Bridging the Gap: Integrating Psychology into Disaster and Emergency Management to Enhance Crisis Response

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ABSTRACT

This paper discusses the significant gap between disaster and emergency management and psychological concepts. This division affects the mental well-being of emergency responders and can interfere with practical disaster and emergency response operations. Integrating psychological concepts of well-being and secondary traumatic stress management into disaster and emergency management is necessary for effective and proficient crisis response. Unfortunately, these psychological tolls are overlooked, and because of this, disaster and emergency management personnel are vulnerable to various mental health issues. Therefore, a stance can be taken in support of integrating psychological insights into disaster response, not only to improve the well-being of first responders but also to strengthen emergency response efforts and crisis recovery.

Drawing on cross-disciplinary work in disaster management, emergency management, and psychology, advocating for the inclusion of necessary psychological perspectives and mental health professionals could ensure that care is provided to first responders proactively. Analysis of the data suggests that a psychological approach in these fields is critical to establishing and maintaining success and sustainability in crisis response. Arguably, the five branches of psychology that would contribute the most to crisis response are industrial-organizational psychology, trauma psychology, clinical psychology, social psychology, and health psychology.

CHAPTER I: INTRODUCTION

Clarity in the midst of chaos--this is what is demanded of the crisis responder, as every decision made in the midst of a crisis has long-term impacts on lives and communities, often with far-reaching consequences. Thus, responders must act with intentionality and sound judgment in unpredictable environments. Crisis responders adhere to systems designed to enable split-second decision-making. However, while disaster response systems are designed to save lives, they are rarely designed to protect those who implement them. Charles de Gaulle, the former president of France, once said, “Faced with a crisis, the man of character falls back on himself. He imposes his stamp of action, takes responsibility for it, makes it his own” (AZQuotes, pg. 1). From responding to catastrophes such as hurricanes and earthquakes to terrorist attacks and public health events, such as the COVID-19 outbreak, crisis responders know this test of character all too well.

Crisis responders are personnel who serve as the first line of defense in responding to disasters or emergencies (Federal Emergency Management Agency, 2024). Before assessing the importance of psychology within these fields, it is critical to define these terms. While many might think emergency management and disaster management can be used interchangeably due to overlap, these fields are, in fact, different. Crisis response operates at the intersection of disaster and emergency management, two fields that share core goals but often take different approaches and operate within different scopes (Federal Emergency Management Agency, 2024). Emergency management

focuses on responding to immediate threats, ranging from oil spills to wildfires, to protect citizens' lives and property (Federal Emergency Management Agency, 2024). Disaster management focuses more broadly on addressing large-scale events such as natural disasters and terrorist attacks (Federal Emergency Management Agency, 2024). This requires multiple layers of strategic planning across functional sectors including finance, logistics, operations, and planning (Federal Emergency Management Agency, 2024).

Disaster and emergency responders routinely face traumatic events, intense physical demands, high-pressure scenarios, and significant stress, all of which can lead to significant psychological consequences. Due to these stressors, responders can struggle with fatigue and burnout and may experience mental health issues such as depression, anxiety, and post-traumatic stress disorder (PTSD). Despite these challenges, crisis management often functions in ways that prioritize responder performance and operational demands over responder well-being. This emphasis often creates structural gaps in support for crisis responders, as deployment culture is fast-paced and often promotes a "pushing through" attitude rather than acknowledging and regulating stress. Training processes commonly address logistics and protocol rather than emotional coping or psychological preparedness. Additionally, post-deployment recovery processes for crisis responders emphasize a return to duty. As a result, mental health needs remain unaddressed in the following deployments. In this way, the sustainability of crisis response depends not only on systems and strategies but on the endurance of those entrusted to carry them out.

The purpose of this study is to assess the psychological challenges faced by crisis responders and examine how psychological concepts can be integrated into crisis response systems. In addition, this study aims to understand how respondents personally perceive and experience the role of psychology in the field. This includes its relevance, applicability, impact, or absence. This study also seeks to identify strategies to enhance crisis response for responders as well as the community that they serve. Insights from this study can inform training processes, procedures, and overarching organizational practices to better support responders. Integrating psychological considerations into disaster and emergency management is necessary to support responders and improve overall crisis response effectiveness.

Thesis Statement and Research Questions

Integrating psychological concepts into disaster and emergency management is necessary to support crisis responders and improve overall crisis response. Disaster and emergency responders are frequently subject to traumatic experiences, physical and emotional exhaustion, high-stakes situations, and significant occupational stress which can impose psychological tolls on responders. These tolls, however, are often overlooked, and as a result disaster and emergency management teams are vulnerable to various mental health issues. Therefore, a stance can be taken in support of integrating psychological insights into crisis response not only to purpose of improving the well-being of first responders but also to strengthen emergency response efforts and crisis recovery. Drawing from interdisciplinary studies and cross-disciplinary work in disaster management, emergency management, and psychology, advocacy for necessary psychological perspectives and mental health professionals could ensure that care is embedded proactively within response

systems. Analysis of these data suggests that a psychological approach in these fields is critical to establishing and maintaining success and sustainability in crisis response. Arguably, the five branches of psychology that would most benefit crisis response are industrial organizational psychology, trauma psychology, clinical psychology, social psychology, and health psychology.

