Merely Mortal: A Quantitative Examination of the Dehumanization of First Responders

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ABSTRACT
MERELY MORTAL: A QUANTITATIVE EXAMINATION OF THE DEHUMANIZATION OF FIRST RESPONDERS

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Northern Illinois University, 2022
Suzanne Degges-White, Director

Background: While understaffing and work-related stress are not unusual within first responder professions, the past few years have added additional strain. COVID-19, political and civil unrest, and economic downturn have stretched the first responder workforce thinner than ever, contributing to a reduction in the workforce through death, early retirement, attrition, or decreased vocational effectiveness. Unfortunately, public stereotypes coupled with the tenets of first responder culture have done little to support those who serve. Public perception often involves polarized stereotypes about first responders (e.g., good guys or bad guys, heroes or villains), and first responder culture encourages a machine-like demeanor. The imagery of heroes, villains, and machines is indicative of dehumanization, or denial of some aspect(s) of humanity. The purpose of this study was to examine how first responders’ perceptions of dehumanization (meta-dehumanization) relate to workforce threats including suicidality, burnout, and decreased self-efficacy.

Methodology: A total of 211 first responders from the US and Canada participated in this study by completing two measures of meta-dehumanization, the Suicide Behaviors Questionnaire-Revised, the Burnout subscale of the Professional Quality of Life Scale, and the General Self-Efficacy Scale. Analyses included Pearson product-moment correlation, ANOVAs, and hierarchical regression analyses.
Results: Statistically significant relationships were found between meta-dehumanization for each of the three workforce threats when controlling for time in the profession. Results from ancillary analyses indicate that these relationships continued to be statistically significant even after controlling for country of residence (US or Canada).
MERELY MORTAL: A QUANTITATIVE EXAMINATION OF THE DEHUMANIZATION OF FIRST RESPONDERS

BY

KARI M. MIKA-LUDE
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A DISSERTATION SUBMITTED TO THE GRADUATE SCHOOL
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE
DOCTOR OF PHILOSOPHY

DEPARTMENT OF COUNSELING AND HIGHER EDUCATION

Doctoral Director:
Suzanne Degges-White
ACKNOWLEDGEMENTS

First and foremost, I want to acknowledge that this study exists because of my husband, Allen. He is a firefighter/EMT whose career was interrupted by PTSD in the late 1990s. He was a 21-year-old volunteer at the time and was first on scene to a fatal, single-vehicle wreck in his hometown, and the driver was severely injured to the point of being unrecognizable. Allen did everything he could based on his training and experience, but the driver did not survive. As he began to fill out the necessary paperwork, he took the driver’s license from the man’s wallet, only to find that the deceased driver was a member of his family.

Unfortunately, no one acknowledged what Allen had been through. He was left to process the trauma of that call alone, and not surprisingly, PTSD set in. In less than a year, he left the fire service. It was not until years later, around 2014, that he finally started to open up about his “last call” and how it had been affecting him all those years. With some encouragement, he finally agreed to seek treatment and was able to gain peace. He was eventually able to re-enter the first responder domain as a full-time EMT, and together we have advocated with first responder organizations throughout the state of West Virginia to develop policies and procedures that destigmatize mental health concerns, promote help seeking, and cultivate trauma-informed workplaces. I consider this dissertation to be an extension of those efforts, inspired by Allen’s experiences, and it is for that reason that it is very close to my heart.

When completing a dissertation, however, inspiration is not enough; I could not have made it to this point without the tremendous amount of support I received. My husband, of course, has been there every step of the way, sharing in my celebrations and offering hugs and
encouragement when I was struggling. Other family members and friends also rallied around me, giving me grace when I was not as present as I would have liked to be and even helping me recruit participants for the study. Most notably, my husband, my parents and stepmom, my private practice colleagues, and members of the Culloden Volunteer Fire Department not only shared recruitment information via social media but even took time out of their day to physically bring flyers to various places. For that, I am endlessly grateful.

In addition to all the support I received from family and friends, I also want to acknowledge the faculty here at NIU. Most importantly, I want to recognize my dissertation committee: Dr. Suzanne Degges-White (chair), Dr. Dana Isawi, and Dr. Melissa Fickling. I am deeply appreciative of Dr. Degges-White’s caring mentorship and of my committee’s encouragement, dedication, and guidance throughout this process. I am also incredibly grateful to Dr. Ismael Carreras and Dr. Thomas Smith of the Department of Educational Technology, Research, and Assessment, who helped me to understand (and even appreciate!) statistics. Finally, two other faculty members who were there at the beginning of my doctoral journey also deserve acknowledgement: Dr. Toni Tollerud and Dr. Jane Rheineck. I am so glad to have had the opportunity to learn from them.

I also could not have made it through this program without the strength and support of my cohort(s), both beginning and end. I specifically want to acknowledge Dr. Suzy Wise, Dr. Lucy Parker, Adrienne Moody, Patrick McMillion, and Scott Adair Cox from my original cohort (2014-16) and future-Dr. Valerie Moreno-Tucker, future-Dr. Katie Rodenkirch, and future-Dr. Giselle Navarro from my current cohort (2020-present). Thank you, thank you, thank you.
Finally, I want to acknowledge that this study would not exist without the first responders who answered the call. I am humbled by the number of first responders across the US and Canada who took the time to participate in this study. Please know that I see you, I appreciate you, and I am grateful for your service.
DEDICATION

This dissertation is dedicated to my husband, Allen, who is my chief supporter and whose experiences inspired this work, and to all first responders who are committed to protecting the public. “Thank you” is simply not enough.
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CHAPTER 1

INTRODUCTION

It’s 0600 on a cold Sunday morning in December 2020. I’m seated in the back of a small, stuffy room with other members of the Critical Incident Stress Management (CISM) team, waiting for the debriefing to begin. There are six of us present: two firefighter/EMTs, a retired firefighter, a state trooper, a mental health professional, and me, a mental health professional/EMT. A young police officer was recently shot and killed in the line of duty here in West Virginia, and we’ve been called in to assist the officers who worked with her.

The room is gray and dimly lit. Rows of plastic folding tables line the width of the space, and there is a chalkboard and podium at the front. The atmosphere is quiet and tense, and at least a dozen uniformed police officers are seated at the tables, looking expectantly toward the front of the room. They are geared up to begin their shift, complete with bullet-proof vests that look terribly uncomfortable, and their faces are drawn and weary. The emotional exhaustion is palpable, albeit unspoken.

At the front of the room stands one of our team members, a firefighter/EMT, who will be facilitating the debriefing. He clears his throat and begins with an overview of CISM, why we are here, and what we do. He explains the process of critical incident stress debriefings and then opens the floor for the officers. Although everyone is attentive, nobody speaks. After several moments of uneasy silence, he empathizes with the difficulty of talking about feelings and
struggles, stating, “It’s hard to talk about. We’re supposed to be the ones with the capes on our back and the S on our chest. I get it.”

Introduction to the Problem

First responders are those who are the first to provide care or assistance during emergency situations (Benincasa et al., 2022; Meckes et al., 2021; Rodriguez et al., 2016), including fire service, emergency medical services (EMS), law enforcement, emergency department (e.g., physicians, nurses), 911/dispatch, search-and-rescue, and National Guard personnel (Arble et al., 2018; Pietrantoni & Prati, 2008). They represent important pieces of the public safety puzzle, fighting fire, upholding laws, safeguarding citizens, and providing emergency medical care, all while sacrificing time and well-being (Bochantin et al., 2020; Howard & Navega, 2018; Johnson et al., 2020; Lewis-Schroeder et al., 2018; McCaslin et al., 2009). Although specific job tasks and levels of exposure to emergency situations may differ, all first responder groups face numerous high-stakes stressors on a regular basis (Arble et al., 2018; Benincasa et al., 2022; Schafer et al., 2015), including repeated exposure to trauma (Burnett & Wahl, 2015; Greinacher et al., 2019; Horan et al., 2021; Pierce & Lilly, 2012). This makes them susceptible to burnout as well as mental health concerns like depression, anxiety, substance use disorders, and PTSD, all of which are correlated with suicidality (Arbona & Schwartz, 2016; Boffa et al., 2018; Bond & Anestis, 2021; Chopko et al., 2014; Stanley et al., 2015; SAMHSA, 2018; Wagner et al., 2010; Wagner & O’Neill, 2012).

---

1 This scenario is a true-life experience. It is being shared here because it highlights the reality of what it is like to be a first responder, including the pressure to be super human (a form of dehumanization).
The past few years have added additional strain. COVID-19, political and civil unrest, and economic downturn have stretched the first responder workforce thinner than ever. Fire, EMS, law enforcement, and healthcare agencies alike are facing severe staffing shortages, causing delays in emergency care (Casto, 2022; Fitzgerald, 2021; Kath & Solowski, 2022; Quinton, 2021; Stamp, 2022). In addition to those leaving the workforce, fewer are stepping up to take their place (DeStefano, 2020; PERF, 2021). Even when new recruits are available, onboarding them demands time, money, and other resources that are already in short supply (Bethea et al., 2020). Because having too few first responders on duty inevitably affects public safety (Bethea et al., 2020), it is crucial to examine and better understand issues that may be detracting from the workforce. Workforce threats are variables that contribute to reduction in the first responder workforce, whether through death, early retirement, attrition, or decreased vocational effectiveness. In particular, this study focuses on workforce threats including suicide, burnout, and decreased self-efficacy.

**Workforce Threats**

While understaffing is not at all a new phenomenon within first responder professions, recent increases in suicide, early retirement, and attrition have made the situation worse (Benincasa et al., 2022; Gagliano, 2021; Gerrish, 2020; Legg & Macbride, 2020; Lutz, 2021; Tiesman et al., 2021). Suicides have outnumbered line-of-duty deaths (LODDs) over the past several years (Gerrish, 2020; Heyman et al., 2018; Horan et al., 2021; Kam, 2021), and burnout and demoralization, which is significantly related to self-efficacy (Li et al., 2020), have
contributed to early retirements, attrition, and decreased vocational effectiveness (Bethea et al., 2020; Howard & Navega, 2018; Maslach et al., 2001). People have been leaving the workforce in record numbers (DeStefano, 2020; McCausland, 2021; Nardi, 2021; Pascucci, 2022; Westervelt, 2021), and those who remain are at even higher risk of burnout and mental health concerns than they were before due to severe understaffing and, therefore, excessive workload (Casto, 2022; Kam, 2021; Nelson, 2021; Page, 2021; Phillips, 2020). Thus, suicidality, burnout, and decreased self-efficacy threaten an already depleted workforce (Bethea et al., 2020).

Suicidality

Suicidality refers to the presence of suicidal ideation, intent, or plan (APA, n.d.). Suicide is an all-too-common occurrence among first responders, to the point of exceeding LODDs. Specifically, in 2017, 103 fire/EMS personnel and 140 police officers died by suicide in comparison to 93 fire/EMS personnel and 129 police officers who died in the line of duty that same year (Heyman et al., 2018). Suicide numbers have only continued to increase (Gerrish, 2020), with suicides continuing to outnumber LODDs in 2018, 2019, 2020, and 2021 (Fahy & Petrillo, 2021; Kam, 2021; Perine, 2021; Shannon, 2020). Thus, suicide is a greater risk than these already dangerous professions (Martin et al., 2017).
Another threat to the first responder workforce is burnout, which is “a prolonged response to chronic emotional and interpersonal stressors on the job” (Maslach et al., 2001, p. 397). Of all helping professionals, first responders are some of the most vulnerable to burnout (Bagherian & Hosseini, 2019; Benincasa et al., 2022; Makara-Studzińska et al., 2020; Reardon et al., 2020). It can contribute to feelings of hopelessness, difficulties navigating work demands or performing job duties, and feeling as though one’s efforts do not make a difference (Pike et al., 2019). Its components include exhaustion, cynicism, and reduced professional efficacy (Maslach et al., 2001; Moriano et al., 2021; Reardon et al., 2020; Stanetić & Tešanović, 2013). Kirschman (2021) described burnout among first responders as “a state of apathy in which [first responders] protect themselves against the stress by adopting an uncaring attitude” (p. 107). This latter definition is also consistent with the concept of defensive dehumanization, in which helping professionals engage in “subtle dehumanization” of those they are helping in order to stave off compassion fatigue or vicarious traumatization and continue working effectively (Vaes & Muratore, 2013). As a workforce threat, burnout has significant consequences in terms of job performance. These include, but are not limited to, absenteeism, turnover, decreased productivity and effectiveness, impaired judgment, and increased likelihood of accidents (Bagherian & Hosseini, 2019; Bethea et al., 2020; Reardon et al., 2020; Yao et al., 2018).
Self-Efficacy

Finally, self-efficacy refers to the extent to which an individual believes that they can be successful in performing a task (Bandura, 1977). In general, an individual is more likely to persist in a task if they believe they can successfully complete it (i.e., high self-efficacy) and less likely to persist in completing a task if they do not believe they can successfully complete it (i.e., low self-efficacy). Self-efficacy also has important implications as a possible workforce threat. A number of studies have documented a link between self-efficacy and job performance, job satisfaction, workplace well-being, and employee turnover (e.g., DeSimone et al., 2018; Lai & Chen, 2012; McNatt & Judge, 2008).

Background and Contextual Framework

Unfortunately, public stereotypes coupled with the tenets of first responder culture have done little to support those who serve. Although public perception can and does fluctuate, there seems to be a tendency toward polarized stereotypes regarding first responders (Kirschman, 2021); they are either good guys or bad guys, heroes or villains. Additionally, first responder culture emphasizes toughness, vigilance, and stoicism, essentially encouraging a machine-like demeanor, shutting down emotions for the sake of the mission (Henderson et al., 2016; Kirschman, 2021; Rodriguez et al., 2016; Royle et al., 2009). While these cultural values are beneficial on the job, they are often incompatible with civilian life (the first responder’s life outside of work).
The imagery of heroes, villains, and machines is indicative of dehumanization. Essentially, dehumanization is the denial of some aspect(s) of humanity (Haslam, 2006; Haslam, 2014; Haslam et al., 2008; Haslam & Loughnan, 2014). The term can imply less than human (i.e., animalistic), inhuman (i.e., mechanistic), or more than human (i.e., which will be referred to as deistic in this manuscript). As will be elaborated on in Chapter 2, elements consistent with each of these can be found in both first responder culture and public stereotypes of first responders.

Problem Statement

Despite the wealth of literature focusing on dehumanization, few studies have focused on the perception of being dehumanized (i.e., meta-dehumanization; Kteily & Bruneau, 2017; Kteily et al., 2016; Sainz et al., 2021; Yang et al., 2015) and the experiences of those who have been dehumanized (Bastian & Haslam, 2011), and only one study was found that focused on the experiences of first responders being dehumanized. It was a study by Zlobina and Andujar (2021) that focused on the relationship between police officers’ experiences of meta-dehumanization and subsequent police violence during citizens’ protests. No other studies were found examining the experiences of other first responder groups. The sparse literature that was available outlined several consequences of dehumanization, including increased risk of victimization (Ellawala, 2016; Haslam & Loughnan, 2014; Reinka & Leach, 2017; Zlobina & Andujar, 2021); higher tendency to dehumanize others (Kteily et al., 2016; Sainz et al., 2021); negative evaluation of the self (Bastian & Haslam, 2011; Kteily et al., 2016), which could have implications for self-efficacy; cognitive and emotional effects, including decreased subjective
well-being (Bastian & Crimston, 2014; Bastian & Haslam, 2011; Sainz et al., 2021), which could have implications for suicidality; and behavioral reactions such as avoidance, dishonesty, and unethical/immoral behavior (Bastian & Haslam, 2011; Kouchaki et al., 2018). Particularly concerning for first responders would be decreased care and concern for others (Bastian & Crimston, 2014), which impacts public safety and is also indicative of burnout (Kirschman, 2021). Taken together, it seems that dehumanization may contribute to elements that threaten the first responder workforce, including suicidality, burnout, and self-efficacy. Indeed, there are studies linking dehumanization to each of these constructs in other populations (e.g., Caesens et al., 2017; Fontesse et al., 2021; Hagerty & Williams, 2022; Moriano et al., 2021; Nguyen & Stinglhamber, 2018). However, an extensive review of the literature yielded no results on the effects of meta-dehumanization in relation to workforce threats among first responders. This study seeks to bridge that gap.

Purpose Statement, Research Questions, and Hypotheses

Thus, the purpose of this quantitative study is to examine how first responders’ experiences of meta-dehumanization relate to workforce threats including suicidality, burnout, and decreased self-efficacy when controlling for time in their profession. Meta-dehumanization will be measured using two different instruments to capture meta-dehumanization as it relates to both public opinion and organizational culture, hereinafter referred to as “meta-dehumanization” and “organizational meta-dehumanization” or consolidated into “perceptions of dehumanization.” Time in the profession is relevant because several studies (e.g., Makara-Studzińska et al., 2020; Reardon et al., 2020; Regehr et al., 2003; Testoni et al., 2020; Witczak-Błoszyk et al., 2022; Yao
et al., 2018) showed correlations between time in the profession and the workforce threats being examined in this study. Some specific examples include findings indicating that greater time in the profession was correlated with increased burnout and decreased self-efficacy in first responders (Makara-Studzińska et al., 2020; Reardon et al., 2020; Regehr et al., 2003; Stanetić & Tešanović, 2013). Consequently, in an effort to distinguish the effect of dehumanization on workforce threats, statistical methods were utilized to control for time in the profession.

Therefore, the research questions are:

1. What is the relationship between meta-dehumanization and organizational meta-dehumanization among first responders?

2. What is the relationship between first responders’ perceptions of dehumanization and time in the profession?

3. How do perceptions of dehumanization relate to (a) suicidality, (b) burnout, and (c) self-efficacy when controlling for time in the profession?

The first two questions are foundational, seeking to examine (1) the relationship between the measures of meta-dehumanization among first responders and (2) the relationship between the measures of meta-dehumanization and time in the profession. The subsequent research questions represent the main focus of this study: to examine how, when controlling for time in the profession, the measures of meta-dehumanization relate to suicidality, burnout, and self-efficacy for first responders. The corresponding hypotheses are as follows:

1. There is a significant and positive correlation between meta-dehumanization and organizational meta-dehumanization among first responders.
2. There is a significant and positive correlation between first responders’ perceptions of dehumanization and time in the profession.

3a. There is a significant and positive correlation between perceptions of dehumanization and levels of suicidality among first responders.

3b. There is a significant and positive correlation between perceptions of dehumanization and levels of burnout among first responders.

3c. There is a significant and negative correlation between perceptions of dehumanization and levels of self-efficacy among first responders.

**Brief Overview of the Study Design**

Because the purpose of this study is to examine the relationship(s) between meta-dehumanization, organizational meta-dehumanization, suicidality, burnout, self-efficacy, and time in the profession among first responders, a correlational research design is appropriate (Creswell & Guetterman, 2019). Multiple variables (i.e., two measures of meta-dehumanization as well as suicidality, burnout, and general self-efficacy) will be assessed at one point in time from a single group of participants. Information about time in the profession will also be gathered through a demographic survey.

Data will be analyzed using several statistical methods. First, the Pearson correlation coefficient will be utilized to determine the relationship between meta-dehumanization and organizational meta-dehumanization among first responders. Second, to assess the relationship between first responders’ perceptions of dehumanization and time in the profession, analysis of variance (ANOVA) will be conducted. Finally, hierarchical regression will be used to examine
the relationship between perceptions of dehumanization and suicidality, burnout, and self-efficacy while controlling for time in the profession. These will be outlined in greater detail in Chapter 3.

Need for the Study: Potential Significance for the Counseling Profession

Counselors and counselor educators are in a unique position to support first responders on multiple levels, from individual to systemic. However, they must first be adequately prepared to do so (Kirschman et al., 2014). First responders are an underserved population, just like the military (Lanza et al., 2018). Although there are many mental health professionals willing to work with military clients, for instance, only 13% are actually qualified to do so (SBHP, 2021) in terms of training, education, and multicultural competence. Given the similarities between military culture and first responder culture (Henderson et al., 2016), which will be outlined later, this lack of preparation is likely to affect first responders, as well (Kirschman, 2021).

