (EMT, paramedic, firefighter, police; 48%) and allied health/front line personnel (MD, behavioral health, nursing, etc.; 52%). Hours worked per week (M=47.2, SD=18.6); 27% more than usual.
- As burnout increased, mental health problems also increased. More work hours per week, >usual work schedule or in traditional first responder roles were associated with burnout. Feeling socially isolated and other trauma such as disaster were associated with mental health problems.

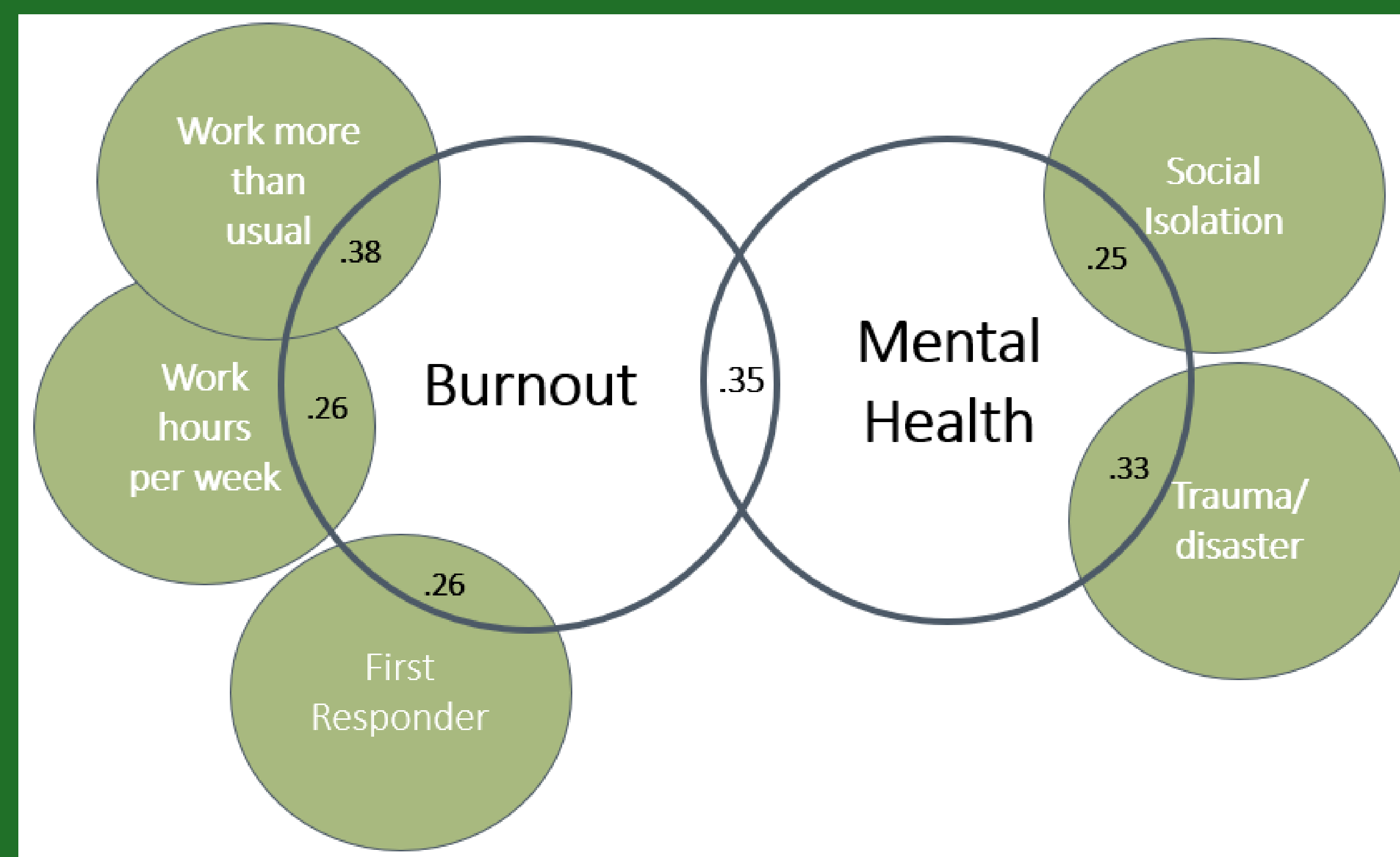
Protective Factors

Connectedness: *“I have others on my team who understand, ...support and encourage each other.”*

Wellbeing: *“we might be saving lives, but sometimes our job is saving our own lives.”*

Self-care: *“schedule self-care...more emphasis on self-care is really important*

Risk Factors



*I know for me it's irritability feeling short, loss of focus, and also just feeling super fatigued
“I...became burnt out and transitioned to a new job outside of the medical field.”*

The dust was settling from [pandemic], we had like the new norm, and then [hurricane] kind of uprooted everybody.

Cumulative Stressors

Social Isolation	56%
Job change	31%
Death or illness of a close friend or family member	27%
Financial problem	26%
Move	24%
Trauma/disaster	19%
Participated in response or emergency services	18%

Implications

- Contributors to burnout and mental health, include work stressors, job type, social isolation and life stressors, such as disaster and trauma.
- Positive coping skills along with social and wellbeing supports are needed.
- Biofeedback is a process to enhance physical, emotional, and mental wellbeing through self awareness of physiological data.
- Wearable artificial intelligence (i.e., smart watches, etc.), care provide real time and low intensity interventions, while increasing access to care.

Conclusions

- Need for services aimed at reducing anxiety, depression, and loneliness while improving coping skills, such as self care
- Services must be accessible, destigmatized, and efficient (i.e., daily habits)—reduce any added burden
- Leverage technology to facilitate assessment / screening, training, and intervention
- With climate change and increased disasters, retention and wellbeing are priorities for employees in both the healthcare and first responder industries.



Contact us

¹Löwe et. al <https://doi.org/10.1016/j.jad.2009.06.019>

²Adams, Figley, Boscarino <https://doi.org/10.1177/1049731507310190>