Research Questions:

The study addresses the following set of research questions in order to understand the exploration of psychological support for crisis responders.

Primary Research Question:

1. What branches of psychology can best assist those in crisis response?

Supporting Research Questions:

2. How can crisis responders receive adequate psychological care amid an emergency or a disaster?
3. What are the most prevalent needs, according to crisis responders within the field?
4. What could be the negative effects or consequences if these needs are left unmet?
5. What psychological support systems should be set up for crisis responders post-disaster and how can they positively impact them?
6. How can we prevent burnout and/or compassion fatigue within crisis responders?

CHAPTER II: LITERATURE REVIEW

What is crisis response?

To understand what a crisis response is, one must first understand what would be characterized as a crisis. A crisis is defined as a situation that is a disruptive and urgent event that exceeds the normal operational capacity of a system and requires an immediate and coordinated response (Federal Emergency Management Agency, 2024). This may involve a municipality calling upon a regional or state-level response agency, or a state requesting federal assistance or private-sector support. Examples of crises include natural disasters such as wildfires; public health crises such as the COVID-19 pandemic; human-caused or technological crises such as power grid collapses; and security-related crises such as terrorist attacks (Federal Emergency Management Agency, 2024). Response efforts and thus responders can be divided into the public and private sectors. Public sector crisis response is typically government-led and focuses on coordinating large-scale efforts to maintain public safety. Private sector response supports these efforts through logistical support, resources, and specialized services (Federal Emergency Management Agency, 2024).

What is the difference between a disaster and an emergency? While many might think emergency management and disaster management are interchangeable, these fields differ in nature. Before assessing the importance of psychology in these fields, it is critical to define the terms. Emergency management focuses on rapid response to threatening situations with the objective of saving lives and minimizing injuries to people or property (Federal Emergency Management Agency, 2024). Emergency management

focuses on elements such as terrorist attacks, chemical and substance spills, biological emergencies such as anthrax attacks, medical emergencies or incidents, fires, etc. In summary, it is an immediate response to a crisis and is short-term. In contrast, disaster management entails an overarching set of actions, including preparation, response, recovery, and mitigation. It is more extensive than a disaster itself (in terms of its processes) and is continuous until the mission is complete. Disaster management focuses on disasters such as hurricanes, pandemics, tornadoes, wildfires, etc. Hence, while both contribute to response and share similar elements, they differ in nature and scope. In essence, it is important to note that a large part of disaster management centers on four primary phases within a community: mitigation, preparedness, response, and recovery.

These are aligned with the national preparedness goal, which encompasses 32 core capabilities, as well as prevention, protection, mitigation, response, and recovery processes (Federal Emergency Management Agency, 2024).

While crises can take many forms, one example is a hurricane. Implementing building codes for hurricane-resistant structures would be an example of mitigation, which is a long-term strategy for risk reduction (Federal Emergency Management Agency, 2024).

Within the scope of this example, during the preparedness phase, training practices and hurricane simulation exercises are commonly conducted to improve performance. The preparedness phase also encompasses operational planning and logistical planning. This includes preparing facilities for first, emergency, and disaster responders, such as an Emergency Operations Center (EOC). An EOC is a singular place where members of all critical units within a community convene to

work together to more effectively respond to an emergency or disaster. This can also include preparing base camps for federal or national personnel (Federal Emergency Management Agency, 2020). Furthermore, this phase encompasses preparations regarding places of safety for citizens, such as shelters or Points of Distribution (POD) Centers (Federal Emergency Management Agency, 2024). Additionally, during this preparedness phase, logistics prepares transportation and communication modes to ensure inventory management systems are in place in the event of a predictable disaster. The third phase is response, centered on taking action within a community during a disaster to prevent loss of life and minimize damages. This, within the scope of the hurricane example, could encompass the distribution of food, water, and other resources at PODs, as well as debris clearance to reopen critical roadways for emergency access. . There are ongoing efforts to assist individuals in the midst of a crisis, conduct search and rescue and evacuation (as they are able), respond to emergencies within the disaster, such as fires, power lines down, responding to calls for service, dealing with hazardous spills or industry accidents, etc. Many may think that response to emergencies stalls during a disaster, but it is ongoing, which is one of the moments when crisis responders experience trauma themselves. In the fourth phase, recovery, those in disaster management assist in returning affected communities back to a state of stability by providing the necessary materials, assets, and personnel that are needed in order for the community to be proficient (Federal Emergency Management Agency, 2024).

Throughout these phases it is critical to understand the importance of administering psychological principles and care to those assisting communities in order to empower and enhance disaster management at its core, which is its personnel. Thus, the

integration of psychological concepts into disaster and emergency management is necessary for completely efficient and proficient crisis response.