This study seeks to add to the existing knowledge base about first responders by examining how their perceptions of dehumanization may contribute to suicidality, burnout, and decreased self-efficacy and, ultimately, a diminished workforce. Indirectly, it also explores some of the sources of dehumanization, including public stereotypes and first responder culture/organizations. Ideally, such information will help the counseling profession build capacity for addressing such issues within the counseling milieu (individual and microsystem levels), identifying additional and ongoing research opportunities for continuing to expand the knowledge base (mesosystem level), incorporating information about first responders and first responder culture into counselor education curricula (mesosystem and exosystem levels), and
pinpointing opportunities to advocate for and with this underserved population within their workplaces and society at large (exosystem and macrosystem levels).

Key Concepts

**Burnout.** Burnout is defined as “a prolonged response to chronic emotional and interpersonal stressors on the job” (Maslach et al., 2001, p. 397). Its components include exhaustion, cynicism, and reduced professional efficacy (Maslach et al., 2001).

**Dehumanization.** Dehumanization is defined as “address[ing] or portray[ing] someone in a way that obscures or demeans that person’s humanity or individuality.” Haslam (2014) argued for an inclusive understanding of dehumanization characterized by “denials of humanness – however mild, commonplace, or subtle” (p. 35). Additionally, Hodson et al. (2014) suggested that the term “dehumanization” can imply both *less than human* (i.e., inhuman, subhuman, or nonhuman) and *more than human* (i.e., suprahuman).

In 2006, Haslam proposed a model of dehumanization that built on previous research to clarify what exactly is denied to the dehumanized: human uniqueness and human nature. He asserted that people or groups are dehumanized in one of two ways: (1) animalistic and (2) mechanistic. In 2008, Haslam and colleagues expanded on that to include comparisons to “supernatural beings.” To keep with the alliteration of animalistic and mechanistic, this will be referred to as *deistic dehumanization*.

**Animalistic Dehumanization.** According to Haslam (2006), animalistic dehumanization occurs when human uniqueness is denied.
Deistic Dehumanization. According to Haslam et al. (2008), deistic dehumanization is comparisons that are often considered to be positive, as the perceptions are generally favorable, centered around awe and admiration. However, this type of perception is, indeed, a form of dehumanization because “capabilities are exaggerated, [and there is] a failure to recognize the person’s fallibility, feelings, and desires” (Haslam et al., 2008, p. 257).

Mechanistic Dehumanization. According to Haslam (2006), mechanistic dehumanization occurs when human nature is denied.

First Responders. First responders are those who are the first to provide care or assistance during emergency situations (Benincasa et al, 2022; Meckes et al., 2021; Rodriguez et al., 2016), including fire service, emergency medical services (EMS), law enforcement, emergency department (e.g., physicians, nurses, technicians), 911/dispatch, search-and-rescue, and National Guard personnel (Arble et al., 2018; Meckes et al., 2021; Pietrantoni & Prati, 2008; Rodriguez et al., 2016).

Demographically, first responder professions in the US tend to be disproportionately male in comparison to the overall population of the US (Fahy et al., 2021; Schafer et al., 2015), with males representing between 67.3% and 95.2% of most first responder professions (Data USA, 2022a-d; Zippia, 2022a-e). The only outlier seems to be 911/dispatch, in which females represent up to 77.8% of the workforce (Zippia, 2022c). The majority of first responders in the US are also White, representing between 62.5% and 84.8% (Data USA, 2022a-d; Fahy et al., 2021; Schafer et al., 2015; Zippia, 2022a-e) and heterosexual/cisgender, representing between 93% and 95% (Zippia, 2022a-e). Between 10% and 25.2% of first responders in the US have also served in the military (Schafer et al., 2015).
**Meta-Dehumanization.** Meta-dehumanization refers to the degree to which one believes their group is denied humanity by others (Fontesse et al., 2021; Kteily & Bruneau, 2017; Kteily et al., 2016; Sainz et al., 2021; Yang et al., 2015).

**Organizational Meta-Dehumanization.** Organizational meta-dehumanization refers to the degree to which one believes they are dehumanized by an organization with which the individual is associated or employed (Caesens & Stinglhamber, 2019; Caesens et al., 2017).

**Perceptions of Dehumanization.** This term is being used to consolidate meta-dehumanization and organizational meta-dehumanization for conciseness.

**Self-Efficacy.** Self-efficacy refers to the extent to which an individual believes that they can be successful in performing a task (Bandura, 1977).

**Suicidality.** Suicidality is defined by the American Psychological Association (APA, n.d.) as “the risk of suicide, usually indicated by suicidal ideation or intent, especially as evident in the presence of a well-elaborated suicidal plan.” Using the Suicide Behaviors Questionnaire-Revised (SBQ-R; Osman et al., 2001), it will be measured based on four constructs: lifetime suicidal ideation and/or suicide attempt, frequency of suicidal ideation over the past 12 months, threat of suicide attempt, and self-reported likelihood of suicidal behavior in the future.

**Workforce Threats.** This term is being used to refer to variables that contribute to reduction in the first responder workforce, whether through death, early retirement, attrition, or decreased vocational effectiveness. In particular, this study will focus on workforce threats including suicidality, burnout, and decreased self-efficacy.
Organization of the Remainder of the Manuscript

This study focuses on the relationship between meta-dehumanization and workforce threats (i.e., suicidality, burnout, and decreased self-efficacy) for first responders. It will be guided by a theoretical model of dehumanization posited by Haslam (2006) and Haslam and colleagues (2008) as well as existential theory (Frankl, 1959; Tillich, 1952; Yalom, 1980). This chapter provided introductory information on first responder professions; the unique challenges faced by first responders, including the role of first responder culture and recent events like COVID-19 and political/civil unrest; workforce threats including suicidality, burnout, and decreased self-efficacy; and how first responders may be a dehumanized group. Chapter 2 will provide a thorough review of relevant literature to elaborate on the concepts introduced in Chapter 1. Chapter 3 will outline the research methodology that was used.
CHAPTER 2

LITERATURE REVIEW

sometimes the wolf cries girl
sometimes the hero stumbles
and falls right off the page,
sometimes the princess rolls her eyes
and says “i don’t want to be saved.”
sometimes the dragon needs rescuing
and the villain aches to be helped,
sometimes, in the darkness,
the lost boy finds himself.
sometimes the prince is cunning,
and not at all what he seemed,
sometimes the witch’s kindness
shows it’s she who deserves to be queen.
sometimes we shouldn’t define people
by someone else’s point of view –
just because it’s what we’ve been told,
doesn’t make it true.²

Introduction and Background

As introduced in Chapter 1, the main hypothesis of this study is that dehumanization may
be contributing to first responder workforce threats such as burnout, suicidality, and decreased
self-efficacy. This chapter establishes the foundation for that assertion and paves the way for the
current study. Chapter 2 will begin with background information about first responder life,
including first responder culture. It will then outline common challenges, mental health concerns,
and stereotypes faced by first responders and how recent events (e.g., COVID-19 and
political/civil unrest) have intensified them. Following that will be the theoretical/conceptual

framework, which draws connections between dehumanization and first responders when viewed through an existential lens, and then an introduction to the concept of meta-dehumanization. Chapter 2 closes with a summary of the relevance and importance of this information.

The past few years have been particularly trying for first responders in the US; a global pandemic, now stretching toward its fourth year, and political and civil unrest have pushed first responders to the limit (Kam, 2021; Kirschman, 2021; Stogner et al., 2020; Zolnikov & Furio, 2020b). People have been leaving the first responder workforce in record numbers (Casto, 2022; Fitzgerald, 2021; Powell, 2022; Westervelt, 2021), and those who remain are at even higher risk of burnout and mental health concerns than they were before due to severe understaffing and, subsequently, excessive workload (Cantzler, 2021; Gagliano, 2021; Phillips, 2020; Tiesman et al., 2021). Because having too few first responders on duty inevitably affects public safety (Bethea et al., 2020), it is crucial to examine and address issues that may be detracting from the workforce.

Unfortunately, from a mental healthcare perspective, first responders are an underserved population, just like the military (Lanza et al., 2018). For instance, although there are many mental health professionals willing to work with military clients, only 13% are actually qualified to do so (SBHP, 2021) in terms of training, education, and multicultural competence. Given the similarities between military culture and first responder culture (Henderson et al., 2016), which will be specified later in this chapter, this lack of preparation is likely to affect first responders, as well (Kirschman, 2021). The counseling profession, if adequately prepared, can be poised to better meet the mental health needs of first responders on multiple levels from individual (e.g., counseling) to systemic (e.g., community and legislative advocacy).
The term *first responders* encompasses an eclectic array of professionals who are among the first to provide aid during emergency situations (Meckes et al., 2021; Rodriguez et al., 2016). This umbrella term often includes fire service, emergency medical services (EMS), law enforcement, emergency department (e.g., physicians, nurses), 911/dispatch, search-and-rescue, and National Guard personnel (Arble et al., 2018; Benincasa et al., 2022; Pietrantoni & Prati, 2008). Although specific job tasks and levels of exposure to emergency situations may differ, all first responder groups face numerous high-stakes stressors on a regular basis (Arble et al., 2018; Benincasa, 2022). These include, but are not limited to, physical and emotional strain; threats to personal safety and health; witnessing injury, death, and destruction; encountering death and loss of friends and colleagues; organizational challenges like bureaucracy, politics, and inadequate resources; heavy responsibility to the community as well as fellow first responders; and fluctuating public opinion (Lewis-Schroeder et al., 2018; Lopes de Lyra et al., 2021; Regehr et al., 2003; Witzczak-Blöszyk et al., 2022). Work schedules are demanding, requiring shift work, nights/weekends/holidays, mandatory overtime, and on-call rotations (Bochantin et al., 2020; Kirschman, 2018; Schafer et al., 2015). These work conditions contribute to sleep deprivation (Kirschman, 2018) and, subsequently, self-medicating to either fall asleep or stay awake (Kirschman et al., 2014). Shifts are unpredictable, with abrupt changes of pace (Kirschman, 2021), and first responders confront traumatic situations on a near-daily basis, sometimes multiple times in a single shift (Greinacher et al., 2019; Makara-Studzińska et al.,...
Repeated exposure to trauma can leave a person much more vulnerable to mental health disorders (Arnold & Pinkston, 2014; Henderson et al., 2016; Kaplan et al., 2017; Meckes et al., 2021), as such experiences take not only a physical toll but also a psychological one, leading to decompensation (Everly & Mitchell, 2008).

**Mental Health Concerns**

It is not surprising, then, that a review of the literature demonstrates ample attention to the prevalence of mental health disorders among first responders. Even without the added pressure of a global pandemic (COVID-19), first responders experience high levels of burnout (Benincasa et al., 2022; Howard & Navega, 2018; Reardon et al., 2020; Witczak-Błoszyk et al., 2022). They also experience conditions like depression, anxiety, substance use disorders, and PTSD at higher rates than the civilian population (Austin-Ketch et al., 2012; Boffa et al., 2017; Obidoa et al., 2011; Stanley et al., 2016; Wagner et al., 2010), and such disorders are correlated with suicidality (Chopko et al., 2014; Henderson et al., 2016; Martin et al., 2017; SAMHSA, 2018; Stanley et al., 2018). There is also a condition known as emergency responders exhaustion syndrome (ERES), which is “a damaging combination of depression, isolation, exhaustion, anger, and poor coping” (Kirschman, 2021, p. 148) that is exacerbated by critical incidents (Kirschman, 2021). It is not a formal diagnosis but rather a framework developed for clinicians to help them grasp the most common symptoms experienced by first responders (Fay et al., n.d.). Indeed, the most common presenting concerns for first responders seeking mental healthcare include substance use disorders/addictions, depression, somatization, panic, trauma/hypervigilance, and suicidality (Kirschman et al., 2014).
The Role of First Responder Culture

Despite a clear need for mental healthcare, the norm in first responder culture has been to bury their feelings and act as if they are not affected by what they have witnessed or experienced (Johnson et al., 2020; Kirschman, 2021; Lanza et al., 2018; Royle et al., 2009). In fact, help-seeking is often considered a sign of weakness among first responders (Horan et al., 2021) due to the “Superman culture” inherent in first responder professions that stigmatizes showing emotions or asking for help (Kirschman, 2021). Paradoxically, although there is typically a team/no-one-left-behind approach prevalent in first responder professions, first responder culture is highly individualistic, with the tenets of first responder culture closely resembling military culture (Henderson et al., 2016). Military culture is strongly rooted in the warrior ethos, which is “the embodiment of the warrior spirit: tough-mindedness, tireless motivation, an unceasing vigilance, [and] a willingness to sacrifice one’s life… if necessary” (USAFA, n.d., p. 1). Comparable values become deeply ingrained in the identities of first responders (Horan et al., 2021; Kaplan et al., 2017; Kirschman, 2021).

On the job, these values are beneficial, allowing the first responder to run toward rather than away from danger (Kirschman, 2018, 2021) and defy natural survival/self-preservation instincts (Rodriguez et al., 2016). However, these values frequently become so ingrained as to become the first responder’s way of being (Kirschman, 2021), which can be incompatible with civilian life and cause an imbalance in family-work demands (Kirschman, 2018, 2021; Tiesman, 2021). Families of first responders often feel like they take second priority to the job (Kirschman, 2021), and first responders can experience a sense of disconnection from civilian
family members due to a lack of shared experiences (Kirschman et al., 2014). Nevertheless, the overwhelming sense of being needed makes it difficult for first responders to prioritize themselves or even their families over their responsibility to the community (Kirschman, 2021).

**How and Why They Do What They Do: Terror Management Theory**

Considering the dangers and the enormous personal sacrifices discussed to this point, it can be difficult for civilians to fathom how and why first responders do what they do on a daily basis. To further add to the enigma, first responder careers are generally not well paid (Rodriguez et al., 2016). The median annual salaries in the United States (based on 2020 wage data) were $65,540 for police, $52,500 for firefighters, and $36,650 for EMS (O*NET OnLine, n.d.). By comparison, the overall median income (based on 2020 data) was $67,521 (Shrider et al., 2021). In West Virginia, where I am located, which is the second-poorest state in the United States as of 2022 (World Population Review, n.d.), those medians dipped even lower to $45,630 for police, $36,300 for firefighters, and $28,600 for EMS (O*NET OnLine, n.d.) compared to an overall median income of $48,037 (United States Census Bureau, 2022).

While these comparisons may not seem significant, it is also important to keep in mind that first responders work significantly longer hours that the average worker (Schafer, 2015), which further contextualizes the income comparison. Additionally, depending on household size and other household income (if applicable), many first responders may be living at or near the threshold for poverty, per federal poverty measures (Office of the Assistant Secretary for Planning and Evaluation [ASPE], 2017). Then, of course, there are the volunteers that put their lives on the line for no financial compensation whatsoever (Fahy et al., 2021). All of this begs
the question: Given the dangers and the considerable personal sacrifices, coupled with the comparatively low compensation, how and why do they do it?

One particularly relevant attempt to address such a question is terror management theory (TMT). TMT was developed as an attempt to provide an explanation, particularly examining how and why people knowingly and even voluntarily engage in behaviors that threaten their existence or safety (Rodriguez et al., 2016). The tenets of TMT take into account the fact that death is an inevitable and ever-present threat, of which human beings are consciously aware. As death-avoiding creatures, this awareness creates the potential for intense anxiety/terror that must then be managed in order to preserve functioning (Greenberg & Arndt, 2012). TMT posits that this angst is managed by “sustaining faith in a view of the world [worldview] and oneself [self-esteem] that denies the precarious and transient nature of one’s own existence” (Greenberg & Arndt, 2012, p. 402). The worldview is the individual’s perceptions of the standards of the group (e.g., first responders) with which they identify, and self-esteem is the individual’s perception of whether they are living up to the standards implicit in this worldview. How those concepts fit together (or not) shapes an individual’s self-efficacy (Rodriguez et al., 2016).

Self-efficacy refers to the extent to which an individual believes that they can be successful in performing a task (Bandura, 1977). In general, an individual is more likely to persist in completing a task if they believe that they can (i.e., high self-efficacy) and less likely to persist in completing a task if they do not believe that they can (i.e., low self-efficacy). In this way, self-efficacy is linked to motivation (Bandura, 1977). It is also strongly negatively correlated with levels of distress (Regehr et al., 2003; Rodriguez et al., 2016). This relationship has important implications for first responders. For example, Pietrantoni and Prati (2008)
conducted a study with 961 first responders and found that higher levels of self-efficacy mitigated compassion fatigue and burnout and that self-esteem played a key role in the mental health and well-being of first responders. Ultimately, the relationship between self-efficacy and burnout is an adaptive process; the danger still exists, but the ability to deny or at least minimize it allows the first responder to continue to do the job (Kirschman, 2018). Failing to live up to the standards of the worldview, on the other hand, results in negative self-perceptions and decreased self-efficacy (Greenberg & Arndt, 2012).

For first responders, the prevailing worldview is that first responders are heroes who will sacrifice everything for complete strangers without fail, and that worldview is embedded into their training (Rodriguez et al., 2016).

The training that is inherent in the development of first responder careers helps to make this worldview a reality; these men and women become the heroes they have always heard about. The sense of self-efficacy as well as the self-esteem that is afforded by the worldview, the training, and enacting the hero lifestyle… will mitigate fear of death and serious injury and serve as a motivator to the behavioral choices of first responders when encountering crisis situations. (Rodriguez et al., 2016, p. 181)

In this way, then, the hero metaphor is constructive, drawing people to first responder professions and mollifying death anxiety to allow them to do their jobs. However, the hero illusions are not impenetrable; self-efficacy is subjective and, therefore, malleable (Greenberg & Arndt, 2012). It can be swayed by direct threats (e.g., encountering violence on the job), indirect threats (e.g., inability to help someone else), significant events, and public scrutiny (Kirschman, 2018). Furthermore, a chronically overwhelming and demanding work environment can contribute to exhaustion, cynicism, and an eroded sense of effectiveness (Maslach et al., 2001). The paradox is that one of the most stressful parts of being a first responder is trying to hide the
mental and emotional effects of the job (Kirschman, 2018). First responders are indoctrinated to remain “in control” through intense situations without relying on others for help (Bochantin et al., 2020; Kirschman, 2021), and any vulnerability becomes equated with weakness (First Responders First, 2021; Henderson et al., 2016). They are taught that “losing control” can jeopardize both safety and career (Horan et al., 2021; Kirschman, 2018), and there has historically been a lack of genuine effort by leadership and the overall culture to reduce the stigma surrounding help seeking (Quevillon et al., 2016; Royle et al., 2009). For example, a needs assessment of the United States Fire Service conducted by the National Fire Protection Association (2021) found that 73% of fire departments in the United States do not have a behavioral health program in place. This lack of attention to mental health is not only harmful to first responders’ overall well-being but can also hinder their vocational functioning and, ultimately, public safety (Arble et al., 2018; Kaplan et al., 2017; Kirschman, 2018; Lanza et al., 2018).

Stereotypes and Public Perception: Paving the Way to Dehumanization

Thus, despite the high stakes, first responders are also less likely to seek professional help for mental health concerns. The reasons for this are threefold, the first two of which have been previously discussed: (1) systemic stigma, which is subsequently internalized; (2) fear of job discrimination and/or negative performance evaluation; and (3) the stereotype portraying first responders as superheroes without needs for care (Lanza et al., 2018). In my roles as a mental health professional specializing in working with first responders, the wife of a firefighter/EMT, and now an EMT myself, I have heard, seen, and felt firsthand what it means to be a first
responder. Reading Lanza et al.’s (2018) work, particularly about the superhero stereotype, prompted me to think about the effects of such stereotypes and the additional burden they place on the first responder. Kirschman (2021) described this as being “imprisoned by public perceptions” (p. 64).

The “tone” of such stereotypes does tend to differ between first responder groups. Stereotypes about firefighters, for example, tend to be much more positive than those about police officers. This is generally due to the types of interactions each group has with the public (Kirschman, 2021). However, it can also vary based on current events. For example, during times of economic hardship, the day-to-day activities of firefighters are often scrutinized and their value to the community questioned (Kirschman, 2021). A comparison between first responder groups is beyond the scope of this study; however, it is important to note that there does seem to be a tendency toward polarization in stereotypes about first responders and that such portrayals can fluctuate regardless of the specific profession.

