Assessing the Mental Health of First Responders: A Systematic Review

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The speaker has no conflicts of interest to disclose.

Objectives

- Discuss duty-related trauma exposure and risk for mental and substance use disorders among first responders.
- Identify the prevalence of mental and substance use disorders among first responders as presented in a systematic review.
- Understand duty-related trauma exposure on first responders and the implications for psychiatric nursing practice and future research.

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First, a little bit about me…

• Education
• Practice
• Research
• Married to a Firefighter/paramedic

I WANT TO TELL YOU LIES

“...But I have to tell it like it is, until my shift is through
And then the real lies begin, when I come home to you
You ask me how my day was, and I say it was just fine
I hope you understand, sometimes, I have to tell you lies.”

First Responders

• Firefighters, paramedics, & emergency medical technicians (EMTs)
• Law enforcement personnel
  – Comparatively, vast differences in training & job duties
• Dispatchers
• Healthcare providers
• Rescue workers
Duty-related trauma exposure

- “Sentinel Events”
  - Baby Jessica (1986)
  - September 11th
- But, many may serve an entire career without working a sentinel event
- Approx. 50 million emergency calls annually (U.S.)
- Every dispatch has the possibility of trauma exposure → Increased risk for mental health conditions

Searching the literature

- First responders: individuals from various professions
- Large focus on the effects of specific sentinel events (i.e. 9/11)
- Primary focus is on PTSD
- Different standardized assessment measures used

How do the day-to-day operations & experiences that are expected & accepted as part of a their job affect first responders’ mental health?

Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) guidelines used to identify the prevalence of mental disorders among first responders.
Study Descriptions

- Countries: U.S. (n=13), Australia (n=4), Brazil (n=2), UK (n=2), Germany (n=2), Canada, Netherlands, Poland, Scotland, South Africa, & Taiwan
- Firefighters (n=19)
  - Volunteer (n=1), professional (n=6), and urban (n=2) firefighters.
- EMTs & paramedics (n=8)
  - Ambulance workers (n=1), rural (n=1), paramedic students (n=1), and urban paramedics & paramedic students (n=1)
- Mental health concern: PTSD (n=18), depression (n=11) & suicidality (n=4), anxiety (n=5), alcohol (n=6) and substance use (n=2), sleep disturbance (n=3), & general psychopathology (n=6)

PTSD

- General populations: 8.7% Veterans: 10-31%
  - Internationally: 17-21%
- 2000-2014 (Internationally): As low as 3.5-7% (U.S)
  - Australia: 68% moderate, 7.4% severe
  - Brazil: 15% met partial criteria, 5.6% met full
  - Scotland: 30% moderate, 30% severe
- Career vs. Volunteer (Australia, 2003)
  - Significant PTSD (9.3% compared to 4.5%)
  - Extreme PTSD (13.3% compared 4.5%)
  - Severe psychological distress (17.3% compared to 7.5%)

PTSD: Increased Risk

Work related:
- High levels of work strain, increased hours, low sense of coherence
- Age started working [younger], years of service, & rank (supervisory)
- Severity of horror felt after Single Worst Incident, fatalities with children
- Work vs. Home conflicts

Personal:
- Poor social support, marital status (single)
- Previous psychological treatment, increased sx of depression & anxiety
- Co-occurring medical problems

Personality traits:
- High levels of denial, low levels of empathy, poor resilience
- High levels of hostility & low levels of self-efficacy before job entry
Depression & Suicidality

- General populations: 7%
- Correlation between lifetime MDD & PTSD estimated at 0.50
  - Both highly associated with suicidality; co-occurrence increases symptoms
  - Comorbidity varies between 21-95%; often associated with trauma exposure

DEPRESSION
- Studies that examined both PTSD & MDD (n=4): 3-28%
- Primary focus on depression (n=2): 6.8-11%

SUICIDE: 1/4 career & 1/5 volunteer had considered suicide (NFVC)
- Dissertation: 16 yrs (NC; n=982): 25 deaths (3x LOD deaths)
- Lifetime SI: 46.8% (U.S. 2015; n=1025)
  - Plan: 19%; Attempted: 15.5%; Non-SI self-injury: 16.4%

Depression: Increased Risk
- Greater than 16 years in service
- Medical health concerns
- Being a paramedic (vs. EMT)

Suicide: Increased risk
- Occupational stress, poor social support
- Lower rank, fewer years on job
- Military status
- All-volunteer
- History of responding to suicide attempt or death

Alcohol Use
- General populations: 6.8%
- Binge drinking: more than 4 drinks (women) & 5 drinks (men) on 1 occasion (NIAAA, 2004): 1/6 adults binge 4x/month

In the fire service, alcohol consumption is common & heavy drinking are considered part of the culture, but there are FEW studies!
- U.S. firefighters (n=954): up to 89% reporting alcohol consumption
- Binge drinking: 33-58% (3 studies)
  - Hazardous drinking: 14% (n=112)
Sleep Disturbance

- Symptomatic of mental health conditions AND contributes to the development of... Difficult to assess causation
- Shift work! Sleep deprivation= less than 4-6hr/sleep/24 hrs
  - Fatigue, decreased alertness, poor concentration

4 Studies:
- Ambulance workers- high levels of fatigue: 10%
- Brazilian firefighters- sleep disturbances: 51%
- Australian, rural paramedics- poor sleepers: 70%
- Increased rates of Depression, SI, chronic fatigue, & AUD

Practice Implications

#1 problem: Strong stigma, perceived possibility of confidentiality loss, & culture of self-reliance = Decreased help-seeking
- General populations: less than 40% seek services
  - Only 32-55% receive recommended care
- Psychiatric evaluations: include inquiry about profession & related risk factors*
- Sleep disturbances!
- Annual Physical: To include comprehensive psychiatric evaluation

Resources

Evidence-based, population-specific interventions are scarce!
- Employee Assistance Programs (EAPs)
- Critical Incident Debriefing (CID): possibly increases risk
- National Fallen Firefighters Foundation: Everyone Goes Home
  - Initiative 13: Psychological Support- shift from EAP to BHAP
  - STRESS FIRST AID: Peer support model
- International Association of Firefighters (IAFF)
  - Behavioral Health & Suicide Awareness training
- Firefighter Behavioral Health Alliance (FFBHA; since 2010)
  - 2016: 68 firefighters, 22 paramedic/EMT (2015: 130)
Research Implications

- To reduce stigma & increase help-seeking behaviors
  - Barriers to help-seeking?
  - Community-engagement approach?
- Tailored interventions
  - Need evidence-based models!
- Modalities used with other victims of trauma
  - Veterans, abuse victims?
  - TF-CBT, EMDR

References


References