The environment of crisis response

To best understand the crisis responder, it is important to understand the environment in which they operate. Throughout these phases, it is critical to understand the importance of applying psychological principles and care to those assisting communities to empower and enhance disaster management at its core: its personnel. The crisis response environment is often characterized by sustained psychological strain and repeated exposure to high-consequence events. Additionally, crisis scenarios produce traumatic incidents such as catastrophic events, death, and exposure to dead bodies or body parts, witnessing severely injured adults and children, and loss of colleagues can be the reality of many deployments for crisis responders (Centers for Disease Control and Prevention, 2024).

Furthermore, it is important to establish an understanding of living environments for a responder. Often housed in temporary, transportable, and austere conditions, many crisis response environments lack privacy and comfort. Military cots may be used as sleeping accommodations within austere environments, and Meals Ready To Go (MREs) may serve as a common food source for responders (Federal Emergency Management Agency, 2024).

Adhikari Baral and Bhagawati (2019) discuss the presence of post-traumatic stress disorder (PTSD) in survivors of the 2015 Nepal earthquake. A sample of 291 participants was recruited for a coping strategy assessment. The results of the study showed that around 24.1% of the sample population had PTSD. Within this percentage, there were higher rates in those who were injured due to the disaster,

the elderly, and females. The most frequently displayed coping mechanism among those who were sampled was noted to be active coping. However, those who had PTSD displayed more passive coping mechanisms and of substance abuse. These factors can be argued to be needed for consideration for the survivor as well as the responder operating within these environments. This being due to the fact that while survivors and crisis responders experience disasters from differing roles, the psychological impacts of exposure to traumatic environments remain relevant across both populations. Additionally, it is important to note an intersection, this being that in some cases a responder can also be a survivor, who's home, community, and family can all be affected by the crisis, yet the responder must continue to operate within the profession effectively.

Sari (2024) provides a historical viewpoint and review of models and tactics used within disaster and emergency management since the twentieth century. Drawing from various forms of research articles, scholarly sources, and historical images relevant to the field, the review addresses multiple aspects of the profession, from public relations to operations to operational defense. Attention is given to the foundational works that have shaped contemporary practice, addressing the need for growth, and discussing the involvement of topics such as resilience.

Career-related stressors on the job

Brooks, Dunn, Amlôt, Greenberg, and Rubin (2016) discuss the social and occupational factors associated with psychological distress and disorder among disaster responders. This article addresses occupational and social elements that affect psychological responses to disasters. It analyzes the three phases of disaster and the observed correlated psychological reactions. These three phases are pre-disaster,

during-disaster, and post-disaster. Most responders are on stand-by, mobilized, or already deployed in pre-disaster times. During a disaster, responders are in the midst of the disaster, typically (but not always) deployed at a point of safety. Post-disaster responders stay to help with the inter-processes to which they are assigned. After the mission is complete, responders demobilize and go home. The strains of these phases, both physical and mental, were noted in this article to affect responders' physical and psychological health as well as personal lives.

The strains experienced across these phases are multifaceted, encompassing both operational and psychological demands. Responders frequently endure prolonged exposure to traumatic environments, extended work hours, sleep deprivation, and limited access to adequate nutrition and recovery (Brooks et al., 2016). During active deployments, these cumulative elements cause exposure to injury, loss of life, and environmental devastation can result in emotional and physical exhaustion as well as heightened acute stress responses. Over time, these conditions are associated with increased risk for adverse psychological outcomes. Some of which include but are not limited to post-traumatic stress disorder (PTSD), depression, burnout, anxiety, anxiety disorders, and emotional dysregulation. Beyond psychological effects, chronic physical

fatigue and insufficient recovery can impair immune functioning, which elevates risks for illness and can contribute to long term health complications (Brooks et al., 2016). Moreover, the duration as well as the intensity of deployments can often disrupt personal relationships compromising social and familial stability. This disruption, in turn, compounds stress and negatively impacts responder well-being (Brooks et al., 2016).

Training, duration of exposure, the elements faced in a disaster, and lack of social support are all factors considered to be stressors within the profession. Demirtaş and Altuntaş (2024) discuss approaches nursing management utilizes during disaster response. The authors found that nurses in Turkey felt that their performance was adequate; however, one primary concern was mutuality. This is that of under-preparedness in a state of disaster. Nurses demonstrated confidence in their core competencies, including their knowledge, abilities, skills, and other characteristics (KASO), but when elements they relied on to do their job were unavailable, or communications were down, their felt doubt and inadequacy. This research suggests that nurses too need to prepare for the specific types of challenges that might exist during disasters and that they experience stress as a result of these challenges and the limitations they present on their jobs.

Dong, Du, and Gardner (2020) reported on the challenges faced by crisis responders during the COVID-19 pandemic. Specifically, crisis responders noted that there was a lack of resources specific to this type of health crisis, particularly dealing with the contagion of the illness, and the space limitations experienced to accommodate

citizens. Occupational stress increased as the illness rapidly spread within communities and the inability to address challenges in a timely manner. Similar to the article by Demirtaş and Altuntaş (2024) providing crisis response of any kind creates occupational stressors when the resources needed are not available.