The Impact of COVID-19 and Political/Civil Unrest

Aside from the abundance of usual stressors, the past few years have been especially difficult for first responders. In particular, 2020 brought about a global pandemic and tremendous political and civil unrest. As “essential workers,” first responders had to continue doing their jobs while others safely quarantined at home (Stogner et al., 2020), and the nature of their work often put them in close proximity with those infected with COVID-19 (Moakley & Kim, 2022; Zolnikov & Furio, 2020a). That level of exposure, coupled with the lack of reliable information early on (Kirschman, 2021), sparked fear and generated stigma toward first
responders within their own communities, leaving them feeling ostracized and unwelcome even in everyday places like grocery stores and gas stations (Zolnikov & Furio, 2020b). Furthermore, as the pandemic lingered on and many began to succumb to so-called “quarantine fatigue,” increasing community tensions and resistance to mask mandates and vaccines put additional pressure on first responders (Stogner et al., 2020).

Shortly after the pandemic began to rage in the US, the murder of George Floyd by then-police officer Derek Chauvin ignited a period of civil unrest and nationwide protests calling for reform. Indeed, Mr. Floyd’s murder was reprehensible and was representative of a much larger, deeply rooted problem: systemic racism (Ellawala, 2016; Reinka & Leach, 2017). It certainly cannot be ignored that Mr. Floyd is one of many people of color in the US who have died as a result of police misconduct and/or excessive force; others include, but are not limited to, Breonna Taylor, Eric Garner, Michael Brown, and Daunte Wright. This has, understandably, resulted in fear, outrage, and a lack of faith in the US legal system (Reinka & Leach, 2017).

Regrettably, many of the peaceful protests calling for much-needed reform wound up overshadowed by violent riots and a rise in anti-police rhetoric (Hutchinson, 2020; Maxwell, 2021). This produced sentiments such as FUCK THE POLICE and DEATH TO PIGS scrawled across buildings and police cars in spray paint (Zwadzich, 2020) and an increase in attacks on individual police officers, vehicles, and precincts across the country (Hutchinson, 2020; Kam, 2021; Page, 2021). This is consistent with findings of a study by Bastian and colleagues (2013) showing a link between moral outrage and the dehumanization of perpetrators. In this situation, individual police officers were reduced to a symbol of systemic racism, regardless of their own personal conduct or service record (Hetey & Eberhardt, 2014; Hutchinson, 2020; Kam, 2021;
Kirschman, 2021). This left many in law enforcement feeling that the public had turned against them (Kam, 2021) and that they were “under siege” (Hutchinson, 2020).

**Dire implications.** The combination of an already high-stress profession, the additional risks brought about by a global pandemic, and a sense of community betrayal have taken their toll. Mental health problems, burnout, and suicide are on the rise (Dean, 2020; Gavin, 2020; Legg & Macbride, 2020; Nelson, 2021), all of which are detracting from the workforce. First responder agencies across the country are facing unprecedented staffing shortages due to increases in early retirement and resignations coupled with decreased funding and difficulties with recruitment. A special report released by the Police Executive Research Forum (PERF) in 2021, for example, showed a 45% increase in retirements, an 18% increase in resignations, and a 5% decrease in hiring in law enforcement in the United States in 2020-21 compared to the same time the previous year. Some parts of the country have been hit harder than others; the New York Police Department (NYPD), for example, saw a 72% increase in retirements in 2020 compared to 2019, leaving them with their lowest head count in ten years (DeStefano, 2020). Other first responder professions are not faring much better. There is a nationwide shortage of EMS professionals (Casto, 2022; Fitzgerald, 2021; McCausland, 2021) and firefighters (Pascucci, 2022; Powell, 2022; Quinton, 2021; Stamp, 2022), as well.

Conversely, though, it is also important to consider the condition of those who remain in first responder roles. Understaffing puts additional strain on a workforce already stretched thin (Cantzler, 2021; Casto, 2022). Morale is low and burnout is high (Deng & Lussenhop, 2020; Nardi, 2021; Page, 2021), which is a potentially dangerous combination for those charged with
keeping others safe. Burnout, for instance, is “a state of apathy in which [first responders] protect themselves against the stress by adopting an uncaring attitude” (Kirschman, 2021, p. 107). Based on that definition, burnout can compromise the first responder’s ability to effectively interact with and protect the public. Further, burnout can contribute to work avoidance and attrition (Bethea et al., 2020; Howard & Navega, 2018; Maslach et al., 2001), decreased self-efficacy (Makara-Studzińska et al., 2020; Pike et al., 2019; Reardon et al., 2020), and compromised public safety. One example of the ways in which this can occur is explained by general strain theory:

Just as general strain theory predicts that individuals placed under severe strain will respond with maladaptive coping mechanisms such as crime, [police] officers facing continued stress through repeated protests and potential viral exposure, coupled with serving in the low control environment that is characterized by rioting, may engage in maladaptive deviant behaviors in the form of police misconduct. (Stogner et al., 2020, p. 8)

In other words, there is the potential for this to become a vicious cycle of violence due to a phenomenon known as “reciprocal dehumanization” (Kteily & Bruneau, 2017), which will be discussed in more detail later. This is not to imply that police misconduct is ever acceptable, but it behooves us to acknowledge that pressure can lead to volatility. This is a critical issue not only for individual law enforcement officers and other first responders but also for public safety and the future of social justice reform (Kaplan et al., 2017; Kirschman, 2018; Moller & Deci, 2009). Overall, the literature suggests that not attending to the physical, emotional, and psychological needs of the helper is harmful not only to the helper but also to those they are charged with helping (Howard & Navega, 2018).

Workforce Threats
While understaffing and work-related stress are not unusual within first responder professions, the past few years have added additional strain. COVID-19, political and civil unrest, and economic downturn have stretched the first responder workforce thinner than ever. Fire, EMS, law enforcement, and healthcare agencies alike are facing severe staffing shortages, causing delays in emergency care (Kath & Solowski, 2022; Pascucci, 2022; PERF, 2021). Having too few first responders on duty, and/or having first responders on duty who are not fit for duty, negatively affects public safety (Bethea et al., 2020). Therefore, it is important to address issues that may threaten the workforce. To reiterate from Chapter 1, workforce threats are variables that contribute to reduction in the first responder workforce, whether through death, early retirement, attrition, or decreased vocational effectiveness. This study specifically focuses on workforce threats including suicidality, burnout, and decreased self-efficacy.

**Suicidality**

Suicide is an intentional, self-inflicted death (CDC, 2022). It is a frequent occurrence among first responders; suicides have exceeded LODDs over the past several years (Heyman et al., 2018), which indicates that suicide is an even greater risk than these already dangerous professions. Suicide within the first responder community has reached epidemic proportions. Studies have consistently shown that first responders are more susceptible to suicidal ideation, suicide attempts, and death by suicide than the general population (Bond & Anestis, 2021; Stanley et al, 2016; Wolford-Clevenger et al., 2020). This finding is even more significant in light of the “healthy worker effect.” To become first responders, individuals must undergo
rigorous physical and mental screening, which results in a relatively healthy group of people. In that sense, even if suicide rates among first responders were comparable to the general public, such rates would be considered “de facto elevated… because one would expect lower rates among first responders than the general population” (Stanley et al., 2016, p. 27). In other words, because first responders are typically physically and psychologically healthier than the general population, even comparable suicide rates represent an elevation for first responders.

In addition to the elevated suicide rates among first responders as compared to the general population, it is also well documented that suicides have outnumbered line-of-duty deaths (LODDs) over the past several years. Specifically, in 2017, 103 fire/EMS personnel and 140 police officers died by suicide in comparison to 93 fire/EMS personnel and 129 police officers who died in the line of duty that same year (Heyman et al., 2018). Suicides have continued to increase (Gerrish, 2020), and suicides continued to outnumber LODDs in 2018, 2019, 2020 and 2021 (Fahy & Petrillo, 2021; Kam, 2021; Perine, 2021; Shannon, 2020). It is concerning enough that first responder suicides are consistently outnumbering LODDs, yet it is also important to note that first responder suicides tend to be underreported (Henderson et al., 2016; Horan et al., 2021; Kirschman, 2018, 2021; Tiesman et al., 2021) due to issues such as shame and stigma (Heyman et al., 2018; Kirschman et al., 2014). For example, it is estimated that only 40% of fire/EMS suicides are accurately reported (Heyman et al., 2018). This indicates that actual suicide rates are likely much higher. For other first responder groups, such as emergency department personnel or 911/dispatchers, a comparison of suicides with LODDs would not be appropriate, as LODDs are much less likely in such professions in contrast with law enforcement, fire, and EMS. Even so, such professions are still at greater risk of suicidal
ideation, suicide attempts, and death by suicide than the general public (Fitch & Marshall, 2019; Stehman et al., 2019). Given that suicide quite literally detracts from the workforce through death, suicidality, then – the presence of suicidal ideation, intent, or plan (APA, n.d.) – is a workforce threat.

**Burnout**

While suicidality very directly threatens and detracts from the workforce, other workforce threats may impact the workforce more circuitously. One example of this is burnout, which is a reaction that stems from chronic vocational stress (Maslach et al., 2001). It can contribute to feelings of hopelessness, difficulties navigating work demands or performing job duties, and feeling as though one’s efforts do not make a difference (Pike et al., 2019). Its components include exhaustion, cynicism, and reduced professional efficacy (Moriano et al., 2021; Reardon et al., 2020; Stanetić & Tešanović, 2013). Kirschman (2021) described burnout among first responders as “a state of apathy in which [first responders] protect themselves against the stress by adopting an uncaring attitude” (p. 107). This latter definition is also consistent with the concept of *defensive dehumanization*, in which helping professionals engage in “subtle dehumanization” of those they are helping in order to stave off compassion fatigue or vicarious traumatization and continue working effectively (Capozza et al., 2016; Deldago et al., 2021; Pereira-Lima & Loureiro, 2015; Testoni et al., 2020; Vaes & Muratore, 2013).

Of all helping professionals, first responders are some of the most vulnerable to burnout (Bagherian & Hosseini, 2019; Benincasa et al, 2022; Makara-Studzińska et al., 2020; Reardon et al., 2020). This is not surprising, given that first responder professions offer maximum workload
(Bochantin & Dickson, 2020; Kirschman, 2018, 2021; Schafer et al., 2015) and relatively minimal pay (O*NET OnLine, n.d.; Rodriguez et al., 2016). As outlined earlier, first responders often earn less than the overall median income, if they are paid at all; the fire service, for instance, relies heavily on volunteers (67% of all firefighters nationwide) for the provision of emergency services, particularly in rural areas (Evarts & Stein, 2020; Fahy et al., 2021). As previously discussed, the realities of these professions often include sleep deprivation, poor work-life balance, and frequent exposure to trauma (Greinacher et al., 2019; Lewis-Schroeder et al., 2018; Lopes de Lyra et al., 2021; Pierce & Lilly, 2012; Witczak-Błoszyk et al., 2022).

Furthermore, the events of the past few years have stretched the workforce thin, leaving first responders with sparse resources to do their jobs effectively (Benincasa et al., 2022; Cantzler, 2021; Casto, 2022; Fitzgerald, 2021), and COVID-related stigma as well as nationwide protests have left first responders feeling undervalued and lacking social/community support (Hutchinson, 2020; Stogner et al., 2020; Zolnikov & Furio, 2020a, 2020b). All these issues are known contributors to burnout (Bethea et al., 2020; Maslach et al., 2001; Moriano et al., 2021; Pietrantoni & Prati, 2008).

Burnout has significant consequences in terms of job performance, up to and including withdrawal (e.g., absenteeism, turnover; Bagherian & Hosseini, 2019; Bethea et al., 2020; Maslach et al., 2001; Reardon et al., 2020; Yao et al., 2018). In one study, for example, Freeman and colleagues (2009) found that burnout contributed to difficulties retaining EMTs in urban and rural settings. For those who do not leave their jobs, however, burnout can lead to decreased productivity and effectiveness, decreased job satisfaction and organizational commitment, impaired judgment, increased likelihood of accidents, declines in patient care, and increased
workplace conflict (Bethea et al., 2020; Maslach et al., 2001; Witczak-Błoszyk et al., 2022; Yao et al., 2018). None of these is desirable in professions that are, quite literally, life or death. We need people in first responder roles, but we also need them to be healthy and at their best; thus, burnout is a workforce threat.

**Self-Efficacy**

Like burnout, self-efficacy also has implications for work performance. Self-efficacy refers to the extent to which an individual believes that they can be successful in performing a task (Bandura, 1977). In general, an individual is more likely to persist in a task if they believe they can successfully complete it (i.e., high self-efficacy) and less likely to persist in completing a task if they do not believe they can successfully complete it (i.e., low self-efficacy). Higher levels of self-efficacy are positively correlated with well-being and negatively correlated with mental health disorders, compassion fatigue, and burnout in first responders (Makara-Studzińska et al., 2020; Pietrantoni & Prati, 2008; Regehr et al., 2003). Additionally, higher levels of self-efficacy among healthcare workers has been found to be positively associated with patient satisfaction (DeSimone et al., 2018).

Self-efficacy – specifically *diminished* or *compromised* self-efficacy – also has important implications as a possible workforce threat. A number of studies have documented a link between self-efficacy and job performance, job satisfaction, workplace well-being, and employee turnover (e.g., DeSimone et al., 2018; Lai & Chen, 2012; McNatt & Judge, 2008). As an example, a study of 194 nurses in southern Italy conducted by DeSimone and colleagues (2018) showed a positive correlation between self-efficacy, job satisfaction, and work engagement as
well as a negative correlation between self-efficacy and turnover. Another study, conducted by McNatt and Judge (2008) yielded similar outcomes among a sample of 71 financial accounting auditors. Thus, much like burnout, decreased self-efficacy is a workforce threat in that we need people in first responder roles, and we need them to be at their best.

Focus of This Study: Examining Dehumanization

Dehumanization is defined as “address[ing] or portray[ing] someone in a way that obscures or demeans that person’s humanity or individuality.” Haslam (2014) argued for an inclusive understanding of dehumanization characterized by “denials of humanness – however mild, commonplace, or subtle” (p. 35). Further, Hodson et al. (2014) suggested that the term “dehumanization” can imply both less than human (i.e., inhuman, subhuman, or nonhuman) and more than human (i.e., superhuman or suprahuman). Although it may be well intentioned, the term “hero” – especially superhero – implies superhuman capabilities without allowance for human vulnerability (Lanza et al., 2018); it conjures images of Superman or Wonder Woman in their capes and unintentionally deprives the first responder of humanness. It perpetuates the idea that the first responder must be able to be all things for all people at all times, without consideration of self. On the other hand, public opinion of first responders is not always positive (Kirschman, 2021). The murder of George Floyd by former police officer Derek Chauvin in May 2020, as discussed earlier, resulted in widespread vilification of law enforcement officers. Thus, whether favorable or unfavorable, there is an inherent tendency to dehumanize first responders; they are categorized as either heroes or villains, but certainly not mere mortals (Kirschman, 2021).
Theoretical Framework: Theoretical Model of Dehumanization

A great deal of research has been conducted on the concept of dehumanization, particularly in terms of racial and ethnic groups, gender, people with disabilities, physical and mental illness, substance use/addiction, education, sports, the workplace, and the criminal justice system (e.g., Bastian et al., 2013; Ellawala, 2016; Haslam & Loughnan, 2014; Haslam et al., 2007; Morera et al., 2018; Moriano et al., 2021). It began with examining overt denials of humanity in the context of war, genocide, and slavery but has since expanded to include more covert forms of dehumanization that can occur in everyday settings (Kteily & Bruneau, 2017; Pizzirani et al., 2019). Such research has found that dehumanization is generally employed as a means of enabling or justifying aggression or violence against some other and/or relieving oneself of morality, guilt, distress, inhibition, or responsibility (Haslam, 2006; Haslam et al., 2008).

In 2006, Haslam proposed a model of dehumanization (Figure 1) that built on previous research to clarify what exactly is denied to the dehumanized: human uniqueness and human nature. He asserted that people or groups are dehumanized in one of two ways: (1) animalistically and (2) mechanistically. Animalistic dehumanization denies human uniqueness, whereas mechanistic dehumanization denies human nature.

In 2008, Haslam and colleagues expanded on that to include comparisons to “supernatural beings,” including gods, minor deities, spirits, and superheroes. To keep with the alliteration of animalistic and mechanistic, this will be referred to in this manuscript as deistic dehumanization. These comparisons are often considered to be positive, as the perceptions are
generally favorable, centered on awe and admiration. However, Haslam et al. (2008) acknowledged that this type of perception is, indeed, a form of dehumanization because “capabilities are exaggerated, but… warts-and-all humanity is overlooked” (p. 257). In other words, deistic dehumanization denies human vulnerability and limitations.

![Theoretical Model of Dehumanization](image)

**Figure 1:** Theoretical model of dehumanization (Haslam, 2006; Haslam et al., 2008).

*The term *deistic* was not included in the original publications. This term is used in this study to describe superhuman forms of dehumanization.*
Relevance to First Responders

Elements consistent with dehumanization can be found in public stereotypes about first responders as well as embedded in first responder culture. Animalistic dehumanization, for instance, is seen when comparing police officers to pigs. In conducting this literature review, for example, a sticker was found for sale on the Internet that reads, “The only good cop is a dead one,” with an image of a severed pig head (rbkali, n.d.). For the purposes of consistent language, this will be referred to as villain stereotyping.

Mechanistic dehumanization seems apparent in first responder culture. First responders are consistently trained “to keep a lid on their feelings” (Kirschman, 2018, p. 53) and that they must always appear to be in control, knowledgeable, and unafraid (Kirschman, 2018). As mentioned previously, the tenets of first responder culture strongly resemble military culture (Henderson et al., 2016), particularly the warrior ethos, which requires tough-mindedness, constant vigilance, and tireless motivation (USAFA, n.d.). Even uniforms and prescribed behaviors are dehumanizing in that they give the illusion of sameness and interchangeability (Haslam, 2006; Hetey & Eberhardt, 2014; Zhang et al., 2017), thereby deindividuating the wearer and instead emphasizing the role they play (Hetey & Eberhardt, 2014). This is consistent with organizational dehumanization, which is a form of mechanistic dehumanization in which an employee is made to feel objectified by (like a tool or instrument for) the organization (Bell & Khoury, 2011; Moriano et al., 2021; Nguyen & Stinglhamber, 2018).

With regard to the superhuman, or deistic, form of dehumanization, first responders are often likened to superheroes (Lanza et al., 2018; Rodriguez et al., 2016). When COVID-19
emerged in the U.S., for instance, there were numerous campaigns thanking the “heroes of the pandemic” (Bates, 2020; Gavin, 2020). Even prior to the pandemic, it was easy to find images of first responders portrayed as superheroes. Although it may be well-intentioned and even flattering at times, it coincidentally deprives the first responder of humanness and a need for care (Lanza et al., 2018).

The Burden of Responsibility: An Existential Conceptualization

Surrounding all these concepts is existentialism. First responders are frequently confronted with human suffering and, at times, the very worst of humanity (Bochantin et al., 2022; Kirschman, 2018; Pietrantoni & Prati, 2008); mass shootings, raging wildfires, and the aftermath of suicides are just some of the horrific things encountered by first responders. They experience threats to their own existence and witness threats to the existence of others (Kirschman, 2021). Existential theory posits that humans’ freedom of choice comes with a price: terrifying responsibility and persistent dread (Yalom, 1980). Choices made by first responders carry the added responsibility of protecting the well-being of others – Do I draw my firearm? Do I run into that burning building? – which can culminate in an overwhelming existential burden. In this way, freedom of choice inevitably raises questions concerning being: Who am I? Is life worth living? Does it have meaning? How can I realize my humanity? (Yalom, 1980; Yalom & Josselson, 2019). Thus, first responders frequently encounter existential issues (Hoffman, 2020) that can potentially undermine their internal sense of humanness, a phenomenon known as self-dehumanization (Bastian et al., 2012; Kouchaki et al., 2018; Yang et al., 2015; Zlobina &
Andujar, 2021). In this way, humanness and existentialism are inextricably linked (Price, 2011; Sartre, 2007; Yalom, 1980).

