

Coping Mechanisms and Perceived Work-Related Stress Among Young Adult Emergency
Medical Technicians in the United States

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Abstract:

As they are often the first on-scene providers, emergency medical technicians (EMTs) serve as an essential backbone of the healthcare system. Responders encounter high-pressure emergency calls that involve numerous obstacles, including burnout, death, and insufficient training (“Emergency Medical Technicians”, 2025). With these challenges, young adult (YA) EMTs are more likely to experience Post-Traumatic Stress Disorder and mental health conditions, including depression, anxiety, and burnout (Khazeai et al., 2019; Powell et al., 2025). Due to intense service, providers manage stress in various ways, either maladaptively (dysfunctional) or adaptively (productive) (Gärtner et al., 2019). This study aims to examine the relationship between types of coping and levels of perceived work-related stress (PWRS) in (18-25 year old) EMTs. The main goal is to better understand how YA EMTs in the United States cope with stress from intense emergency calls. Essentially, these findings will deepen service agencies’ understanding, helping them better support beginner EMTs by uplifting productive coping mechanism usage.

Introduction:

Factual and statistical data, reported by the U.S. Bureau of Labor Statistics, highlights the necessity of EMTs in the workforce; the bureau notes EMT employment rates with a projected expansion rate of 5% in the coming decade (2025). Pertinent to research on coping across healthcare, studies indicate correlations between maladaptive coping and worsening mental health: depression, burnout, decreased fulfillment, and anxiety (Algorani et al., 2023; Rojas et al., 2022). Current research revolves around correlations between coping and stress among older generations of first responders, underrepresenting the YA population. Indeed, studies feature sample populations saturated with EMTs often older than 25 (Rojas et al., 2022; D’Alessandro-Lowe et al., 2025; Parvaresh-Masoud et al., 2023). This study employs a cross-sectional correlational method to analyze correlations between coping frequency and PWRS in YA (18-25 years old) EMTs in the United States, filling a gap in current research.

Literature Review:

With the growth in YAs pursuing the medical field, EMT training serves as a learning tool for students to strengthen their patient care confidence and procedural skill development (Wyatt et al., 2018; Brenner et al., 2018). Although there are studies that examine the benefits of YA medical students obtaining EMT certification, studies lack analysis on the mental repercussions of EMT work (Wyatt et al., 2018; Ginzburg et al., 2018). This study intends to investigate how coping mechanisms relate to emotions and stress levels among the YA EMT population.

Past research on older EMT generations indicate that adaptive coping correlates with positive mental well-being and lower stress levels (Rojas et al., 2022; Gärtner et al., 2019). Other reports indicate that adaptive coping mechanisms (personal wellness and social aid) relate to decreased job distress and improved personal wellness (Parvaresh-Masoud et al., 2023; Gärtner et al., 2019; D’Alessandro-Lowe et al., 2025). A specific form of adaptive coping, gallows humour (dark, ironic humour) facilitates emotional detachment and mutual support among first responders (Rowe and Regehr, 2010). Humour primarily assists with stress coping by regularizing the traumatic nature of emergency medicine, helping providers better focus during traumatic emergencies. By incorporating humor into daily activities, providers joke and laugh, forming a greater connection with one another. Clearly, humour is a significant coping mechanism among first responders, effectively uplifting group relationships. Conversely, maladaptive coping has a direct positive relationship with negative emotions such as feelings of

dropping out (Rogers et al., 2016). These findings underscore the significance of prioritizing adaptive coping among healthcare professionals to prevent distress and burnout (Rogers et al., 2016). In all, present scholarly work illustrates the need for greater research on YA EMT coping in relation to occupational stress levels.

Hypothesis and Objective:

This study aims to refine an understanding of coping in relation to occupational stress among working YA EMTs in the United States. The researcher hypothesizes that greater use of maladaptive coping will positively correlate to PWRS levels, while greater use of adaptive coping will negatively correlate to lower PWRS levels. Regarding adaptive coping, humor will likely be a recurrent coping mechanism, aiding in peer bonding and occupational destressing. Ultimately, this study will inform critical stress and coping patterns among young EMTs, paving the way for more specific interventions to strengthen first responder mental health.

Methodology:

This study will utilize a mixed-methods cross-sectional survey study to measure relationships between coping frequencies and PWRS of (18-25 year old) EMTs in the United States. This particular cross-sectional method effectively collects data on coping prevalence and multiple factors correlating to respondent PWRS (Rogers et al., 2016; Khazaei et al, 2019; Rojas et al., 2022). A random population sample of 381 YA EMTs will be surveyed for a 95% confidence level and a 5% margin of error across a population of around 36,000 YA EMTs (Data USA, n.d.). This mixed-methods outline contributes to an in-depth understanding of EMT coping and emotion after traumatic calls, analyzing qualitative and quantitative responses.

In the first survey section, a Perceived Work-Related Stress questionnaire will have respondents rate stress-inducing disruptions associated with EMT work on a Likert scale (Gärtner et al., 2019). In detail, the scale will have seven work-related statements that respondents rate between 1 (Not at all bothersome) to 4 (Very bothersome) on stress factors, including eating intrusions, workload, alarm noise, and equipment (Gärtner et al., 2019). For emotional regulation, coping frequency will be measured using Carver's BriefCOPE scale with 28 coping statements for respondents to rate on frequency of utilization (1997). Specifically, coping statement utilization will be rated on a 1-4 Likert scale: 1 being (Not at all) and 4 being (All the time). These coping statements will be divided into 2 categories (maladaptive and adaptive coping) for future comparison to occupational stress levels (Carver, 1997). Following this, one open-ended qualitative question will allow respondents to describe their stress levels and coping tendencies following an intense emergency call in brief explanations, emotions, or anecdotes. Consequently, respondents will describe emergency environments and their resulting coping methods, facilitating a deeper understanding of YA EMT occupational distress.

Survey distribution will be across online networking and communication platforms, focusing on digital outreach to emergency medical service agencies. Statistical analysis will be conducted using linear regression with a t-test for slope and Pearson's correlation to determine significance ($p < 0.05$). Thematic analysis will be conducted by generating codes and organizing qualitative responses into 6 main themes, encompassing emotional distress characteristics and coping types (Clarke & Braun, 2014).

Conclusion:

This study aims to pinpoint coping trends and stress levels during the beginning period of young adult EMT work. As an EMT serves a vital role in emergency medical care, it is vital to support their mental well-being for the betterment of their health and patient care. Indeed, sustainable patient care starts with the health and wellness of the providers.

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