Impact of stress on the job

Jones (2017) explore physiological and psychological responses to chronic stress among emergency responders. Findings show that prolonged exposure to

disaster situations leads to elevated cortisol levels, disrupted sleep patterns, and an increased risk of cardiovascular problems. Responders reported heightened anxiety, irritability, and difficulty concentrating, all of which can impact decision-making during crises. The connection of physical and mental stress and the varying outcomes is directly to the efficiency and safety of crisis responders.

Stanley, Hom, and Joiner (2016) discuss mental health challenges faced by first and crisis responders, specifically regarding suicidal ideation. Through a systematic review, the article analyzes sixty-three articles related to risks and behaviors associated with suicide among police officers, firefighters, EMTs, and paramedics. Research evidence supported the claim that profession-related triggers and stressors have resulted in the elevation of psychological disorders and issues in first responders. One of these is depression, which can lead to suicidal ideation, suicide attempts, or suicide itself. This review highlights the KASO constructs of first responders, emergency responders, and those who work in disaster management. Furthermore, it addresses the correlation between mental health issues experienced by those in high-stress environments who are
tasked with responding to emergencies and the adverse effects if those issues are left untreated.

Van Reemst and Jongerling (2019) discuss first and emergency responders in the Netherlands participation data within surveys pertaining to three separate response occasions, each separated by a duration of six months. The findings suggested a relationship between workplace aggression and adverse emotional and behavioral responses among responders. These responses included heightened stress reactions and internalized strain. This was reported to affect the job performance of

responders and managers alike.

Recommendations on best supporting crisis responders

Benedek, Fullerton, and Ursano (2007) emphasize strategies to promote resilience and mitigate the negative mental health effects of disaster response. Recommendations include pre-deployment training on coping strategies, ongoing peer support, access to counseling resources, structured debriefing sessions, and post-deployment follow-up care. The importance of organizational commitment to psychological support is noted and emphasized. Furthermore, data reveal that proactive measures can reduce PTSD incidence, burnout, and absenteeism.

Robinson, Brooks, Fallon, Campodonico, and Liyanage (2018) examine psychological approaches that can be applied to improve disaster preparedness and response. It focuses on three stages: preparedness, immediate response (and response time), and long-term consequences. Within the article's research studies, four primary topics are introduced. The first centers are evacuation behaviors in populations affected

by natural disasters. This includes attitudes of cooperation, resistance, grief, anger, confusion, and vulnerability. The second and third research studies examine physical and psychological responses observed in simulations in which individuals responded to stimulated crisis instances. The fourth study centers on the response and long-term consequences of trauma exposure. This includes symptoms of Post Traumatic Stress Disorder (PTSD), other psychological disorders, or mental health issues. Part of the study centers on signs of post-traumatic growth and positive recovery processes in those who have experienced trauma.

Demirtaş and Altuntaş (2023) discuss approaches to nursing management and

competence in times of disaster. Researchers sent a survey study to five hundred and thirty Turkish nurses polling from March 2021 to April 2021. The results of these surveys denoted that nurses in Turkey felt that their performance was adequate; however, one primary concern centered upon perceptions of under-preparedness during disaster conditions. Nurses felt capable in their core KASO, but when elements they relied on to do their job were unavailable, or communications were down, their responses indicated feelings of doubt and inadequacy. The author's recommendations are immediate implementations of the involvement of nurses in disaster policies and planning procedures to address any proficiency barriers. Psychological studies were also recommended to better understand the nurse's needs amid response, recovery, and mitigation periods. This article reveals a the need for psychological development in multiple forms of emergency response and planning, including response teams that can have IMTs and nurses as a part of them or are led and operated by those in emergency management or transported by those in Logistics.

North and Pfefferbaum (2013) offer evidence-based guidelines for crisis responder support, including the implementation of mental health screening before, during, and after deployments. The authors advocate for resilience training, structured peer support programs, and rapid access to professional psychological services. The recommendations are grounded in research on disaster mental health and recognize the critical role of organizational policies in promoting responder well-being and operational performance.

Maunder et al. (2008) examine lessons learned from the SARS outbreak, focusing on psychological support for healthcare workers and crisis responders. The study identifies stress mitigation strategies such as clear communication from

leadership, flexible work scheduling, provision of practical resources (e.g., PPE), and formal mental health interventions. Results show that structured support reduces anxiety, absenteeism, and long-term psychological effects. This is directly applicable to disaster management personnel and first responders, highlighting that organizational support can significantly buffer the negative impacts of stress on performance and mental health.

Brooks et al. (2016) examine the mental health of those in disaster-related professions within disaster environments, discussing the negative long-term effects that may occur if mental health issues are left untreated, as well as post-disaster resilience that can be seen in those who are within these occupations. Research emphasizes the role of social support and its positive effects on those affected by natural or human-made disasters. However, the article notes that existing systems can be ineffective, stating that

only strong and stable support systems yield these results and positively affect workplace performance.

CHAPTER III: METHODOLOGY

Project Purpose and Research Questions

The purpose of this study was to examine the role of psychological support within crisis response with a focus on identifying relevant psychological frameworks and understanding responder needs in order to best evaluate effectiveness and gaps within current support systems. Supported by a series of research questions addressing the adequacy of care, organizational structure, responder needs, potential consequences of unmet needs, and strategies for prevention and deployment recovery, this study aimed to evaluate which branches of psychology were most applicable within the context of crisis response.