The Ultimate Concerns of Existentialism

Existentialism is a humanistic theory that emphasizes four categories of “ultimate concerns”: (1) freedom, (2) isolation, (3) meaning, and (4) death (Yalom, 1980). Each of these are relevant to humanness and dehumanization but also to first responder culture. This is especially true in times of a disaster, pandemic, or crisis (Hoffman, 2020).

Freedom

According to Frankl (1959), human freedom exists within limits: we are not free from conditions, but we are free to choose how we respond to said conditions. First responders are constantly taking a stand toward imposed conditions, choosing to run toward rather than away from danger in an effort to minimize destruction and the suffering of others (Rodriguez et al., 2016). The selfless acts of first responders on September 11, 2001, for instance, are a prime example of “the unexpected extent to which man is capable of defying and braving even the worst conditions conceivable” (Frankl, 1959, p. 130). On that day, firefighters climbed 110 flights of stairs in an attempt to rescue people from the doomed World Trade Center towers, and a total of 403 first responders lost their lives that day (Cleveland, 2021; Never Forget Project, n.d.; New York Magazine, 2014).
Isolation

Isolation can be considered in terms of interpersonal and intrapersonal dynamics, but Yalom (1980) describes existential isolation as an “unbridgeable gap” between oneself and others. In other words, although a person may be surrounded by others, they will always remain fundamentally separate. Arnold and Pinkston (2014) further elaborated on this by highlighting the simultaneous alienation from yet agonizing closeness to others “who cannot know our pain as we do” (p. 97). Even those with similar pain, such as fellow first responders, experience it from their own unique perspective that can never be collectively shared. The divide is even greater between first responders and their civilian friends and loved ones; there is a painful awareness of the fact that civilian friends and loved ones can never completely fathom the experience of, nor fully grasp what it means to be, a first responder (Kirschman, 2018, 2021).

According to Yalom and Josselson (2019), sometimes an individual may become overwhelmed with dread in the face of isolation and, as a result, fuse with a group or cause: “To be like everyone else – to conform in dress, speech, and customs, to have no thoughts or feelings that are different – saves one from the isolation of the lonely self” (p. 284). It may be, then, that some first responders have entered their profession (in part) as a means of shielding themselves against existential isolation, only to find that this serves to exacerbate the isolation because it does not allow for true connection with others. Additionally, if first responders do experience dehumanization and subsequently internalize it, resulting in self-dehumanization, it could potentially compound this experience of isolation by separating the first responder from their own humanness (Bastian & Crimston, 2014).
Meaning

Frankl (1959) declared that finding meaning in life is man’s primary motivational force, and there is an abundance of literature that documents meaning as being fundamental to well-being (Quevillon et al., 2016). However, the perceived enormity of this ongoing endeavor can also throw an individual into crisis (Yalom, 1980; Yalom & Josselson, 2019), and first responders are no exception. Although first responder professions are widely regarded as highly meaningful (Rodriguez et al., 2016), large-scale disasters, especially those for which the first responder feels unprepared and/or caught off guard, or other situations in which a first responder is unable to help can induce hopelessness that undermines their sense of meaning and purpose (Hoffman, 2020; Pietrantoni & Prati, 2008). Public vilification, such as that experienced by law enforcement officers across the United States in the wake of George Floyd’s murder, may be another example of this. Kirschman (2014) described this as community betrayal, which occurs when the community turns against the agency or individual first responder and can contribute to suicidality. This may be best understood in terms of existential guilt, particularly in the mitwelt mode, which “calls all people toward social responsibility to others, even though the person may not have control over the outcome… [and] emerges from believing that one did not do enough to help those who are suffering” (Hoffman, 2020, p. 12). First responders often describe their jobs as a calling and strongly identify as helpers (Kirschman, 2021). When the outcome of a particular call or event is unfavorable, or when a fellow first responder brings shame to the profession, it is common for first responders to feel a sense of personal failure and, subsequently, profound guilt (Kirschman, 2018, 2021; Kirschman et al., 2014).
Inextricably linked to existential guilt, particularly among first responders, is the concept of death (Herr & Buchanan, 2019; Polemikou & Vantarakis, 2019). Human beings live with the awareness of the inescapable fact that we will, eventually, cease to be (Evram & Çakici Eş, 2020; Scott & Weems, 2013; Tillich, 1952; Yalom & Josselson, 2019). The average person has the privilege of keeping this out of their conscious awareness much of the time (Rodriguez et al., 2016). In fact, on a deeply subconscious level, most people hold the irrational belief that they are inviolable, invulnerable, and even immortal (Yalom & Josselson, 2019), which is what Vachon et al. (2015) referred to as “the illusion of invulnerability” (p. 184).

First responders, on the other hand, are confronted with mortality on a regular basis, not only their own, but also that of others (Rodriguez et al., 2016). Threats to their own safety are part of the job, and they frequently play a role in whether a person in their care survives (Schafer et al., 2015). First responders are called upon to not only face death but also defy it. The experience of repeatedly confronting death is further aggravated by the dehumanizing stereotypes discussed earlier, especially the superhero stereotype, which may inadvertently degrade their sense of humanness and amplify others’ expectations of their abilities. First responders may even begin to internalize the stereotype and feel pressure to ignore or push beyond their human limitations (Bochantin et al., 2020; Kirchman, 2021; Rodriguez et al., 2016), escalating the risk of physical or psychological harm. In other words, the superhero stereotype propagates the illusion of invulnerability within and about first responders.
Existentialism and Dehumanization

Existentialism can also offer possible explanations as to why first responders may be a dehumanized group. First, consistent with TMT, human beings subconsciously employ defenses against thoughts of death and death-related anxiety (Greenberg & Arndt, 2012). Thus, believing that first responders are superheroes may make civilians feel safer by believing that first responders have superhuman abilities to protect the public (Hetey & Eberhardt, 2014). Additionally, as mentioned previously, dehumanization is generally employed as a means of enabling or justifying aggression or violence against some other and/or relieving oneself of morality, guilt, distress, inhibition, or responsibility (Haslam, 2006; Haslam et al., 2008). If we (the general public) deny their humanness, we do not have to acknowledge their suffering. It allows us to shirk the dissonance and displace responsibility (Haslam, 2014; Yalom, 1980), and we do not have to feel guilty about putting first responders in harm’s way to protect us (Hetey & Eberhardt, 2014). After all, superheroes don’t need our help, and villains don’t deserve it. By denying their humanness, however, we are also perpetuating stigma and barriers to care.

Consequences of Dehumanization

Interestingly, despite the wealth of literature focusing on dehumanization, few studies have focused on the experience of being dehumanized (Bastian & Haslam, 2011; Kteily et al., 2016), and only one study was found that focused on the experiences of first responders being dehumanized. It was a study by Zlobina and Andujar (2021) that focused on the relationship between police officers’ experiences of meta-dehumanization and subsequent police violence.
during citizens’ protests. However, the sample was relatively small \((N = 77)\), and the authors acknowledged the need for ongoing research. Additionally, although the article was published in 2021, the data was collected in 2018. While that is not outdated in terms of the amount of time elapsed, it also does not encompass the events and experiences of law enforcement in 2020 and beyond. No other studies were found examining the experiences of other first responder groups.

Nevertheless, the sparse literature that is available outlined several consequences of dehumanization, the most significant of which involve violence and aggression. Being dehumanized puts the dehumanized person/group at risk of victimization (Ellawala, 2016; Haslam & Loughnan, 2014; Moller & Deci, 2009). This includes unprovoked attacks because “people are more likely to commit violence against a group they do not view as fully human” (Hetey & Eberhardt, 2014, p. 148). Such findings may offer an explanation for violence against first responders, such as the wave of police officer assassinations that occurred in Dallas, Baton Rouge, and other cities throughout the United States in 2016 (Kirschman, 2018) or any of the other documented acts of violence against first responders (e.g., Desai, 2020; Encinas, 2021; Kirkwood, 2012; Schladebeck, 2021). However, the experience of being dehumanized can also result in aggressive and hostile behavior in the dehumanized person/group (Bastian et al., 2013; Kouchaki et al., 2018; Renger et al., 2016; Sainz et al., 2021; Sarwar et al., 2021). There is, for example, evidence indicating that dehumanization of racial minorities contributes to police brutality against them (Ellawala, 2016; Reinka & Leach, 2017; Zlobina & Andujar, 2021). There is also evidence that moral outrage can similarly spark a dehumanizing and violent reaction (Bastian et al., 2013; Moller & Deci, 2009). This creates a particularly dangerous combination that can result in reciprocal dehumanization, in which “vicious cycles of conflict” (Kteily &
Less egregious consequences of dehumanization are also of concern. These include negative evaluation of the self (Bastian & Haslam, 2011; Kteily et al., 2016), which could have implications for self-efficacy; cognitive and emotional effects, including emotional exhaustion and decreased subjective well-being (Bastian & Crimston, 2014; Bastian & Haslam, 2011; Nguyen & Stinglhamber, 2018; Sainz et al., 2021), which could have implications for suicidality; and behavioral reactions such as avoidance, dishonesty, and unethical/immoral behavior (Bastian & Haslam, 2011; Kouchaki et al., 2018). Of particular concern with first responders would be decreased care and concern for others (Bastian & Crimston, 2014), which, based on Kirschman’s (2021) definition of burnout, implies that the experience of being dehumanized may contribute to burnout.

Dehumanization and Workforce Threats

Additionally, dehumanization has been linked to decreased job satisfaction, counterproductive workplace behaviors, increased turnover, poor job performance and other workforce threats in a variety of populations (Moriano et al., 2021; Nguyen & Stinglhamber, 2018). Interestingly, there is also evidence of a correlation between the workforce threats of burnout and decreased self-efficacy and an increased tendency to dehumanize others, sometimes as a coping/defensive strategy and other times as a retaliatory mechanism (e.g., Capozza et al., 2016; Delgado et al., 2021; Ogungbamila, 2014; Sarwar et al., 2021; Ugwu et al., 2020). As mentioned previously, though, none of the published studies that were found specifically
examined the relationship between dehumanization and workforce threats within first responder populations.

**Dehumanization and Suicidality**

Hagerty and Williams (2022), for example, in their study of 1,122 healthcare workers, found a positive correlation between dehumanization, moral injury, and suicidality. Other studies have made this connection a bit less directly, demonstrating correlations between organizational dehumanization, increased job stress, and adverse psychological health reactions (e.g., decreased well-being, increased depression and anxiety, emotional numbing, guilt/shame; Caesens & Stinglhamber, 2019; Fontesse et al., 2021; Sarwar et al., 2021), which could have implications for suicidality. Even the superhero stereotype, which decreases death anxiety and thereby allows first responders to do their dangerous work (Rodriguez et al., 2016), can be problematic in that decreased fear of death has also been associated with the emergence of suicidality (Stanley et al., 2016).

**Dehumanization and Burnout**

Further, it has been well established that organizational dehumanization is a risk for employee burnout (Moriano et al., 2021), as are unrealistic expectations (Bagherian & Hosseini, 2019) such as those propagated by the superhero stereotype (Lanza et al., 2018). A study by Caesens and Stinglhamber (2019) examining the effects of organizational dehumanization on 277 Belgian government employees found a positive correlation between dehumanizing experiences at work with employees’ emotional exhaustion, psychological strain at work,
physical complaints, and turnover intentions. Another study yielded similar findings among 422 supermarket workers in Italy (Valtorta et al., 2021).

**Dehumanization and Self-Efficacy**

Finally, other studies, such as that of Fontesse and colleagues (2021), have documented an inverse relationship between dehumanization and self-efficacy. A study by Sarwar and colleagues (2021) demonstrated that organizational dehumanization was inversely related to occupational self-efficacy among 295 hospital-based nurses in Pakistan. Bastian and Haslam (2011) have suggested that this could be because dehumanizing experiences undermine an individual’s sense of value.

**Meta-Dehumanization: Perception Is Reality**

Consistent with the Adlerian concept of phenomenology (Mosak & Maniacci, 1999), it is not just the fact of being dehumanized but also the perception of being dehumanized that is important to consider. The perception of dehumanization is known as “meta-dehumanization” (Figure 2) and refers to the degree to which one believes their group is denied humanity by others (Fontesse et al., 2021; Kteily & Bruneau, 2017; Kteily et al., 2016; Sainz et al., 2021; Yang et al., 2015). Consequences of meta-dehumanization are very similar to those of dehumanization. For instance, meta-dehumanization has been connected to outcomes such as emotional distress, negative self-perception, anxiety, and depression, to name a few (Fontesse et al., 2021; Sainz et al., 2021). Self-dehumanization (the perception of self as being less human than others) has also been noted, likely due to the internalization of meta-dehumanization
(Fontesse et al., 2021; Yang et al., 2015). However, there is only one known published study (Zlobina & Andujar, 2021) on first responders’ experiences of meta-dehumanization, which focused only on law enforcement, and there are no known published studies on the relationship between first responders’ experiences of meta-dehumanization and workforce threats. As mentioned previously, this study seeks to bridge that gap.

Figure 2: Overall theoretical/conceptual framework.

Summary

First responders play a significant role in public safety. By definition, they are the first to respond in emergency situations (Benincasa et al., 2022; Meckes et al., 2021; Rodriguez et al., 2016). Without them, laws could not be enforced, fires could not be fought, and emergency
medical care could not be rendered in any meaningful way. Suicide, resignations, and early retirements have diminished the first responder workforce (DeStefano, 2020; Fitch & Marshall, 2019; Lutz, 2021; McCausland, 2021), and burnout and other mental health concerns threaten the effectiveness and well-being those who remain (Deng & Lussenhop, 2020; Nardi, 2021; Nelson, 2021; Phillips, 2020). The literature demonstrates a possible correlation between these issues and the experience of dehumanization (Bastian & Crimston, 2014; Bastian & Haslam, 2011; Kouchaki et al., 2018; Kteily et al., 2016; Sainz et al., 2021), but no known published study has specifically examined this relationship in first responders. Thus, this study seeks to bridge that gap by examining whether first responders’ experiences of meta-dehumanization are significant predictors of workforce threats including suicidality, burnout, and decreased self-efficacy when controlling for time in the profession. Ideally, this information will better prepare the counseling profession to meet the mental health and vocational needs of first responders. The next chapter will outline the methodology for how this will be accomplished.
CHAPTER 3: METHODOLOGY

As previously mentioned, the purpose of this quantitative study was to examine the relationship between first responders’ experiences of meta-dehumanization and workforce threats including suicidality, burnout, and diminished self-efficacy. This chapter provides an overview of the methodology that was used to gather and analyze data necessary to answer the research questions and hypotheses.

Research Questions and Hypotheses

Initial analyses included examining the relationship between meta-dehumanization and organizational meta-dehumanization among first responders and assessing whether first responders’ perceptions of dehumanization differ based on time in the profession. The research questions and hypotheses for these two foundational components were:

R1. What is the relationship between meta-dehumanization and organizational dehumanization among first responders?

H1. There is a significant and positive correlation between meta-dehumanization and organizational dehumanization among first responders.

R2. What is the relationship between first responders’ perceptions of dehumanization and time in the profession?

H2. There is a significant and positive correlation between first responders’ perceptions of dehumanization and time in the profession.
Following those initial analyses was an exploration of the relationship between first responders’ perceptions of dehumanization and workforce threats, with research questions and hypotheses including:

R3a. How do meta-dehumanization and perception of organizational dehumanization relate to suicidality when controlling for time in the profession?

H3a. When controlling for time in the profession, meta-dehumanization and perception of organizational dehumanization significantly and positively predict suicidality.

R3b. How do meta-dehumanization and perception of organizational dehumanization relate to burnout when controlling for time in the profession?

H3b. When controlling for time in the profession, meta-dehumanization and perception of organizational dehumanization significantly and positively predict burnout.

R3c. How do meta-dehumanization and perception of organizational dehumanization relate to self-efficacy when controlling for time in the profession?

H3c. When controlling for time in the profession, meta-dehumanization and perception of organizational dehumanization significantly and negatively predict self-efficacy.

Research Design and Methods

This study used quantitative methodology to determine the predictive ability of meta-dehumanization for workforce threats of suicidality, burnout, and self-efficacy when controlling for time in the profession. Because the purpose of this study was to examine the relationship between meta-dehumanization (IV), perception of organizational dehumanization (IV), and workforce threats (DV) while controlling for time in the profession (IV), a correlational research
design was appropriate (Creswell & Guetterman, 2019). Multiple variables (meta-dehumanization, organizational meta-dehumanization, time in the profession, suicidality, burnout, and self-efficacy) were assessed at one point in time from a single group of participants.

Meta-dehumanization was measured using a composite score from two different measures: a measure of meta-dehumanization (Sainz et al., 2021) and a measure of organizational meta-dehumanization (Caesens et al., 2017). The purpose of including two different measures was to capture meta-dehumanization as it relates to both public opinion and organizational culture. The use of composite scores is common in social sciences as a means of representing complex concepts with a single data point from a set of highly related data points (AHRQ, 2019; Statistics Solutions, 2022). Since both measures assess perceptions of dehumanization, they are referred to simply as meta-dehumanization and organizational meta-dehumanization. For conciseness, they are sometimes consolidated into “perceptions of dehumanization.” Because of the two different measures of meta-dehumanization, and to justify the combining of them into a composite score, part of the preliminary analysis involved determining what, if any, relationship there is between meta-dehumanization and organizational meta-dehumanization among first responders.

Data was analyzed using several statistical methods. First, the Pearson product moment correlation coefficient was calculated to determine the relationship between meta-dehumanization and organizational meta-dehumanization among first responders. Then a one-way between-subjects ANOVA was conducted to assess whether first responders’ perceptions of dehumanization differ based on time in the profession. Finally, hierarchical regression was used
to examine the relationship between perceptions of dehumanization and workforce threats while controlling for time in the profession.

For the hierarchical regression analysis, the predictor variables, also known as independent variables (IVs), included time in the profession and two measures of meta-dehumanization, which were combined into a composite score. The purpose of including two measures (i.e., meta-dehumanization and organizational meta-dehumanization) was to capture meta-dehumanization as it relates to public perception as well as organizational culture. The composite score was the sum of these two measures. The criterion variables, also known as dependent variables (DVs), in this study included suicidality, burnout, and self-efficacy.

**Participants**

Participants for this study needed to meet the criterion of being a first responder, which, as defined in Chapter 2, may include fire service, emergency medical services (EMS), law enforcement, emergency department (i.e., physicians, nurses, technicians), 911/dispatch, search-and-rescue, and National Guard personnel. The only other demographic criterion required for inclusion was age (18+). Thus, this study was open to adult first responders of any race/ethnicity, gender/gender identity, employment status (e.g., paid vs. volunteer, active vs. retired, etc.), and time on the job. An a priori power analysis was conducted using G*Power Statistical Power Analyses for Windows (Faul et al., 2009; Faul et al., 2007), which indicated a minimum sample size of 119, given an alpha level of 0.05, a moderate effect size, and sufficient power based on standards developed by Cohen (1988). A total of 245 questionnaires were initiated in Qualtrics at
the time of the July 15, 2022, deadline. Of those, 211 were fully completed; thus, the resulting sample was 211 participants.

Recruitment

Respondents were recruited through a variety of means. Information about the study was disseminated through social media – specifically Facebook, LinkedIn, and Instagram – as well as email. Recruitment flyers (see Appendix A) were also posted in first responder departments (i.e., fire departments, police precincts, EMS stations, 911/dispatch centers, and hospital break rooms) in both West Virginia and Illinois after having received permission from appropriate leadership at each location. Recruitment for this study relied on volunteers (nonprobability/convenience sampling) and word-of-mouth recruitment (snowball sampling; Creswell & Guetterman, 2019), such as when social media posts were shared by others. Although location was not an inclusion or exclusion criterion, it was expected that most participants would be from West Virginia (where I am located) and the Chicagoland area (where I am originally from), but the sample ended up being a nationwide sample from all five regions of the US (Northeast, Southeast, Midwest, Southwest, and West) as well as Canada.