Participants

Participants were recruited through direct email outreach. A total of 46 recruitment emails were distributed to crisis response professionals working across both the public and private sectors. This consisted of 23 emails distributed to crisis response professionals within each respective sector. These emails explained the purpose of the study and invited voluntary participation. Of these 46 individuals, 15 were available and willing to complete an interview within the required timeframe for data collection. These participants were included in the study sample. Participants were selected based on availability, willingness to participate, and relevance to the field of crisis response.

Design

The data were gathered through semi-structured interviews and summarized through thematic analysis. This included an in-depth review of the interviews conducted to fully understand and interpret the participants' perspectives. Repeated phrases or topics were identified to establish relevant patterns within the data. Finally, these themes were organized to summarize the primary obstacles and potential needs regarding psychological intervention. All interviewees were audio recorded and transcribed to provide the most accurate accounts of the statements provided during the interviews. All interviewees were interviewed and recorded only with their given consent. A data coder system, Text Analyzer, traced and counted frequency of recurring words to support thematic analysis when examining commonalities across interviews. This was a software utility system that counted common phrases and word frequencies allowing for quantification of qualitative data and facilitating pattern recognition (Online Utility, 2020). Manual coding was applied to verify and support the accuracy of this analytical framework.

Credibility and Ethical Considerations

Ethical considerations were maintained throughout the interview process, and interviewees were informed of the purpose and intent of the study as well as their role within it. All interviewees' identifying information was stored in a locked cabinet, accessible only to the primary researcher.

CHAPTER IV: RESULTS

Part I: Demographic Characteristics of Participants

The participant group consisted of 15 crisis response professionals representing both the public (n=8) and the private (n=7) sectors. Participants varied in their areas of expertise and backgrounds, including those who currently work in logistics, finance, planning, and operations. Among the sample, three of the participants reported prior military service, and five of the participants reported having worked as first responders before switching to crisis response. One participant had previously worked at the Federal Bureau of Investigation (FBI). Years of experience ranged from 4 to 20 years, with 11 years the approximate mean. Participants were residents of Florida, Tennessee, and Virginia, though all participants interviewed reported having deployed to several locations across the United States. Additionally, one participant reported involvement in deploying for specialized global response missions.

Part II: Research Question Response themes

Results and Data Analysis

Analysis of the interview data revealed that the most commonly referenced experiences were fatigue, anxiety, and exhaustion. From the data, several key themes emerged across the interviews, reflecting participants' perceptions of psychological support, coping mechanisms, the need for psychological integration, and organizational culture within crisis response.

The first core theme derived from interview data is that some mental health resources exist but are underutilized and sometimes inaccessible. Five of fifteen participants, one-third of the interview sample, reported being unsure whether they identify any formal or informal support systems within their organization or network designed to assist crisis responders outside of peer support. With the exception of the five participants described above, responses indicated varying levels of familiarity with Employee Assistance Programs (EAPs) or other mental health resources within their employing organization. Only one of the fifteen participants had previously used these resources. Participant 6 noted that "During deployment, everyone's main goal is to get the job done and survive. I don't think many of us are checking in on how we feel; we just feel it." Across participants, however, it is important to note the relevance of peer support, as informal congregation and text threads with peers were described as the primary ways in which they shared experiences. Participant 8 noted that, "The people around you can be the difference between a good and bad deployment."

The second theme, derived from interview data, can be described as the stigma surrounding help-seeking. Across participants, there were perceived levels of stigma and professional norms that reported this stigma to be influential on discomfort levels when discussing mental health-related concerns with supervisors, peers, or support staff within their organization. Participant 4 stated, "In operations, I find that there is a culture around showing up and showing up at your best all the time. Anything might have people wondering if you're cut out for your job." Participant 15 also noted that in their experience of twenty years in the field of crisis

response, they felt as if, “Unless I know the person well, I wouldn’t talk with them about any mental health struggles. There are a lot of politics in play even when you are deployed, and anything you say can be used against you by those who might be vying for your spot.”

Additionally, another common theme can be described as burnout and psychological strain. This theme was noted across every participant, and very adamantly. Participant 2 noted that, “A lot of times, I say that when you are deployed it's like a hair on fire environment. Everyone’s rushing, and moving, and there are twelve different places you have to be all at once. I would say it was exhausting at the very least, but I love what I do.” When discussing how has your experience working in high-stress or emergency environments influenced your emotional well-being and psychological health, Participant 7 stated that they, “experience high levels of burnout following a deployment and it typically takes me a couple weeks to get back into the groove of normal life.” Furthermore, participants reported experiencing elevated levels of stress, anxiety, and depressive symptoms during and following a deployment. Participant 4 noted, “Oftentimes, even while on stand by prior to deploying, I experience anxiety. When you walk into a deployment, you never really know what you are going to get, so I suppose it really could be the fear of the unknown.” Three participants reported a pattern of compartmentalizing, or emotional numbing, to maintain functionality while meeting occupational demands.

Lastly, across participants, there were reports of exhibiting negative physiological responses commonly attributed to stress. Eight participants reported sleep deprivation, and all participants reported experiencing fatigue. Three participants described experiencing involuntary muscle activity, such as facial

twitching or bodily spasms, while deployed, which they attributed to physical exhaustion. Additionally, two participants reported gastrointestinal distress attributed to consumption of pre-packaged military-style rations, being the only readily available source of nourishment (Meals Ready to Eat, MREs).

Limitations

Several limitations were identified in this study. First, there was a limited research base regarding the psychological experiences of crisis responders, which restricted the availability of comparable literature for use or reference. Additionally, the sample size was small, which may limit the generalizability of the findings. Recruitment and access difficulties were also considered limitations, as the demanding and unpredictable nature of the profession can limit the number of individuals available to participate due to operational demands or deployments. Furthermore, self-report bias was present, as the interview data relied on self-reported information.

CHAPTER V: DISCUSSION AND CONCLUSION

Evaluating the Adequacy of Psychological Care During Crisis Response

Participant data, alongside a limited body of research on effective implementation strategies, may indicate a lack of consistency and formal integration of psychological support within crisis response systems. Furthermore, reported reliance on peer support can be argued to reveal both the strength of responders and the limitations of formal care. Suggesting that crisis responders' reliance on interpersonal dynamics could be partially due to attempts to compensate for structural gaps. Many participants reported to be unfamiliar with or non-engaging with formal psychological support resources. This can be attributed to several factors, such as barriers to access, inconsistency, or acceptability within crisis response environments.

For example, a crisis responder getting off of a twelve to sixteen-hour shift, who may be working every day on deployment for several weeks, may be physically exhausted and therefore less likely to engage with mental health resources available. Furthermore, these resources may become even less accessible to responders working night shifts, those stationed in isolated field locations or at Emergency Operations Centers (EOCs), or those engaged in roles that limit their ability to step away from operational duties. Thus, it can be argued that the issue extends beyond availability to the practical challenge of fostering environments that produce engagement from an exhausted responder population in a manner that is both feasible and compatible with operational responsibilities.

Psychological and Structural Needs of Crisis Responders

Accordingly, to successfully implement feasible and compatible strategies aligned with the responsibilities of crisis responders, it is essential to first establish the psychological and structural needs of crisis responders. These needs can be separated into the psychological needs of individual responders and the structural needs of crisis responders. Among the identified needs, accessible and realistic mental health support emerges as the primary concern, underlying the feasibility of all other forms of intervention. Other needs, such as normalization of help-seeking, opportunities for decompression, early intervention, and structured peer support, can be understood as components of a broader requirement for effectiveness that depends on the ability to be delivered in ways that are feasible within operational constraints.

While traditional models of psychological care can still be beneficial, they typically require time away from work-related responsibilities. This can be impractical in crisis response setting. This suggests a specific need for flexible mental health support. Alternative methods, such as mobile forms of mental health access that offer support through check-ins, text-based mental health support lines, or provide responders with easily accessible digital links to coping resources. Additionally, having a rotating mental health support team who shift between operational sites could increase accessibility. These teams could offer both digital and in-person mental health support and could be booked for varying durations, rotating across all operational hours.

Regarding structural needs, participant responses and relevant research indicate that organizational structures influence crisis responders' well-being. That said, it can be argued that the system itself needs to accommodate the psychological

needs of the crisis responder so the responder can continue to operate effectively within it. Extended shifts and continuous deployments need to be managed with the responder in mind, with consistent rest opportunities being maintained despite the condition of the crisis environment. Realistic implementation of this concept could include improving rest conditions within operational settings, such as providing adequate sleeping accommodations in EOCs beyond military-grade cots, while also increasing staffing levels where operationally feasible. In the event of limitations due to specialized roles, incorporating strategies such as role rotation or cross-training can be beneficial.

Furthermore, while it is important to note the unpredictability of the environment as a severe limitation on structural improvement and thus a barrier to meeting responders' needs, risk mitigation, rather than complete elimination, is an achievable goal in crisis-response environments. Another structural need lies in integrating mental health into daily operations, specifically regarding the discussion and consideration of responder burnout as well as compassion fatigue. Introducing mental health checks during briefings, shift transitions, and debriefings can incorporate support processes into daily operations. This approach can be seen as both supporting responders actively and normalizing engagement with mental health support and processes.

Post-Deployment and Pre-Deployment Support and Recovery Processes

The period following a deployment represents a critical phase of psychological recovery for the crisis responder. As responders reported having difficulty adjusting back from a high intensity environment, individual and organizational understanding of this reality is critical. The results indicate the

importance of approaching recovery as an essential part of the response process, rather than an optional stage in order to maintain responder overall well-being as well as long-term efficiency. It is important to note that within this phase, the scope of mental health support can be expanded as the reduced intensity of operational demands allows for a higher likelihood of engagement. Providing traditional forms of mental health support within this transition phase becomes more feasible, giving responders an outlet to discuss how deployments went and how they might have been affected by the things they experienced. Similarly, it can be argued that the pre-deployment phase is an underutilized opportunity for mental health support to expand through proactive and preparatory interventions that prepare responders for the demands of deployment. While experienced responders may be familiar with the demands of crisis response, pre-deployment support remains beneficial in reinforcing coping strategies, readiness mindsets, and mitigation for the cumulative effects of repeated exposure to high-stress environments.