Instruments

The instruments that were utilized in this quantitative study included a brief demographic questionnaire (Appendix B), a measure of meta-dehumanization (Appendix C), a measure of organizational meta-dehumanization (Appendix D), the Suicide Behaviors Questionnaire-Revised (SBQ-R; Osman et al., 2001; Appendix E), the Professional Quality of Life (ProQOL;
Pike et al., 2019) Scale – Burnout Subscale (Appendix F), and the General Self-Efficacy (GSE; Schwarzer & Jerusalem, 1995) Scale (Appendix G). Two of the instruments (SBQ-R and ProQOL) are freely available for public use. Written permission was secured for each of the other instruments.

Measure of Meta-Dehumanization (Sainz et al., 2021)

The measure of meta-dehumanization that was used in this study was adapted by Sainz et al. (2021) from the original measure created by Bastian and Haslam (2010) to assess denials of human uniqueness and human nature. Participants responded to an eight-item, Likert-scale questionnaire. Some of the items are phrased positively (e.g., “I feel that others see me as responsive and warm, as capable of emotion,” and “I feel that others see me as refined and cultured”), while others are phrased negatively (e.g., “I feel that others see me as mechanical and cold, like a robot,” and “I feel that others see me as lacking self-restraint, like an animal”). For the purposes of this study, participants were instructed to consider how true each statement is/was for their role as a first responder. Responses range from “1 = not at all” to “7 = very much so.” The original scoring called for negative statements to be reverse scored, so when responses from each item were then summed for an overall score, lower scores reflected higher levels of meta-dehumanization. To allow for a composite score comprised of the two measures of meta-dehumanization, the scoring was inverted to instead allow for higher scores to reflect higher levels of meta-dehumanization (consistent with the measure of organizational meta-dehumanization; see next section). The Cronbach’s alpha reported by Sainz and colleagues
(2021) was 0.662. Other studies (e.g., Bastian et al., 2012; Kteily et al., 2016) reported Cronbach’s alpha levels ranging from 0.87 to 0.95.

**Measure of Organizational Meta-Dehumanization (Caesens et al., 2017)**

The measure of organizational meta-dehumanization used in this study was developed by Caesens and colleagues (2017). Participants responded to an 11-item, Likert-scale questionnaire examining perceptions of mechanistic dehumanization perpetrated by an organization with which the individual is associated or employed (i.e., organizational meta-dehumanization). Sample items include, “My organization treats me as if I were a robot,” and “My organization considers me as a number.” Responses range from “1 = strongly disagree” to “7 = strongly agree.” For the purposes of this study, participants were instructed to consider how true each statement is/was for their role as a first responder. Responses were summed for an overall score, with higher scores reflecting higher levels of perceived organizational/mechanistic dehumanization (Caesens et al., 2017). The Cronbach’s alpha reported by Caesens and colleagues (2017) was 0.89. Another study by Nguyen and Stinglhamber (2018) found it to have “very good internal consistency (α = 0.95)” (p. 4), and a study by Moriano et al. (2021) reported a Cronbach’s alpha of 0.94.

**Suicide Behaviors Questionnaire-Revised (SBQ-R; Osman et al., 2001)**

The Suicide Behaviors Questionnaire-Revised (SBQ-R; Osman et al., 2001) is a Likert-scale assessment that is designed to assess suicidality. Participants responded to the four-item, self-report questionnaire, which measures four aspects of suicidality: lifetime suicidal ideation
and/or suicide attempt (i.e., “Have you ever thought about or attempted to kill yourself?” with responses ranging from “1 = never” to “4 = I have attempted to kill myself and really hoped to die”); frequency of suicidal ideation over the past 12 months (i.e., “How often have you thought about killing yourself in the past year?” with responses ranging from “1 = never” to “5 = very often [5 or more times]”); threat of suicide attempt (i.e., “Have you ever told someone that you were going to commit suicide, or that you might do it?” with responses ranging from “1 = no” to “3 = Yes, more than once, and I really wanted to do it”); and self-reported likelihood of suicidal behavior in the future (i.e., “How likely is it that you will attempt suicide someday?” with responses ranging from “0 = never” to “3 = unlikely”; Nebraska Youth Suicide Prevention, 2019; Osman et al., 2001). Point values were assigned to each response, and then the scores were summed for an overall score, with higher scores indicating higher levels of suicidality. This measurement tool has been widely used in studies involving first responders (e.g., Boffa et al., 2018; Edwards & Wilkerson, 2020; Ponder et al., 2021; Stanley et al., 2018) and has demonstrated acceptable to very good reliability, with Cronbach’s alpha scores ranging from 0.77 (Stanley et al., 2018) to 0.86 (Fitzpatrick et al., 2020).

**Professional Quality of Life (ProQOL) Scale – Burnout Subscale (Stamm, 2009)**

The Professional Quality of Life (ProQOL) Scale was designed for use with public service professionals, such as first responders (Pike et al., 2019). Several studies (e.g., Burnett & Wahl, 2015; Pietrantoni & Prati, 2008; Pike et al., 2019) have utilized the ProQOL with first responder populations. The overall measure includes subscales for compassion satisfaction,
burnout, and secondary traumatic stress (Stamm, 2009). For the purposes of this study, only the Burnout subscale was used.

The Burnout subscale consists of 10 Likert-scale items with responses ranging from “1 = never” to “5 = very often.” Sample items include, “I feel trapped in my job as a helper,” and “I feel worn out because of my work as a helper.” Five of the subscale items were reverse scored per the scoring instructions. Scores for the subscale items were then summed, with a score of 22 or less indicating “low burnout,” a score of 23-41 indicating “average burnout,” and a score of ≥42 indicating “high burnout” (Stamm, 2009). The Cronbach’s alpha reported by Stamm (2009) was 0.75. Another study by Burnett and Wahl (2015) also found the Cronbach’s alpha to be 0.75. Additionally, Stamm (2010) indicated that the ProQOL has demonstrated good inter-scale correlations as well as good construct validity.

General Self-Efficacy (GSE) Scale (Schwarzer & Jerusalem, 1995)

The General Self-Efficacy Scale (GSE; Schwarzer & Jerusalem, 1995) was designed for the general adult population (Schwarzer & Jerusalem, n.d.) but has been utilized with first responder populations (e.g., Makara-Studzińska et al., 2020). Participants responded to a 10-item, Likert-scale questionnaire with responses ranging from “1 = not at all true” to “4 = exactly true.” Sample items include, “I am confident that I could deal efficiently with unexpected events,” and “I can usually handle whatever comes my way.” For the purposes of this study, participants were instructed to consider how true each statement is/was for their role as a first responder. Responses from each item were then summed for an overall score, with higher scores indicating higher levels of self-efficacy. Studies in 23 different countries have yielded
Cronbach’s alpha scores ranging from 0.76 to 0.90, with the majority in the high 0.80s, and criterion-related validity has been documented in numerous correlation studies (Schwarzer & Jerusalem, n.d.).

**Procedure**

Data collection processes and research design were approved by the IRB of Northern Illinois University prior to any recruiting or data collection. Once recruited, participants in this study engaged in several components of data collection. Upon accessing the survey in Qualtrics, participants were first prompted to read about the purpose of the study, the risks and benefits of participation, and their rights as research participants. As a means of consent, participants then had the option to either continue to the demographic survey and scales/questionnaires or to exit. Electronic administration allowed participants to complete the surveys/questionnaires at whatever time and from whatever location was convenient for them. The informed consent, demographic survey, and all scales/questionnaires were administered electronically using Qualtrics software. SPSS was utilized for statistical analysis.

**Analysis**

Preliminary analyses involved examining (1) the relationship between meta-dehumanization and organizational meta-dehumanization among first responders and (2) the relationship between first responders’ perceptions of dehumanization and time in the profession. The former was analyzed using the Pearson correlation coefficient, which measures the strength and direction of the relationship between two interval-scale factors (Privitera, 2018). The latter
was analyzed using a one-way between-subjects ANOVA. In simple terms, ANOVA tests for the difference between two or more means (Privitera, 2018; Salkind & Frey, 2020). More specifically, a one-way between-subjects ANOVA involves testing hypotheses for one factor with two or more levels (i.e., time in the profession) in which different participants are observed at each level of a factor (Privitera, 2018). Because data was collected from one set of participants at one point in time, each participant could only occupy one of the levels of the “time in the profession” factor.

For the subsequent analysis, data was analyzed using hierarchical linear regression, which is a type of multiple linear regression analysis. Multiple linear regression analysis is “used to assess the association between two or more independent variables and a single continuous dependent variable” (BU, 2013). It is broadly applicable to the behavioral sciences and can be used “in a purely exploratory fashion to identify a collection of variables that strongly predict an outcome variable” (Cohen et al., 2003, p. 3). Specifically, hierarchical analysis helps determine how much predictive ability a particular variable has over another variable (Smith, n.d.).

The analyses (Table 1) were conducted in SPSS. Preliminary analyses involved the Pearson correlation coefficient and one-way between-subjects ANOVA. The main analysis began with checking that assumptions of normality, homoscedasticity, linearity, and independence have not been violated (Privitera, 2018). Two-step hierarchical regression analyses were then conducted to predict each of the workforce threats in relation to meta-dehumanization when controlling for time in the profession. To do this, time in the profession was entered into Block 1 to control for the effects of that variable. Next, the composite meta-dehumanization score was entered into Block 2 to determine suicidality, burnout, and self-efficacy scores without
the influence of time in the profession. The null hypothesis ($H_0$) for the overall regression model is that there is no relationship between the independent and dependent variables.

Table 1

<table>
<thead>
<tr>
<th>RQ</th>
<th>Statistic</th>
<th>Criterion Variable (DV)</th>
<th>Predictor Variables (IVs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pearson correlation coefficient</td>
<td>Organizational meta-dehumanization</td>
<td>Meta-dehumanization</td>
</tr>
<tr>
<td>2</td>
<td>One-way between-subjects ANOVA</td>
<td>Perceptions of dehumanization (composite)</td>
<td>Time in the profession</td>
</tr>
<tr>
<td>3a</td>
<td>Hierarchical regression</td>
<td>Suicidality</td>
<td>Perceptions of dehumanization (composite), time in the profession</td>
</tr>
<tr>
<td>3b</td>
<td>Hierarchical regression</td>
<td>Burnout</td>
<td>Perceptions of dehumanization (composite), time in the profession</td>
</tr>
<tr>
<td>3c</td>
<td>Hierarchical regression</td>
<td>Self-efficacy</td>
<td>Perceptions of dehumanization (composite), time in the profession</td>
</tr>
</tbody>
</table>

Potential Limitations

As with any study, this study did have some potential limitations with regard to its methodology. All the measures in this study were self-report inventories, which means that participants reported beliefs, attitudes, and behaviors without assistance from a researcher (Vogt
& Johnson, 2016). This creates the potential for response bias, which can occur when self-report measures are used. It is sometimes related to social desirability bias, in which participants wish to “look good” in the survey, even if it is anonymous (Rosenman et al., 2011). Although the surveys in this proposed study were anonymous, the variables being measured may be somewhat sensitive in nature (e.g., suicidality), so there is the potential that some participants may have underreported. Alternatively, there may have been a tendency for participants to try to answer in a certain way in an effort to help a fellow first responder. However, research (e.g., Crutzen & Göritz, 2010) indicates that the influence of social desirability on Internet-based, anonymous surveys is not significant.

Another potential limitation has to do with sampling methods. Nonprobability sampling was utilized by seeking participants who were available, represented a specific characteristic (i.e., being a first responder), and would voluntarily participate. This is also known as convenience sampling (Creswell & Guetterman, 2019), and it means that it cannot be asserted with confidence that the sample is representative of the overall population (Creswell & Guetterman, 2019; Vogt & Johnston, 2016). There is also the consideration of possible differences between people who choose to participate in research versus those who do not, which may also be related to social desirability bias (Rosenman et al., 2011). Again, however, research (e.g., Crutzen & Göritz, 2010) indicates that the influence of social desirability on Internet-based, anonymous surveys is not significant.
CHAPTER SUMMARY

This chapter outlined the methodology that was used in this study to gather and analyze data necessary to answer the research questions and test the hypotheses. The target population was defined, and information was provided on how participants were recruited. Measurement instruments for collecting the necessary data were identified and presented; full versions can be found in the appendices of this manuscript. Analyses were then described and justified, followed by a discussion of potential limitations. Chapter 4 will provide additional details about the participants and describe the processing of data, statistical results, and ancillary analyses.
CHAPTER 4

RESULTS

The previous chapter described the methodology that was implemented to gather and analyze data necessary to answer the research questions and test the hypotheses. Chapter 4 provides additional details about the participants followed by a description of the processing of data and statistical results associated with the planned analyses. Additionally, this chapter outlines the ancillary analyses that were conducted.

Description of the Sample

A total of 245 questionnaires were initiated in Qualtrics at the time of the July 15, 2022, deadline. Of those, 211 were fully completed; the remaining 34 completed the demographic survey but none of the subsequent questionnaires, so those responses were omitted. Thus, the resulting sample of 211 represented an 86.1% completion rate.

As shown in Table 2, participants in this study were a heterogeneous sample of first responders from the US (nationwide) and Canada. Participants identified as EMS (47.9%), law enforcement (19.0%), fire service (13.7%), hospital emergency department (5.2%), and 911/dispatch (4.3%). There were no participants representing search-and-rescue or National Guard only, but an additional 10.0% of participants indicated that they held multiple first responder roles, some of which included one or both of those roles. Just under 12% of participants had a military background. In terms of time in the profession, 37.0% had 15+ years, 18.5% had 5-10 years, 17.1% had 10-15 years, 13.3% had 3-5 years, 12.3% had 1-3 years, and
1.9% had less than one year. Service locations included urban (26.1%), rural (25.1%), and suburban (10.4%), while an additional 38.4% described their service location as a combination of urban, suburban, and/or rural. Most participants (62.6%) were employed as first responders for wages full time. Of the remaining participants, 9.0% were employed for wages part time, 7.6% were volunteers, 6.6% were not currently working as first responders due to medical/disability reasons, 5.2% were not currently working as first responders due to other reasons, 3.8% were not currently working as first responders due to personal/family reasons, 3.3% were retired, and 1.9% were both employed for wages and volunteers. A wide variety of income levels were reported, with 25.6% earning $36,000-50,000/year; 24.6% earning $51,000-75,000/year; 13.3% earning $76,000-100,000/year; 11.8% earning greater than $100,000/year; 9.0% earning $21,000-35,000/year; 8.5% not earning any income as a first responder due to holding a volunteer role; and 3.3% earning less than $20,000/year. The remaining 3.8% preferred not to respond to the question about their income as a first responder.

Of the 211 participants, 53.6% identified as male, 45.0% identified as female, 0.9% identified as non-binary, and 0.5% identified as trans*. The majority (91.5%) identified as Caucasian, 3.8% identified as African American or Black, 1.4% identified as Native American or Alaska Native, 1.4% identified as multiracial, 0.9% identified as Asian or Pacific Islander, and 0.9% identified as Hispanic/Latinx. Religious/spiritual affiliations varied, with 49.3% identifying as Christian (any denomination), 42.7% indicating no religious/spiritual affiliation, 3.8% identifying as spiritual but not religious, 3.3% identifying with any other religious/spiritual affiliation, and 0.9% identifying as Jewish. Age ranges included 35-44 (29.4%), 25-34 (28.0%), 45-54 (18.0%), 18-24 (13.7%), 55-64 (8.1%), and 65+ (2.8%). Geographic location was divided
into six categories, including Canada (24.2%) and the five regions of the United States (National Geographic Society, 2022): Northeast (6.2%), Southeast (41.7%), Midwest (18.5%), Southwest (4.7%), and West (4.7%). The majority (58.3%) were married or partnered, 26.1% were single/never married, 10.9% were divorced, 4.3% were separated, and 0.5% were widowed. The sample also reported a wide range of education levels, with 27.0% having had some college education but no degree, 22.3% holding a bachelor’s degree, 16.1% having had trade/technical/vocational training, 16.1% holding an associate’s degree, 9.0% holding a master’s degree, 7.6% holding a high school diploma or equivalent, 0.9% holding less than a high school diploma, and 0.9% holding a professional/doctoral degree.

Most participants (52.6%) indicated that they had been diagnosed with a mental health disorder. Of those, 31.3% had been diagnosed with multiple disorders, 8.1% had been diagnosed with a trauma-related disorder, 5.2% had been diagnosed with an anxiety disorder, 5.2% had been diagnosed with a depressive disorder, 0.5% had been diagnosed with a bipolar spectrum disorder, and 0.5% had been diagnosed with a substance use disorder. Remaining participants indicated that they had never been diagnosed with a mental health disorder (42.2%), were unsure if they had (4.7%), or preferred not to respond (0.5%).
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<th>Demographic Variable</th>
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<th>Employment Status</th>
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<td>Employed for wages part time</td>
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<td>Southeast US (AL, AK, DE, FL, GA, KY, LA, MD, MS, NC, SC, TN, VA, WV)</td>
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<td>41.7</td>
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<td>Midwest US (IL, IN, IA, KS, MI, MN, MS, OH, ND, NE, SD, WI)</td>
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<td>18.5</td>
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<td>Southwest US (AZ, NM, OK, TX)</td>
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<td>4.7</td>
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<td>West US (AK, CA, CO, HI, ID, NV, MT, OR, UT, WA, WY)</td>
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<tr>
<td>Combination</td>
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## Table 2 (continued)

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<tr>
<td>High school diploma or equivalent</td>
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<td>Some college, no degree</td>
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<td>27.0</td>
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<td>Trade/technical/vocational training</td>
<td>34</td>
<td>16.1</td>
</tr>
<tr>
<td>Associate’s degree</td>
<td>34</td>
<td>16.1</td>
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<tr>
<td>Bachelor’s degree</td>
<td>47</td>
<td>22.3</td>
</tr>
<tr>
<td>Master’s degree</td>
<td>19</td>
<td>9.0</td>
</tr>
<tr>
<td>Professional/doctoral degree</td>
<td>2</td>
<td>0.9</td>
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<table>
<thead>
<tr>
<th>Relationship Status</th>
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<tbody>
<tr>
<td>Single/never married</td>
<td>55</td>
<td>26.1</td>
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<tr>
<td>Married/partnered</td>
<td>123</td>
<td>58.3</td>
</tr>
<tr>
<td>Separated</td>
<td>9</td>
<td>4.3</td>
</tr>
<tr>
<td>Divorced</td>
<td>23</td>
<td>10.9</td>
</tr>
<tr>
<td>Widowed</td>
<td>1</td>
<td>0.5</td>
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<table>
<thead>
<tr>
<th>First Responder Income</th>
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<tr>
<td>N/A; volunteer</td>
<td>18</td>
<td>8.5</td>
</tr>
<tr>
<td>Less than $20,000</td>
<td>7</td>
<td>3.3</td>
</tr>
<tr>
<td>$21,000-35,000</td>
<td>19</td>
<td>9.0</td>
</tr>
<tr>
<td>$36,000-50,000</td>
<td>54</td>
<td>25.6</td>
</tr>
<tr>
<td>$51,000-75,000</td>
<td>52</td>
<td>24.6</td>
</tr>
<tr>
<td>$76,000-100,000</td>
<td>28</td>
<td>13.3</td>
</tr>
<tr>
<td>Greater than $100,000</td>
<td>25</td>
<td>11.8</td>
</tr>
<tr>
<td>Prefer not to respond</td>
<td>1</td>
<td>0.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Religious/Spiritual Affiliation</th>
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</thead>
<tbody>
<tr>
<td>Christianity (any denomination)</td>
<td>104</td>
<td>49.3</td>
</tr>
<tr>
<td>Judaism</td>
<td>2</td>
<td>0.9</td>
</tr>
<tr>
<td>Spiritual but not religious</td>
<td>8</td>
<td>3.8</td>
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<tr>
<td>No religious/spiritual affiliation</td>
<td>90</td>
<td>42.7</td>
</tr>
<tr>
<td>Any other religious/spiritual affiliation</td>
<td>7</td>
<td>3.3</td>
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<table>
<thead>
<tr>
<th>Mental Health Diagnosis</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>111</td>
<td>52.6</td>
</tr>
<tr>
<td>No</td>
<td>89</td>
<td>42.2</td>
</tr>
<tr>
<td>Unsure</td>
<td>10</td>
<td>4.7</td>
</tr>
<tr>
<td>Prefer not to respond</td>
<td>1</td>
<td>0.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Diagnostic Category</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety disorders</td>
<td>11</td>
<td>5.2</td>
</tr>
<tr>
<td>Depressive disorders</td>
<td>11</td>
<td>5.2</td>
</tr>
<tr>
<td>Trauma-related disorders</td>
<td>17</td>
<td>8.1</td>
</tr>
<tr>
<td>Bipolar spectrum disorders</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Substance use disorders</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Multiple diagnoses</td>
<td>66</td>
<td>31.3</td>
</tr>
<tr>
<td>No/unknown diagnoses</td>
<td>104</td>
<td>49.3</td>
</tr>
</tbody>
</table>
Descriptive Statistics for Instruments Used in the Study

The means, standard deviations, and minimum and maximum values for participants’ scores on each instrument, as well as the composite meta-dehumanization measure, are presented in Table 3. Those instruments include the measure of meta-dehumanization, the measure of organizational meta-dehumanization, the Suicide Behaviors Questionnaire-Revised (SBQ-R), the Professional Quality of Life (ProQOL) Scale – Burnout Subscale, and the General Self-Efficacy (GSE) Scale.