Operational and Psychological Consequences of Unmet Needs

Repeated exposure to trauma and crisis conditions can have severe consequences, such as the development of mental health challenges, and may contribute to the development of mental health disorders. Operationally, these effects can manifest into increased likelihood of error, diminished team cohesion, and reduced efficiency, all of which can be detrimental in a crisis scenario. Furthermore, a negative consequence that can be argued to continue to present itself within the profession can be an increased risk of turnover. As responders experience burnout, their capacity to sustain long-term engagement may diminish, which can ultimately affect the sustainability of the response system as a whole.

Integrating Psychological Frameworks into Crisis Response Practice

The data suggest that, due to the complex nature and scope of stressors and the unique situations and scenarios crisis responders face, a single branch of psychology could not fully address the problems at hand. Instead, an integrated framework may be most beneficial given the multidimensional nature of these demands. These needs operate at multiple levels, including individual psychology, team psychology (whether IMTs or other groups), and organizational levels. Arguably, the five branches of psychology that would most benefit crisis response are industrial-organizational psychology, trauma psychology, clinical psychology, social psychology, and health psychology. These branches are proposed as complementary rather than mutually exclusive, with each addressing distinct but overlapping dimensions of responder need.

Industrial-organizational psychology could be used to address the organizational and structural aspects of crisis response systems. Industrial-organizational psychology focuses on human behavior within workplace settings, examining how structure, leadership, and workplace culture impact both performance and the overall well-being of employees. In the context of crisis response, industrial organizational psychology can be argued to be particularly relevant due to the defined chains of command within the field, as many disaster and emergency management systems are organized through tiered leadership structures. Additionally, team dynamics within disaster and emergency management are central to crisis response processes, as crisis responders must collaborate efficiently both within their own teams and across agencies.

Trauma and clinical psychology would be critical, considering the exposure

to traumatic events that crisis responders witness in their daily work. Trauma psychology is a subfield of psychology that focuses on an individual's response to and processing of traumatic experiences. Crisis responders regularly experience several layers of trauma. This begins directly through witnessing death and large-scale destruction, as well as a secondarily through absorption of the emotional impact of survivors' experiences. Additionally, cumulative trauma is important to consider due to repeated exposure to traumatic situations. Thus, trauma psychology would provide a framework for understanding the emotional, cognitive, and physiological responses to trauma experienced by crisis responders. Clinical psychology is a broader branch of psychology that focuses on identifying symptoms and addressing conditions through the assessment, diagnosis, and treatment of mental health disorders. Both pre- and post-deployment stress were reported by participants, as well as anxiety and depressive states. Additionally, the existing research regarding the mental health of crisis responders indicates a consistent presence of psychological disorders, further indicating that both trauma and clinical psychology would be essential for understanding and addressing the emotional and psychological responses resulting from repeated exposure to crisis situations.

Health psychology would also be essential, as it offers insights into the interaction between physical and mental health during crisis response processes. Participants reported several negative physiological responses commonly attributed to stress, suggesting the importance of addressing and incorporating health psychology perspectives into crisis response. The consistency of participant reports regarding fatigue demonstrates the normalization of exhaustion within the field of crisis response, which can be argued to be significant. Health psychology emphasizes

concepts such as sleep regulation, nutrition, and stress management. These concepts, when integrated into organizational and individual practices, could enhance overall responder well-being and operational effectiveness.

Social psychology provides framework for understanding team-level dynamics, particularly norms and interpersonal influences that can be relevant to crisis response. Social psychology studies how feelings and behaviors are influenced by the presence of others and focuses on social norms and group dynamics. Notably, participants described peers as important sources of support and individuals with whom conversations regarding mental health or check-ins occurred during or following deployments. This self-reported reliance can be argued to indicate group norms and team culture as important factors in how responders manage and perceive stress. Thus, integrating social psychology into crisis response is essential, as it enables both the identification and modification of group norms and works alongside existing social mechanisms of coping discussed by responders.

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APPENDIX A: INTERVIEW INSTRUMENT

The interview questions the participants answered were made up of the following questions.

1. Please describe your overall perceptions of the mental health services or psychological support resources available to you before, during, and following a crisis event.

2. What factors or circumstances do you believe may deter or delay crisis responders from accessing mental health or support services during or after a response?

3. How has your experience working in high-stress or emergency environments influenced your emotional well-being and psychological health?

4. In your view, what measures or improvements could be implemented to enhance the accessibility and effectiveness of psychological support for crisis response personnel?

5. Can you identify any formal or informal support systems within your organization or network that are designed to assist crisis responders? How frequently do you observe these being utilized?

6. How would you characterize the impact of repeated exposure to crisis situations on your psychological resilience? In your experience, how prevalent is burnout among crisis responders?