Table 3
Sample Means and Standard Deviations for All Instruments and Composite Scores

<table>
<thead>
<tr>
<th>Measure</th>
<th>Mean</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meta-dehumanization</td>
<td>21.63</td>
<td>7.78</td>
<td>8.00</td>
<td>56.00</td>
</tr>
<tr>
<td>Organizational meta-dehumanization</td>
<td>49.39</td>
<td>17.87</td>
<td>11.00</td>
<td>77.00</td>
</tr>
<tr>
<td>SBQ-R</td>
<td>7.15</td>
<td>3.50</td>
<td>3.00</td>
<td>18.00</td>
</tr>
<tr>
<td>ProQol Burnout Subscale</td>
<td>28.34</td>
<td>7.25</td>
<td>10.00</td>
<td>42.00</td>
</tr>
<tr>
<td>GSE</td>
<td>32.00</td>
<td>4.33</td>
<td>20.00</td>
<td>40.00</td>
</tr>
<tr>
<td>Composite meta-dehumanization</td>
<td>71.01</td>
<td>21.70</td>
<td>22.00</td>
<td>133.00</td>
</tr>
</tbody>
</table>

Reliability

Coefficient alpha, also known as Cronbach’s alpha, was utilized to determine the internal consistency (reliability) of each instrument as well as the composite meta-dehumanization
measure. This coefficient usually ranges between zero and one, and the closer the coefficient gets to one, the greater the internal consistency of items in a particular scale (Gliem & Gliem, 2003; Shahirah & Moi, 2019). George and Mallery (2003) provided guidelines for interpreting the value of Cronbach’s alpha for Likert-scale instruments. According to George and Mallery (2003), an alpha value greater than or equal to 0.90 indicates excellent internal consistency, 0.80-0.89 indicates good internal consistency, 0.70-0.79 indicates acceptable internal consistency, 0.60-0.69 indicates questionable internal consistency, 0.50-0.59 indicates poor internal consistency, and below 0.50 indicates unacceptable internal consistency. Table 4 outlines the Cronbach’s alpha (α) scores for each of the instruments and the composite measure of meta-dehumanization used in this study.

Table 4
Cronbach’s Alpha Values for All Instruments and Composite Scores

<table>
<thead>
<tr>
<th>Measure</th>
<th>Cronbach’s Alpha (α)</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meta-dehumanization</td>
<td>0.823</td>
<td>Good</td>
</tr>
<tr>
<td>Organizational meta-dehumanization</td>
<td>0.933</td>
<td>Excellent</td>
</tr>
<tr>
<td>SBQ-R</td>
<td>0.826</td>
<td>Good</td>
</tr>
<tr>
<td>ProQOL Burnout Subscale</td>
<td>0.734</td>
<td>Acceptable</td>
</tr>
<tr>
<td>GSE</td>
<td>0.860</td>
<td>Good-Excellent</td>
</tr>
<tr>
<td>Composite meta-dehumanization</td>
<td>0.907</td>
<td>Excellent</td>
</tr>
</tbody>
</table>

*Note. Interpretations based on George and Mallery (2003).*
Hypothesis Testing

In this section, each of the research hypotheses and the corresponding statistical analyses are outlined. Each hypothesis is restated, the analytical procedures are described, and the results are presented. For all analyses, an alpha level of 0.05 was the threshold for statistical significance. Following the discussion of hypothesis testing, ancillary analyses are discussed.

Hypothesis 1

The first hypothesis addressed the research question regarding the presence of a relationship between meta-dehumanization and organizational meta-dehumanization among first responders. The null hypothesis ($H_0$) was that there is no relationship between these two variables, whereas the alternative hypothesis ($H_1$) was that there is a significant relationship between these two variables. For the purposes of this study, it was specifically hypothesized that there is a significant and positive correlation between meta-dehumanization and organizational meta-dehumanization among first responders.

To test this hypothesis, a Pearson correlation coefficient was calculated (Table 5). This revealed a significant, positive correlation between meta-dehumanization and organizational meta-dehumanization ($r = 0.327, N = 211, p < 0.001$). It was a low-moderate correlation: 10.69% of the variation within the data is explained by the relationship between these two variables. Thus, Hypothesis 1 was supported.
Table 5

Pearson Correlation Coefficient to Examine the Relationship Between Meta-Dehumanization and Organizational Meta-Dehumanization Among First Responders

<table>
<thead>
<tr>
<th></th>
<th>Meta-Dehumanization</th>
<th>Organizational Meta-Dehumanization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meta-dehumanization</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>0.327**</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>211</td>
</tr>
<tr>
<td>Organizational meta-dehumanization</td>
<td>Pearson Correlation</td>
<td>0.327**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>211</td>
</tr>
</tbody>
</table>

Note. ** Correlation is significant at the 0.01 level (2-tailed).

Hypothesis 2

The second hypothesis addressed the research question regarding the presence of a relationship between first responders’ perceptions of dehumanization and time in the profession. The null hypothesis (H0) was that there is no relationship between these two variables. The alternative hypothesis (H1) stated that there would be a significant and positive correlation between first responders’ perceptions of dehumanization and time in the profession.

To test this hypothesis, a one-way between-subjects ANOVA was conducted (Table 6). This revealed no significant effect of time in the profession on first responders’ perceptions of dehumanization: \( F(5, 205) = 1.662, p = 0.145 \). Thus, Hypothesis 2 was not supported.
Hypothesis 3

The third hypothesis stated that a significant amount of the variance in workforce threats (suicidality, burnout, and self-efficacy) would be accounted for by perceptions of dehumanization when controlling for time in the profession. The null hypothesis (H₀) was that there is no relationship between these variables. For the purposes of this study, it was specifically hypothesized that (a) there is a significant and positive correlation between perceptions of dehumanization and levels of suicidality among first responders; (b) there is a significant and positive correlation between perceptions of dehumanization and levels of burnout among first responders; and (c) there is a significant and negative correlation between perceptions of dehumanization and levels of self-efficacy among first responders.

To test this three-pronged hypothesis, three separate hierarchical regression analyses were conducted. For each analysis, assumptions of normality, homoscedasticity, linearity, and independence were conducted, and it was determined that they had not been violated. The assumption of normality was assessed using the histogram and Q-Q plot. Visual examination of
both of these suggested normality. Thus, it was found that this assumption had not been violated. The assumption of homoscedasticity was assessed using the scatterplot of the standardized predicted value and the standardized residuals. Because each scatterplot appeared random and did not reveal a fan shape, it was determined that this assumption had not been violated. The assumption of linearity was assessed using the scatterplot of the standardized predicted value and the dependent variable. Because each scatterplot appeared random and did not reveal a fan shape, it was determined that this assumption had not been violated. Finally, the assumption of independence was assessed using variance inflation factor (VIF) and tolerance values. Because all VIF values were less than 10 and all tolerance values were greater than 0.10, it was determined that this assumption had not been violated.

Two-step hierarchical regression analysis was then conducted for each workforce threat in relation to perceptions of dehumanization when controlling for time in the profession. To do this, time in the profession was entered into Block 1 to control for the effects of that variable. Next, the composite meta-dehumanization score was entered into Block 2 to examine the influence of meta-dehumanization on levels of suicidality, burnout, and self-efficacy without the influence of time in the profession.
Suicidality

Model 1, with time in the profession as the only predictor, explained 0.8% of the variance and was not statistically significant \( F (1, 209) = 2.619, p = 0.107 \). Model 2, in which the composite meta-dehumanization score was added, explained significantly more variance \( \Delta R^2 = 0.095, F (1, 208) = 22.190, p < 0.001 \). This model explains 9.9% of the variance and reflects a medium effect size (Cohen’s \( f = 0.33 \)). Thus, Hypothesis 3a was supported; meta-dehumanization was found to be a significant, positive predictor of suicidality \( (b = 0.050, p < 0.001) \). A post hoc power analysis was conducted using G*Power (Faul et al., 2009; Faul et al., 2007). With an alpha level of 0.01, a sample size of 211, and a medium effect size of 0.33, achieved power for the study was 0.999.

Burnout

Model 1, with time in the profession as the only predictor, explained 0.2% of the variance and was not statistically significant \( F (1, 209) = 1.426, p = 0.234 \). Model 2, in which the composite meta-dehumanization score was added, explained significantly more variance \( \Delta R^2 = 0.463, F (1, 208) = 181.361, p < 0.001 \). This model explains 46.4% of the variance and reflects a large effect size (Cohen’s \( f = 0.93 \)). Thus, Hypothesis 3b was supported; meta-dehumanization was found to be a significant, positive predictor of burnout \( (b = 0.230, p < 0.001) \). A post hoc power analysis was conducted using G*Power (Faul et al., 2009; Faul et al., 2007). With an alpha level of 0.01, a sample size of 211, and a large effect size of 0.93, achieved power for the study was 1.00.
Self-Efficacy

Model 1, with time in the profession as the only predictor, explained 0.3% of the variance and was not statistically significant [F (1, 209) = 0.564, p = 0.453]. Model 2, in which the composite meta-dehumanization score was added, explained significantly more variance [$\Delta R^2 = 0.059$, F (1, 208) = 13.014, p < 0.001]. This model explains 6.1% of the variance and reflects a small-medium effect size (Cohen’s $f = 0.23$). Thus, Hypothesis 3c was supported; meta-dehumanization was found to be a significant, negative predictor of self-efficacy ($b = -0.049$, p < 0.001). A post hoc power analysis was conducted using G*Power (Faul et al., 2009; Faul et al., 2007). With an alpha level of 0.01, a sample size of 211, and a small-medium effect size of 0.23, achieved power for the study was 0.999.

Ancillary Analyses

The relationships between selected demographic variables (i.e., country of residence, profession, service location, and gender), perceptions of dehumanization, and workforce threats were explored. While these variables were not specifically addressed in the research questions, they were included in the ancillary analyses based on the current literature and the demographic composition of this sample (e.g., a significant number of participants from outside the US, a broad range of professional identities, and so on) in order to generate directions for further study.
Relationship Between Country of Residence and Perceptions of Dehumanization

Because the sample included participants from both the US and Canada, it was relevant to examine the possible influence of country of residence on perceptions of dehumanization. The rationale for this is that there may be a cultural influence on first responders’ perceptions of dehumanization. To do this, a one-way between-subjects ANOVA was conducted to examine first responders’ perceptions of dehumanization in relation to country of residence. Levene’s test was significant, which indicates that the assumption of homogeneity of variance was violated. To adjust for that, an alternative $F$-statistic (Welch) was used. This revealed a significant effect of country of residence on perceptions of dehumanization [$F (1, 104.399) = 18.534, p < 0.001, \eta^2 = 0.07$ (moderate effect)].

Relationship Between Country of Residence and Workforce Threats

Because of the significant finding for the previous analysis, it was also relevant to examine the possible influence of country of residence on workforce threats. To accomplish this, one-way between-subjects ANOVAs were conducted to examine first responders’ country of residence in relation to each of the three workforce threats.

Suicidality

Levene’s test was significant, which indicates that the assumption of homogeneity of variance was violated. To adjust for that, an alternative $F$-statistic (Welch) was used. This revealed a no significant effect of country on suicidality [$F (1, 104.249) = 2.129, p = 0.147$].
**Burnout**

This revealed a significant effect of country on burnout \( F(1, 209) = 17.735, p < 0.001, \eta^2 = 0.08 \) (moderate effect). Compared to first responders in the US, first responders in Canada reported significantly higher levels of burnout \( (b = 0.219, p < 0.001) \).

**Self-Efficacy**

This revealed a significant effect of country on self-efficacy \( F(1, 209) = 18.677, p < 0.001, \eta^2 = 0.08 \) (moderate effect). Compared to first responders in the US, first responders in Canada reported significantly lower levels of self-efficacy \( (b = -0.034, p = 0.014) \).

**Hierarchical Regression Analysis to Control for Country of Residence**

Since there were significant findings linking country of residence to perceptions of dehumanization as well as two of the three workforce threats, hierarchical regression analyses were conducted to examine the relationships between perceptions of dehumanization and each of the three workforce threats while controlling for country of residence. To do this, country of residence was entered into Block 1 to control for the effects of this variable. Next, the composite meta-dehumanization score was entered into Block 2 to determine the influence of meta-dehumanization on suicidality, burnout, and self-efficacy without the influence of country of residence.
Suicidality

Model 1, with country of residence as the only predictor, explained 0.3% of the variance and was not statistically significant [$F(1, 209) = 1.692, p = 0.195$]. Model 2, in which the composite meta-dehumanization score was added, explained significantly more variance [$\Delta R^2 = 0.074, F(1, 208) = 16.919, p < 0.001$]. This model explains an additional 7.4% of the variance and reflects a medium effect size (Cohen’s $f = 0.28$). A post hoc power analysis was conducted using G*Power (Faul et al., 2009; Faul et al., 2007). With an alpha level of 0.01, a sample size of 211, and a medium effect size of 0.28, achieved power for the study was 0.999.

Burnout

Model 1, with country of residence as the only predictor, explained 7.4% of the variance and was statistically significant [$F(1, 209) = 17.735, p < 0.001$]. Model 2, in which the composite meta-dehumanization score was added, explained significantly more variance [$\Delta R^2 = 0.480, F(1, 208) = 160.938, p < 0.001$]. This model explains an additional 47.5% of the variance and reflects a large effect size (Cohen’s $f = 0.95$). A post hoc power analysis was conducted using G*Power (Faul et al., 2009; Faul et al., 2007). With an alpha level of 0.01, a sample size of 211, and a large effect size of 0.95, achieved power for the study was 1.00.

Self-Efficacy

Model 1, with country of residence as the only predictor, explained 7.8% of the variance and was statistically significant [$F(1, 209) = 18.677, p < 0.001$]. Model 2, in which the
composite meta-dehumanization score was added, explained significantly more variance \([\Delta R^2 = 0.10, F (1, 208) = 6.204, p = 0.014]\). This model explains an additional 10% of the variance and reflects a medium effect size (Cohen’s \(f = 0.33\)). A post hoc power analysis was conducted using G*Power (Faul et al., 2009; Faul et al., 2007). With an alpha level of 0.01, a sample size of 211, and a medium effect size of 0.33, achieved power for the study was 0.999.

Influence of Profession and Service Location on Perceptions of Dehumanization

Another area of interest for ancillary analysis was the possible influence of profession and/or service location on first responders’ perceptions of dehumanization. In reviewing the literature, it was noted that the “tone” of dehumanizing stereotypes can vary between first responder groups, generally due to the types of interactions each group has with the public (Kirschman, 2021). Thus, examining the influence of a first responder’s particular profession on perceptions of dehumanization is relevant. Including service location will allow for an examination of whether the type of area served (e.g., urban, suburban, rural) is significant, or whether there is any significant interaction effect between these two variables.

To examine these possibilities, a two-way between-subjects ANOVA was conducted to explore the influence of profession and service location on first responders’ perceptions of dehumanization. First, the assumptions of normality and homoscedasticity were assessed. The assumption of normality was assessed using the Shapiro-Wilk test, skewness/kurtosis, and the histogram and Q-Q plot. The Shapiro-Wilk test was not significant \((p = 0.053)\), skewness/kurtosis were not extreme (-0.317), and visual examination of the histogram and Q-Q plot suggested normality. Thus, it was found that this assumption had not been violated. The
assumption of homoscedasticity was assessed using Levene’s test of equality of error variances. Because this test was not statistically significant \( (p = 0.935) \), equality of variance can be assumed. Therefore, it was determined that this assumption had not been violated.

Following the checking of assumptions, the analysis was conducted. There was a statistically significant main effect of first responder profession on perceptions of dehumanization \( [F(5, 188) = 3.362, p = 0.006, \eta^2 = 0.07 \text{ (medium effect)}] \). However, there was no statistically significant main effect of service location (e.g., urban, suburban, rural) on perceptions of dehumanization \( [F(3, 188) = 1.46, p = 0.228] \). There was also no statistically significant profession \( \times \) service location interaction effect on perceptions of dehumanization \( [F(14, 188) = 0.867, p = 0.596] \). Pairwise comparisons showed significant differences between fire service and law enforcement personnel (mean difference = -23.725, \( p = 0.002 \)) and between fire service and EMS personnel (mean difference = -17.885, \( p = 0.017 \)). Based on these analyses, fire service personnel perceive themselves as dehumanized at a significantly lower rate than law enforcement and EMS.

**Relationship Between First Responder Profession and Workforce Threats**

Another area of interest for ancillary analysis was the possible influence of profession on workforce threats. The rationale for this is the same as for examining the possible influence of profession on first responders’ perceptions of dehumanization as outlined in the previous section. To do this, a one-way between-subjects ANOVA was conducted to examine each workforce threat in relation to first responder profession. This revealed a significant effect of profession on level of burnout only \( [F(5, 205) = 6.232, p < 0.001, \eta^2 = 0.13 \text{ (moderate-large effect)}] \).
was no significant effect of profession on suicidality or self-efficacy \( (p = 0.226 \text{ and } p = 0.155, \text{ respectively}) \).

Since a significant effect was found with regard to profession and level of burnout, the Bonferroni post hoc test was employed. Using this test, significant differences were found between fire service and law enforcement personnel (mean difference = -8.93, \( p < 0.001 \)), fire service and EMS personnel (mean difference = -6.33, \( p < 0.001 \)), fire service and hospital emergency department personnel (mean difference = -7.85, \( p = 0.021 \)), and fire service personnel and those holding/having held multiple first responder roles (mean difference = -6.47, \( p = 0.017 \)). Based on these analyses, fire service personnel experience significantly lower levels of burnout than law enforcement, EMS, and emergency department personnel as well as those who hold/have held multiple first responder roles.

**Gender Differences in Perceptions of Dehumanization Among First Responders**

The final area of interest for ancillary analysis was the possible role of gender in first responders’ perceptions of dehumanization. As discussed previously, most first responder professions tend to be male dominated (Fahy et al., 2021; Schafer et al., 2015; Zippia, 2022a-e), so examining any potential gender differences is relevant. Since the majority of the sample consisted of male-identified and female-identified individuals (53.6\% and 45.0\%, respectively), the scope of this analysis was limited to those two groups. An independent \( t \) test was conducted but showed no significant difference between male-identified and female-identified first responders \( (t = 0.512, df = 206, p = 0.610) \).
Summary

This chapter included descriptive details about the participants followed by an overview of the data processing and statistical results associated with the planned analyses. Additionally, this chapter outlined the ancillary analyses that were conducted. The purpose of this study was to examine the relationship between perceptions of dehumanization and workforce threats while controlling for time in the profession. To accomplish this, 211 participants completed questionnaires assessing meta-dehumanization, organizational meta-dehumanization, suicidality, burnout, and self-efficacy. Based on the hierarchical regression analyses, statistically significant relationships were found between perceptions of dehumanization and each of the three workforce threats. Results from ancillary analyses indicate that these relationships continued to be statistically significant even after controlling for country of residence (US or Canada). The next chapter will summarize the key findings and their implications, acknowledge limitations of the present study, and suggest recommendations for future research.
CHAPTER 5
DISCUSSION

The previous chapter described the processing of data and statistical results associated with both planned and ancillary analyses. The purpose of this final chapter is to summarize key findings and the implications of those findings and relate them to the counseling profession. This chapter will also acknowledge the potential limitations of the study and provide recommendations for future research.

Overview of the Study

The past few years have been particularly trying for first responders in the US. COVID-19, political and civil unrest, and economic downturn have stretched the first responder workforce thinner than ever, leading to severe understaffing and delays in emergency care (Casto, 2022; Fitzgerald, 2021; Kath & Solowski, 2022; Quinton, 2021; Stamp, 2022). Because having too few first responders on duty inevitably affects public safety (Bethea et al., 2020), it was crucial to examine and better understand issues that threaten the workforce. Previous literature (e.g., Caesens et al., 2017; Fontesse et al., 2021; Hagerty & Williams, 2022; Moriano et al., 2021; Nguyen & Stinglhamber, 2018) had established a link between experiences of dehumanization and workforce threats in a variety of populations, but no known published study has specifically examined whether these correlations existed among first responders. Thus, this study was designed to examine the relationships between first responders’ experiences of meta-dehumanization and workforce threats including suicidality, burnout, and diminished self-
efficacy. It was hypothesized that meta-dehumanization would be a significant predictor of each of the three identified workforce threats.

In order to test the research hypotheses, 211 first responders (defined as fire service, EMS, law enforcement, emergency department, 911/dispatch, search-and-rescue, and National Guard personnel) were recruited to voluntarily complete a demographic questionnaire and the five assessment instruments. Data exploration included collecting descriptive statistics on the participants and their responses and calculating the reliability of the instruments utilized. This was followed by statistical analysis of the data. A Pearson product moment correlation coefficient was calculated to determine the relationship between meta-dehumanization and organizational meta-dehumanization among first responders. A one-way between-subjects ANOVA was conducted to assess whether first responders’ perceptions of dehumanization differ based on time in the profession. Hierarchical regression analyses were utilized to examine the relationships between perceptions of dehumanization and each of the three workforce threats while controlling for time in the profession. Finally, in addition to the planned analyses, several ancillary analyses were conducted to determine relationships between country of residence (US or Canada) and meta-dehumanization; country of residence and each of the three workforce threats; profession, service location, and meta-dehumanization; and gender and meta-dehumanization.

Key Findings

The findings of this study indicate that first responders experience meta-dehumanization and that such experiences significantly predict all three workforce threats (suicidality, burnout,
and self-efficacy). Although the link between dehumanization and these workforce threats have been established for a variety of populations in the existing literature, no known published studies have done so for first responders. Thus, this study has expanded upon and added to the existing literature by documenting these correlations for this population.

**Findings from Planned Analyses**

The preliminary analyses demonstrated a statistically significant relationship between meta-dehumanization and organizational meta-dehumanization among first responders (Hypothesis 1). However, there was no significant relationship found between time in the profession and meta-dehumanization (Hypothesis 2). The main analysis documented statistically significant relationships between perceptions of dehumanization and all three workforce threats – suicidality (Hypothesis 3a), burnout (Hypothesis 3b), and self-efficacy (Hypothesis 3c) – when controlling for time in the profession.

**Findings from Ancillary Analyses**

Ancillary analyses also yielded important findings. First, country of residence was found to be a significant predictor of perceptions of dehumanization and two of the three workforce threats (burnout and self-efficacy). Specifically, first responders in Canada reported higher levels of meta-dehumanization, higher levels of burnout, and lower levels of self-efficacy than first responders in the US. Because of this, additional hierarchical regression analyses were conducted to examine the relationships between perceptions of dehumanization and workforce threats while controlling for country of residence. These analyses revealed that meta-dehumanization
continued to be a significant predictor of all three workforce threats even after controlling for country of residence.

Second, first responder profession was found to be a significant predictor of meta-dehumanization and one of the three workforce threats, burnout. Specifically, fire service personnel reported significantly lower levels of meta-dehumanization in comparison with law enforcement and EMS as well as significantly lower levels of burnout in comparison with law enforcement, EMS, emergency department personnel, and those who hold/have held multiple first responder roles. This may be related to disparities in how different first responder groups are dehumanized. As discussed in Chapter 2, the tone of stereotypes about first responders differs between groups, with stereotypes about firefighters usually being much more positive than those about some other groups (Kirschman, 2021). Additional research may be warranted to further examine these between-group variations.

**Summary of Key Findings**

The findings from this study both support and expand upon existing literature. Previous studies (e.g., Fontesse et al., 2021; Hagerty & Williams, 2022; Moriano et al., 2021) had already documented relationships between meta-dehumanization and the workforce threats outlined in this manuscript, but no known published studies had established this connection specifically for first responders. The findings of this study demonstrate positive correlations between first responders’ experiences of meta-dehumanization and suicidality and burnout as well as a negative correlation between first responders’ experiences of meta-dehumanization and self-efficacy. This both supports the findings of previous studies that likewise documented such
correlations and also expands upon those findings by establishing these correlations for first responders.

Discussion of the Findings

As mentioned above, the results of the analyses support Hypotheses 1, 3a, 3b, and 3c. Hypothesis 2, conversely, was not supported. In this section, the results of the hypotheses will be discussed.

Hypothesis 1

Hypothesis 1 predicated that there would be a significant and positive relationship between meta-dehumanization and organizational meta-dehumanization among first responders. A Pearson correlation coefficient was calculated to test this hypothesis, and the results support Hypothesis 1; there was a significant, positive correlation between the two variables. It was a low-moderate correlation. The low-moderate correlation was not necessarily surprising. Although both measures sought to examine the construct of meta-dehumanization, they were doing so in different contexts (e.g., a general measure of meta-dehumanization vs. a measure of meta-dehumanization experienced in the workplace). No other published studies were found examining a correlation between these two measures, so a comparison in that regard cannot be made at this time. However, it is also noteworthy that the internal reliability of the composite of the two measures of meta-dehumanization was excellent, with a Cronbach’s alpha of 0.907.
Hypothesis 2

Hypothesis 2 predicted that there would be a significant positive correlation between first responders’ perceptions of dehumanization and time in the profession. A one-way between-subjects ANOVA was conducted to test this hypothesis, but the results did not support Hypothesis 2; there was no significant effect of time in the profession on first responders’ perceptions of dehumanization. This was interesting because although no other published studies were found examining this specific correlation, there were studies that demonstrated correlations between time in the profession and the workforce threats examined in this study. Some specific examples include findings indicating that greater time in the profession is correlated with increased burnout and decreased self-efficacy among first responders (Makara-Studzińska et al., 2020; Reardon et al., 2020; Regehr et al., 2003; Stanetić & Tešanović, 2013). Thus, it was anticipated that longer exposure to the profession (and the apparent dehumanizing forces present) would have significantly impacted meta-dehumanization, but that does not seem to be the case. It seems plausible that the exceptional events experienced by first responders in 2020 and beyond could have served to override the variable of time in the profession, but since no previous studies examined this potential correlation among first responders prior to 2020, there is no way to verify this theory.

Hypothesis 3

Hypothesis 3 predicted that, when controlling for time in the profession, there would be significant and positive correlations between perceptions of dehumanization and levels of
suicidality and burnout as well as a significant and negative correlation between perceptions of
dehumanization and levels of self-efficacy among first responders. Three separate hierarchical
regression analyses were conducted to test this three-pronged hypothesis. The results support
Hypotheses 3a-c.

Hypothesis 3a: Suicidality

Per the results of the first hierarchical regression analysis, meta-dehumanization was
found to be a significant, positive predictor of suicidality. This finding is consistent with
previous literature that found such correlations within other populations (e.g., Hagerty &
Williams, 2022). However, this finding also adds to the existing literature by documenting this
correlation within the first responder population.

The findings from this analysis also show that 9.9% of the variance in suicidality scores
was explained by meta-dehumanization, which reflected a medium effect size. This could be
because of the stigma that surrounds the topic of suicide. This stigma is even further exacerbated
by first responder culture (Kirschman, 2021). Although research (e.g., Crutzen & Göritz, 2010)
indicates that the influence of social desirability on Internet-based, anonymous surveys is not
significant, it is possible that there was underreporting of this particular construct.

Hypothesis 3b: Burnout

Per the results of the second hierarchical regression analysis, meta-dehumanization was
found to be a significant, positive predictor of burnout. This finding is consistent with previous
literature that found such correlations within other populations (e.g., Caesens & Stinglhamber,
However, this finding also adds to the existing literature by documenting this correlation within the first responder population. The findings from this analysis also show that 46.4% of the variance in burnout scores was explained by meta-dehumanization, which reflected a large effect size.

**Hypothesis 3c: Self-Efficacy**

Per the results of the third hierarchical regression analysis, meta-dehumanization was found to be a significant, negative predictor of self-efficacy. This finding is consistent with previous literature that found such correlations within other populations (e.g., Fontesse et al., 2021; Sarwar et al., 2021). However, this finding also adds to the existing literature by documenting this correlation within the first responder population.

The findings from this analysis also show that 6.1% of the variance in self-efficacy scores was explained by meta-dehumanization, which reflected a small-medium effect size. This can potentially be attributable to the fact that first responders are wary of anything they perceive as a threat to their identity and/or career (Henderson et al., 2016; Kirschman, 2021), which may have potentially led to underreporting of diminished self-efficacy. Additionally, first responders receive extensive and ongoing training related to their jobs (Kirschman, 2018, 2021; Kirschman et al., 2014), so that could have been a protective factor with regard to self-efficacy.

**Implications of the Study for the Counseling Profession and Beyond**

“There comes a point where we need to stop just pulling people out of the river. We need to go upstream and find out why they are falling in.”
- Desmond Tutu, South African Bishop and 1984 Nobel Prize recipient
The findings of this study, particularly in combination with previous studies, have a number of important implications for the counseling profession and beyond. This study has demonstrated that first responders experience meta-dehumanization and that such experiences significantly predict workforce threats including suicidality, burnout, and decreased self-efficacy. Prior research showed that each of those variables detracts from the workforce, whether through death, attrition/early retirement, or diminished capacity.

Previous research findings demonstrated that dehumanization and meta-dehumanization yield other serious consequences, as well. Such consequences include, but are not limited to, violence/aggression toward the dehumanized person or group, emotional exhaustion, decreased subjective well-being, decreased care and concern for others, poor job performance, moral disengagement, other-harming unethical/immoral behaviors, and increased tendency to dehumanize others (Delgado et al., 2021; Ellawala, 2016; Haslam & Loughnan, 2014). The latter, in particular, can generate a vicious cycle of reciprocal dehumanization and subsequent intergroup aggression/violence (Bastian & Haslam, 2011; Kteily et al., 2016; Renger et al., 2016; Zlobina & Andujar, 2021). Based on the existing literature and the findings of this study, it is reasonable to believe that these consequences affect first responders, as well (Figure 3). In fact, previous studies have found correlations between police officers’ experiences of meta-dehumanization and dehumanizing beliefs toward others (Zlobina & Andujar, 2021) and between dehumanizing beliefs and police violence (Reinka & Leach, 2017; Zlobina & Andujar, 2021). Taken together, this reinforces what was suggested by Howard and Navega (2018): not attending to the needs of the helper is harmful to both the helper and those whom they are charged with helping. Thus, there are clinical and academic implications for the counseling profession as well.
As discussed in Chapter 2, evidence exists that indicates that first responders experience mental health concerns and workforce threats at a higher rate than civilians (Benincasa et al., 2022; Heyman et al., 2018; SAMHSA, 2018), especially after accounting for the “healthy worker effect” (Stanley et al., 2016). However, the findings of this study indicate that mental health concerns and workforce threats may merely be symptoms of a much larger issue: dehumanization. Therefore, it behooves the counseling profession, first responder organizations/leadership, and policymakers to “go upstream” in an effort to identify and address root causes.
Implications for the Counseling Profession

Counselors and counselor educators are in a unique position to support first responders on multiple levels, from individual to systemic. However, they must first be adequately prepared to do so (Kirschman et al., 2014). The findings of this study, especially in context with previous literature, can help better equip the counseling profession to meet the mental health and vocational needs of this underserved population (Lanza et al., 2018).

Implications for Counseling Practice

This study contributes increased understanding of how first responders’ perceptions of public stereotypes and first responder culture may serve to dehumanize people in first responder roles. It has also highlighted correlations between meta-dehumanization and suicidality, burnout, and self-efficacy and, taken in context with previous literature, the subsequent negative consequences for the individual first responder, the workforce, and public safety. Thus, the counseling profession can focus on building capacity for addressing these issues within the counseling milieu (i.e., individual and microsystem levels).

First, counselors have an ethical responsibility to cultivate their knowledge and awareness of multiculturalism and effectively implement cultural sensitivity in their work with clients (ACA, 2014). Engaging in self-reflection to address possible counselor bias and/or countertransference may also be beneficial because, as noted in Chapter 2, even well-intentioned “hero” stereotypes can be detrimental to first responders’ well-being (Lanza et al., 2018). Counselors must also be able to effectively manage their own emotional responses to the first
responder’s story so the first responder is not put in the position of feeling responsible for “rescuing” the clinician (Kirschman, 2021; Phillips, 2020).

Understanding first responder culture can also help counselors recognize that first responders are mistrustful of anything they perceive as a threat to their identity and/or career, and the stigma surrounding mental health makes seeking mental healthcare just such a threat (Henderson et al., 2016; Kirschman, 2021). Additionally, previous literature (e.g., Bastian & Haslam, 2011; Kteily et al., 2016) has classified meta-dehumanization as an identity threat.

Counselors, therefore, must be able to understand first responder culture and how that layer of cultural identity can impact the individual, their beliefs about help seeking, and possible internalized dehumanization in order to provide competent care. It may be beneficial for the counselor to partner with an expert in the culture, which in this case may be a first responder peer, or to at least get “buy-in” from potential mentors. Further, group affirmation interventions may help buffer against devaluation (Kteily et al., 2016).

Another way in which counselors can address dehumanization within the counseling space is to acknowledge that perceptions of dehumanization are not necessarily objectively true. There is research that suggests that people tend to overestimate the extent to which the views of others/other groups differ from their own, so it is plausible that perceptions of dehumanization could be similarly skewed (Kteily et al., 2016). If this is also the case for first responders, counselors could address this as a type of cognitive distortion (e.g., overgeneralization, personalization, or mental filtering) that is then challenged with information that may disconfirm perceptions of dehumanization.
Finally, counselors can also explore any dehumanizing beliefs first responders may hold toward others. While maintaining unconditional positive regard, this may include assisting with self-reflection to identify, challenge, and replace such beliefs as well as to gain an understanding of how such beliefs may have impacted their behavior. In particular, examining the potential for often-unnoticed forms of maltreatment like microaggression and microinvalidation (Bastian & Haslam, 2011) may be an important first step toward breaking cycles of reciprocal dehumanization.

**Implications for Counselor Education, Scholarship, and Advocacy**

In addition to all that can be accomplished within the counseling space, the ability of the counseling profession to intervene extends well beyond the individual and microsystem levels. At the mesosystem level, counselors may work with first responder organizations and leadership to implement programs geared toward decreasing stigma, which “may allow [first] responders to utilize already established deep relational bonds with colleagues” (Edwards & Wilkerson, 2020). At the exosystem level, scholars can identify additional and ongoing research opportunities for continuing to expand the knowledge base, and educators can incorporate information about first responders and first responder culture into counselor education curricula. Finally, at the macrosystem level, counselors can seek out opportunities to advocate for and with this underserved population within their workplaces, society at large, and legislatively, helping others to understand that first responders are human beings with human limitations, faults, and emotions.
Systemic and Sociopolitical Implications

In addition to the implications specific to the counseling profession, there are also systemic and sociopolitical implications that are relevant not only to the counseling profession but perhaps also to first responder organizations, leadership, stakeholders, and policymakers. Based on the results of this study, first responders perceive themselves to be dehumanized at the organizational level and the societal level. To address either of these at their core, a systemic approach is necessary.

At the organizational level, leaders, stakeholders, and policymakers, potentially in partnership with counselors, need to recognize the existence of organizational dehumanization within first responder professions and take steps to alleviate it. The findings of this study indicate that first responders experience meta-dehumanization at the organizational level and that such experiences significantly threaten the workforce. Even if employees’ perceptions of dehumanization are not objectively true, perception is reality (Mosak & Maniacci, 1999), which means that the objective accuracy (or inaccuracy) of the perception is unlikely to influence the consequences. Programs aimed at improving working conditions may be beneficial, as feeling powerless and disrespected contribute to perceptions of dehumanization (Renger et al., 2016; Yang et al., 2015; Zlobina & Andujar, 2021). While first responder professions are inherently stressful, which cannot necessarily be changed, the work environment and workplace dynamics are within the control of organizational leadership. For instance, promoting security-providing leadership behaviors can help foster trust, mutual respect, and a sense of being able to turn to leadership in case of problems/difficulties (Moriano et al., 2021). Additionally, upper-level
leadership, stakeholders, and policymakers can enact changes for attracting and retaining first responder employees, which would alleviate staffing shortages, decrease individual workloads and mandatory overtime, and allow employees to utilize accrued time off (which also prevents burnout). Finally, a cultural shift focused on destigmatizing mental health and seeking mental healthcare, developing more robust EAP services, and/or providing financial assistance to first responders who wish to seek mental healthcare could promote workforce wellness.

At the societal level, there are potential sociopolitical implications surrounding systemic racism and much-needed police reform. Although systemic racism and reciprocal dehumanization were not specific foci of this study, the findings indicate that first responders do experience meta-dehumanization, and previous research has already demonstrated a link between experiences of meta-dehumanization and a tendency to dehumanize others, resulting in reciprocal dehumanization (Kteily et al., 2016). Additionally, it is known from existing literature that reciprocal dehumanization creates conditions for mutual disrespect and denial of humanness (Zlobina & Andujar, 2021) and that it tends to escalate conflict between groups (Kteily et al., 2016). Experiencing dehumanization can also lead to moral disengagement and other-harming unethical behavior (Renger et al., 2016), which may explain (although certainly not excuse) police brutality and perhaps even how protests can sometimes devolve into riots. Consequently, additional attention is needed, which will be discussed later in this chapter when suggestions for further research are provided.

Conservatively, when taken in context with earlier literature associating meta-dehumanization with reciprocal dehumanization, the findings of this study demonstrating that first responders (including law enforcement) do perceive themselves to be dehumanized could
have implications for police reform and perhaps even restorative practices between law enforcement and the public, particularly communities of color. The solutions are certainly not simple, as “many dehumanizing perceptions are rooted in stereotypes and intergroup relations that have long histories,” and such perceptions are often unconscious and automatic (Haslam & Loughnan, 2014, p. 417). However, with awareness comes responsibility. Moller and Deci (2009) discussed a need for authority figures to resist meeting violence with violence (or any other means that diminish autonomy) because such strategies ultimately induce even greater violence as a function of dehumanization. In other words, to combat reciprocal dehumanization, the cycle of violence must be interrupted, and intergroup aggression/violence must be denormalized. Given the inherent power differential, meaningful change would need to begin within the law enforcement system.