7. What coping mechanisms or psychological preparedness strategies were you trained in prior to your work in crisis response? How applicable or effective have these been in practice?

8. Can you recall a specific situation in which mental health support was either especially effective or notably absent during or after a response effort?

9. To what extent do you feel comfortable discussing mental health-related concerns with supervisors, peers, or support staff within your organization? What influences that level of comfort or discomfort?

10. From your perspective, what role should mental health education and emotional preparedness play in the training and ongoing development of crisis response professionals?

APPENDIX B: INFORMED CONSENT

Consent to Participate in Research

Study Title: Integrating Psychological Insights into Emergency and Disaster Management to Improve Crisis Response

Protocol Number:

Approval Date:

Principal Investigator: Mollie Bedwell, Undergraduate Researcher, Middle Tennessee State University

Faculty Advisor: Dr. Elizabeth Q. Wright, Department of Psychology, Middle Tennessee State University

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You are being asked to participate in a research project. The following information is provided to inform you about the project and your participation.

1. Purpose of the Study

The purpose of this study is to examine how psychological insights can be applied to enhance the effectiveness and well-being of individuals involved in crisis response.

2. Description of Procedures and Duration

If you agree to participate, you will complete a one-on-one interview lasting approximately 30 to 60 minutes. The interview will ask open-ended questions about your

personal and professional experiences in emergency or disaster response. With your permission, the interview may be audio-recorded for data analysis. After the interview, you will receive a list of mental health and support resources.

3. Compensation

There is no compensation for participation in this study.

Your Rights as a Participant

- Your participation is **voluntary**. You may **skip any questions** you do not wish to answer.

- You may **stop the interview at any time without penalty**.

- The risks of participation are minimal, but some questions may cause emotional discomfort.

- There are no direct benefits to you from participating, but your input may help improve crisis response strategies.

- Your responses will be kept confidential and will **not include any identifiable personal information** in any reports or publications.

- While every effort will be made to keep your information private, confidentiality cannot be guaranteed if disclosure is required by law (e.g., threats of harm to self or others).

- Your data may be reviewed by authorized personnel at MTSU or regulatory agencies as required by law or policy.

Contact Information

If you have questions about the study, please contact:

- **Principal Investigator:**

  Mollie Bedwell

  Email: mlb2ev@mtmail.mtsu.edu

  Phone: (615) 579-0915

- **Faculty Advisor:**

  Dr. Elizabeth Q. Wright

  Email: elizabeth.wright@mtsu.edu Phone:

  (615) 898-5935

If you have questions about your rights as a participant or concerns about the study, you may contact the MTSU Office of Research Compliance at (615) 494-8918 or email irb_information@mtsu.edu.

Consent to Participate

By marking "I consent to participate," you confirm that:

- You have read and understand the information provided above.
- You are at least 18 years old.
- You voluntarily agree to participate in this study.

[ ] I consent to participate [ ] I decline to participate

Thank you for considering participation in this research.

APPENDIX C: IRB APPROVAL

Date: September 16, 2025 PI:

Mollie Bedwell

Department: Middle Tennessee State University, Criminal Justice Adm

Co-PI: Elizabeth Wright

Department: Middle Tennessee State University, Criminal Justice Adm Re:

Initial - IRB-FY2025-276

Applying Psychological Insights Into Emergency and Disaster Management In Order to Improve Crisis Response

The Middle Tennessee State University Institutional Review Board has reviewed and approved by Expedited Review the above-referenced research study. The approval is effective starting September 16, 2025.

Decision: Approved

Research Category:

6. Collection of data from voice, video, digital, or image recordings made for research purposes.

7. Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research

employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies. (NOTE: Some research in this category may be exempt from the HHS regulations for the protection of human subjects. 45 CFR46.101(b)(2) and (b)(3). This listing refers only to research that is not exempt.)

The following applies to your approved study:

1. In accordance with 45 CFR 46.110 and the regulations for Expedited Review (Common Rule), this project does not expire, and continuing review is not required by the IRB.
2. Any unanticipated harm to participants or adverse events must be reported to the Office of Compliance.
3. All modifications to the approved study must be submitted for review through Cayuse IRB for approval before their implementation. Adding new researchers constitutes a modification to the protocol. Per MTSU Policy, a researcher is defined as anyone who handles the data or interacts with participants. Everyone meeting this definition for this project must have completed the required CITI training and received IRB approval prior to becoming actively involved in the project.
4. Closure of the study must be submitted within Cayuse when the study ends or when personal identifiers are removed from the data and all codes and keys are destroyed.
5. Federal regulations require human subjects' records to be retained for at least 3

years after completion of the research. Once de-identified, the data can be kept longer for further analysis.

6. If your research is funded by a sponsor, they may have specific data retention policies that supersede the standard IRB guidelines.
7. If your study involves protected health information (PHI), you must adhere to HIPAA regulations when storing and destroying data.
8. Data should be destroyed using a secure method that permanently erases information. Keep a record of when and how research data were destroyed.

Sincerely,
Middle Tennessee State University Institutional Review Board