Potential Limitations of the Study

This study did have some potential limitations. First, all the measures in this study were self-report inventories, which means that participants reported beliefs, attitudes, and behaviors without assistance from a researcher (Vogt & Johnson, 2016). As a result, instrumentation error is a possibility in that there was not a researcher present to administer the surveys or answer questions. However, contact information was provided several times throughout the online survey. Although some participants did reach out, the purpose seemed to be to provide additional context from their lived experiences; none of the participants reached out to ask questions about the questionnaires. Additionally, existing instruments were chosen based on their strong evidence base and internal reliability to minimize error.
In addition to possible instrumentation error, there was also the potential for response bias, which can occur when self-report measures are used (Vogt & Johnson, 2016). It is sometimes related to social desirability bias, in which participants wish to “look good” in the survey, even if it is anonymous (Rosenman et al., 2011). Although the surveys in this study were anonymous, the variables being measured were somewhat sensitive in nature (e.g., suicidality), so there is the potential that some participants may have underreported. Alternatively, there may have been a tendency for participants to try to answer in a certain way in an effort to help a fellow first responder. Although research (e.g., Crutzen & Göritz, 2010) indicates that the influence of social desirability on Internet-based, anonymous surveys is not significant, even a slight possibility must be acknowledged.

Another potential limitation has to do with the sampling methods utilized. The use of nonprobability sampling means that it cannot be asserted with confidence that the sample is representative of the overall population (Creswell & Guetterman, 2019; Vogt & Johnston, 2016). There is also the consideration of possible differences between people who choose to participate in research versus those who do not.

The sampling methods also inevitably affected the composition of the sample. For the most part, the demographic make-up of the sample mirrored the demographic make-up of the overall first responder population in the US (i.e., predominantly White, male, and heterosexual/cisgender; Data USA, 2022a-d; Schafer et al., 2015; Zippia, 2022a-e). However, the majority of the sample (41.7%) were located in the Southeast region of the US. The second largest subsample (24.2%) were located in Canada. The original focus of this study was on first responders in the US, so obtaining such a large proportion of Canadian first responders was not
necessarily intended or expected. However, the Canadian first responders were not excluded from the sample. The reason for this is that despite the subject matter being sensitive and stigmatized, it was important enough that so many Canadian first responders took the time and energy to complete a survey for a doctoral candidate in another country. Therefore, I felt that it was important for their experiences to be included in the study.

There are also some limitations regarding the results themselves. Primarily, correlation does not prove causation. Therefore, a causal relationship between perceptions of dehumanization and workforce threats cannot be conclusively determined at this time. Additionally, as stated earlier in this chapter, perceptions do not equate to objective truth. The results of this study indicate that first responders perceive themselves to be dehumanized, not that they actually are dehumanized. However, this distinction does not necessarily alter the consequences of such experiences.

Finally, although the findings of this study build upon and extend the previous literature, additional research is still needed to further support some of the deductions outlined in the discussion of implications. For instance, this study found that first responders in the US and Canada do experience meta-dehumanization, and prior studies have already noted a positive correlation between meta-dehumanization and reciprocal dehumanization. However, further research is needed to corroborate such a correlation specifically with first responders. Thus, the sociopolitical implications noted earlier must be considered prudently.

In summary, the results of this study must be interpreted within the context of these potential limitations. Generalizability may be affected by the sample, which was self-selected and predominantly located in the Southeast region of the US (as opposed to equally distributed).
Further, although participants were provided with the researcher’s contact information to ask questions or express concerns, there is the possibility that some of the survey items may have been misinterpreted since there was no researcher present to administer the surveys or answer questions. However, the limitations of this study were limitations of necessity, and every effort was made to minimize error. Additionally, although some inferences can be made regarding the findings of this study in context with prior research, further corroboration is needed to better support such inferences. These potential limitations do influence how the results are to be interpreted, but they also lead to opportunities for ongoing research, which will be discussed in the next section.

Recommendations for Future Research

As mentioned in previous sections of this chapter, this study has contributed to the existing literature by documenting correlations between first responders’ experiences of meta-dehumanization and workforce threats including suicidality, burnout, and self-efficacy; between country of residence and experiences of meta-dehumanization, burnout, and self-efficacy; and between first responder profession and experiences of meta-dehumanization and burnout. The findings have also highlighted areas of need for ongoing research.

First, it is important to note that meta-dehumanization refers to perceptions of dehumanization, and perception does not necessarily correspond with objective reality. The results of this study indicate that first responders in the US and Canada perceive themselves to be dehumanized, not that they actually are dehumanized. While this distinction does not necessarily alter the consequences of such experiences, it may be worth examining the extent to which the
general public and first responder organizations actually do hold dehumanizing beliefs or engage in dehumanizing practices toward first responders. As mentioned previously, the results of such research could inform how counselors address meta-dehumanization within the counseling milieu.

Second, perhaps one of the most concerning potential outcomes of meta-dehumanization is increased tendency to dehumanize others. Only one study (Zlobina & Andujar, 2021) was found examining this, and it was focused specifically on law enforcement with a relatively small sample size (N = 77) prior to the events of 2020. However, research with other populations has established that feeling dehumanized and dehumanizing others are correlated (reciprocal dehumanization), and reciprocal dehumanization creates conditions for mutual disrespect, conflict escalation, moral disengagement, and other-harming unethical behavior (Kteily et al., 2016; Renger et al., 2016; Zlobina & Andujar, 2021). Thus, because of the potential public safety and sociopolitical implications, it may be beneficial to further examine this connection between meta-dehumanization and dehumanizing behavior toward others among first responders, particularly law enforcement. Such findings could have implications for police reform and perhaps even restorative practices between law enforcement and the public, particularly communities of color.

Third, this study revealed some between-group differences based on country of residence and first responder profession. Specifically, it was noted that first responders in Canada reported higher levels of meta-dehumanization, higher levels of burnout, and lower levels of self-efficacy than first responders in the US, and fire service personnel reported significantly lower levels of meta-dehumanization and burnout than some other first responder professions. Additional
research may be warranted to further examine these between-group variations. In particular, qualitative studies may offer a more in-depth exploration of factors that may be contributing to experiences of meta-dehumanization for these different groups, which could help inform efforts to better support first responders in their respective countries and/or professions.

Finally, it has been noted by Haslam and Loughnan (2014) that strategies for decreasing dehumanization and humanizing dehumanized groups have received little attention in the literature. This study has documented that first responders’ experiences of meta-dehumanization are correlated with suicidality, burnout, and self-efficacy, and a review of the literature has detailed myriad other consequences associated with dehumanization, many of which could negatively impact the workforce, public safety, and the sociopolitical climate. Thus, it behooves the counseling profession to study ways in which “rehumanization” can be achieved.

Conclusion

The purpose of this study was to examine the relationships between first responders’ experiences of meta-dehumanization and workforce threats including suicidality, burnout, and decreased self-efficacy. A total of 211 first responders participated in the study, and results indicate that perceptions of dehumanization are significantly correlated with all three workforce threats, even when controlling for time in the profession and country of residence. Additionally, results show between-group differences with regard to first responder profession, which may be related to disparities in how different first responder groups are dehumanized (i.e., animalistically, mechanistically, or deistically). These findings are noteworthy in that they add to and expand upon existing literature and invite a deeper and more empathic examination of the
experiences of first responders. They also yield implications for the counseling profession; first responders themselves; first responder organizations, leadership, and stakeholders; and potentially even police reform. Additional and ongoing research is needed to gain additional understanding of factors that affect first responders’ perceptions of dehumanization, the consequences of such perceptions, and ways to (re)humanize first responders in the eyes of the public, their organizations, and themselves.
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APPENDIX A

RECRUITMENT FLYER
Are you a first responder?

If you are 18 or older and are/were a first responder (paid or volunteer), you may be eligible to participate in an "ANONYMOUS" research study.

Study for adults in first responder roles

First responders play a critical role in public safety. These already-high-stress professions have been made even more so in recent years due to COVID-19, tremendous political and civil unrest, and recent economic downturn. While understaffing and stress are not unusual within first responder professions, the past few years have stretched the workforce thinner than ever.

The purpose of this study is to examine the effect of stereotypes (e.g., superhero, robot/machine) on the first responder workforce.

I am looking for adults (18 years or older) who hold or have held at least one first responder role (i.e., law enforcement, fire service, EMS, search-and-rescue, 911/dispatch, ER doctor/nurse, or National Guard).

Participants will be asked to:
- Fill out an anonymous online survey that includes a basic demographic survey followed by a brief questionnaire (~10 minutes).

Location
- 100% online! To access the survey, click [here] or scan the QR code below.

Are you eligible?
- Age 18 or older
- Hold or have held at least one first responder role (active or retired, paid or volunteer).

Questions?
Contact the researcher:
Kari Mika-Lude,
MA, LPC (WV), LCPC (IL), NCC, NREMT
Doctoral (PhD) Candidate
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Northern Illinois University | College of Education | Department of Counseling and Higher Education
APPENDIX B

DEMOGRAPHIC QUESTIONNAIRE
1. What is your current age?
   a. 18-24
   b. 25-34
   c. 35-44
   d. 45-54
   e. 55-64
   f. 65+

2. What is your gender?
   a. Female
   b. Male
   c. Non-binary/non-conforming
   d. Trans*
   e. Prefer to self-describe: ____________________
   f. Prefer not to respond.

3. What is your racial/ethnic identity? Select any/all that apply.
   a. African American or Black
   b. Asian
   c. Caucasian or White
   d. Hispanic/Latinx
   e. Native American or Alaska Native
   f. Native Hawaiian or Other Pacific Islander
   g. Multiracial
4. What is/was your PRIMARY first responder profession?
   a. Law enforcement
   b. Firefighter
   c. Firefighter/EMS
   d. Emergency Medical Services (EMS)
   e. Emergency Department (e.g., physician, nurse)
   f. 911/dispatch
   g. Search-and-rescue
   h. National Guard
5. If you would like to further specify your profession, please do so: ___________________
6. How long have you served or did you serve in ANY first responder role?
   a. Less than 1 year
   b. 1-3 years
   c. 3-5 years
   d. 3-4 years
   e. 5-10 years
   f. 10-15 years
   g. 15+ years
7. As a first responder, are you currently (select the option that best applies):
   a. Employed for wages full time.
   b. Employed for wages part time.
c. A volunteer.
d. A trainee.
e. Not currently working as a first responder due to personal/family reasons.
f. Not currently working as a first responder due to disability/health reasons.
g. Not currently working as a first responder for other reasons.
h. Not currently working as a first responder but actively seeking work as a first responder.
i. Retired.
j. Other (specify): __________________________

8. If you would like to further specify your employment status as a first responder, please do so: ______________________________

9. Have you ever served in the military?
   a. Yes
   b. No

10. If you answered yes to question #10, please specify the branch of the military in which you served: ______________________________

11. In what city/state are you located? ______________________________

12. How would you describe the primary location in which you serve/served as a first responder?
   a. Urban
   b. Suburban
   c. Rural
d. Combination

13. What is the highest level of education you COMPLETED?
   a. Some high school, no diploma
   b. High school or equivalent (i.e., GED)
   c. Some college, no degree
   d. Trade/technical/vocational training
   e. Associate’s degree
   f. Bachelor’s degree
   g. Master’s degree
   h. Professional/doctoral degree

14. What is your current relationship status?
   a. Single, never married
   b. Married or domestic partnership
   c. Separated
   d. Divorced
   e. Widowed

15. What is/was your YEARLY income as a first responder?
   a. N/A; I am/was a volunteer.
   b. Less than $20,000
   c. $21,000 to $35,000
   d. $36,000 to $50,000
   e. $51,000 to $75,000
f. $76,000 to $100,000
g. Greater than $100,000
h. Prefer not to respond.

16. What is your religious/spiritual affiliation, if any? If none, just type N/A. ____________

17. Have you ever received a mental health diagnosis (e.g., depression, anxiety, PTSD, etc.)?
   a. Yes
   b. No
   c. I’m not sure.

18. If you answered yes to question #18 and wish to specify what diagnosis/es you have received, please do so: ________________________________
APPENDIX C

MEASURE OF META-DEHUMANIZATION

(Bastian et al., 2012; Sainz et al., 2021)
In this section, you will rate each statement on a scale from 1-7, where 1 = not at all and 7 = very much so. The term “people” refers to people in general, such as the general public. Please rate how true each statement is for your role as a first responder.

**Human Nature (HN)**

1. People see me as responsive, warm, and capable of emotion.
2. People see me as superficial, like I have no depth.
3. People see me as open-minded, like I can think clearly about things.
4. People see me as mechanical and cold, like a robot.

**Human Uniqueness (UH)**

5. People see me as refined and cultured.
6. People see me as rational, logical, and intelligent.
7. People see me as unsophisticated.
8. People see me as lacking self-restraint, like an animal.
APPENDIX D

MEASURE OF ORGANIZATIONAL META-DEHUMANIZATION

(Caesens et al., 2017)
In this section, you will rate each statement from 1-7, where 1 = not at all and 7 = very much so.

The term “organization” refers to the organization(s) for which you work(ed) or volunteer(ed) as a first responder. Please consider how true each statement is for your role as a first responder.

1. My organization makes me feel that one worker is easily as good as any other.

2. My organization would not hesitate to replace me if it enabled them to save money or make more profit.

3. If my job could be done by a machine or a robot, my organization would not hesitate to replace me with this new technology.

4. My organization considers me as a tool to use for its own ends.

5. My organization considers me as a tool devoted to its own success.

6. My organization makes me feel that my only importance is my performance at work.

7. My organization is only interested in me when it needs me.

8. The only thing that counts for my organization is what I can contribute to it.

9. My organization treats me as if I were a robot.

10. My organization considers me as a number.

11. My organization treats me as if I were an object.
APPENDIX E

THE SUICIDE BEHAVIORS QUESTIONNAIRE-REVISED (SBQ-R)

(Osman et al., 2001)
Suicidality is simply defined as “the risk of suicide, usually indicated by suicidal ideation (thoughts) or intent”.

Please select the statement or phrase that best applies to you.

Have you ever thought about or attempted to kill yourself?

1 = Never
2 = It was just a brief passing thought.
3a = I have had a plan at least once to kill myself but did not try to do it.
3b = I have had a plan at least once to kill myself and really wanted to die.
4a = I have attempted to kill myself but did not want to die.
4b = I have attempted to kill myself and really hoped to die.

How often have you thought about killing yourself in the past year?

1 = Never
2 = Rarely (1 time)
3 = Sometimes (2 times)
4 = Often (3-4 times)
5 = Very often (5 or more times)

Have you ever told someone that you were going to commit suicide, or that you might do it?

1 = No
2a = Yes, at one time, but I did not really want to die.
2b = Yes, at one time, and I really wanted to die.
3a = Yes, more than once, but I did not really want to do it.
3b = Yes, more than once, and I really wanted to do it.
How likely is it that you will attempt suicide someday?

0 = Never
1 = No chance at all
2 = Rather unlikely
3 = Unlikely
4 = Likely
5 = Rather likely
6 = Very likely
APPENDIX F

PROFESSIONAL QUALITY OF LIFE (ProQOL) SCALE – BURNOUT SUBSCALE

(Stamm, 2009)
In this section, you will rate each statement on a scale from 1-5, where 1 = never and 5 = very often. Please rate how true each statement is for your role as a first responder.

1. I am happy.
2. I feel connected to others.
3. I am not as productive at work because I am losing sleep over traumatic experiences as a helper.
4. I feel trapped in my job as a helper.
5. I have beliefs that sustain me.
6. I am the person I always wanted to be.
7. I feel worn out because of my work as a helper.
8. I feel overwhelmed because my workload seems endless.
9. I feel “bogged down” by the system.
10. I am a very caring person.
APPENDIX G

GENERAL SELF-EFFICACY (GSE) SCALE

(Schwarzer & Jerusalem, 1995)
Self-efficacy refers to one’s belief in their ability to successfully complete a task. In this section, you will rate each statement on a scale from 1-4, where 1 = not at all true and 4 = exactly true. Please rate how true each statement is for your role as a first responder.

1. I can always manage to solve difficult problems if I try hard enough.
2. If someone opposes me, I can find the means and ways to get what I want.
3. It is easy for me to stick to my aims and accomplish my goals.
4. I am confident that I could deal efficiently with unexpected events.
5. Thanks to my resourcefulness, I know how to handle unforeseen situations.
6. I can solve most problems if I invest the necessary effort.
7. I can remain calm when facing difficulties because I can rely on my coping abilities.
8. When I am confronted with a problem, I can usually find several solutions.
9. If I am in trouble, I can usually think of a solution.
10. I can usually handle whatever comes my way.
APPENDIX H

INFORMED CONSENT DOCUMENT
Consent to Participate in a Research Study

Study Title: A Quantitative Examination of the Dehumanization of First Responders
Researcher: Kari Mika-Lude, MA, LCPC (IL), LPC (WV), CAADC (IL), AADC-S (WV), ALPS, NCC, MAC, CCTP, ACS, NREMT
Department: Counseling and Higher Education (CAHE), Northern Illinois University
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Description of the Study: First responders play a critical role in public safety. These already high-stress professions have been made even more so in recent years due to COVID-19, tremendous political and civil unrest, and economic downturn. While understaffing and stress are not unusual within first responder professions, the past few years have stretched the workforce thinner than ever. The purpose of this study is to examine the effect of dehumanizing stereotypes (e.g., superhero, bad guys, robot/machine, etc.) on the first responder workforce. If you agree to participate, you will be asked to fill out a basic demographic survey and five (5) brief, multiple-choice questionnaires. Your participation is voluntary and completely anonymous.

Key Information

- This is a voluntary research study examining how first responders' experiences of dehumanization relate to workforce threats.
- This quantitative study is completely anonymous and involves a demographic survey and 5 brief, multiple-choice questionnaires.
- The benefits include psychological insight, contributing to the destigmatization of mental health and promotion of wellness within first responder professions, and (if requested) assistance with accessing needed resources. The risks include collection of personal/sensitive information (although it will be collected anonymously), presentation of content that some people may consider sensitive (e.g., suicide), and possible psychological distress (if/when recalling experiences with dehumanization, mental health disorders, and/or trauma, but that is not the direct focus of the study).
Risks and Benefits
The study has the following risks: First, there will be the collection of personal/sensitive information, including, but not limited to, mental health history. Although the presence of a mental health or trauma-related disorder is not necessary for inclusion in the study, the prevalence rate is very high among first responders. The risk is mitigated, however, by the anonymous nature of the study; no identifying information is being collected. Second, there will be the presentation of content that some people may consider sensitive. One of the questionnaires, for example, asks about past or current suicidality. Again, this information is being collected anonymously, and additional resources may be requested from the researcher. Finally, although not the specific focus of the study, there is the possibility of psychological or emotional distress due to the potential for participants to recall their own experiences with dehumanization, mental health disorders, and/or trauma.

The benefits of participation are personal psychological insight, the opportunity to contribute to the destigmatization of mental health and the promotion of mental wellness within first responder professions, and potential assistance with accessing needed resources (if requested). To protect the anonymity of this survey, additional resources can be requested by contacting the researcher directly (outside of this survey/questionnaire). Additionally, this study will contribute to the advancement of the counseling profession with regard to providing competent and effective mental healthcare to first responders.

Confidentiality

- This study is anonymous. The researcher is not collecting or retaining any personal identifying information.
- In addition to being collected anonymously, the records of this study will be kept strictly confidential. All research data is stored electronically in Qualtrics, which is a secure survey platform. For more information on Qualtrics security standards, please visit https://www.qualtrics.com/security-statement/. Because no personal identifying information is being collected, no such information would be included in any report or publication.
Your Rights
The decision to participate in this study is entirely up to you. You may refuse to take part in the study at any time. Your decision will not result in any loss of benefits to which you are otherwise entitled. You have the right to withdraw completely from participation at any point during the process.

You have the right to ask questions about this research study and to have those questions answered before, during, or after research. If you have any further questions about the study at any time, please feel free to contact the researcher, Kari Mika-Lude, at Z1748646@students.niu.edu or by phone/text at (304) 760-9324. You may also contact Ms. Mika-Lude’s faculty mentor, Dr. Suzanne Degges-White, at sdeggeswhite@niu.edu or (815) 753-9163. If you have any questions about your rights as a research participant that have not been answered by the researcher, or if you have any problems or concerns that occur as a result of your participation, you may contact the Office of Research Compliance, Integrity, and Safety at (815) 753-8588.

Future Use of the Research Data
Data collected could be used in future research studies or distributed to another investigator for future research studies without additional informed consent from you. However, since no personal identifying information is being collected, no such information would be included in future uses of the data.

By proceeding with the survey, you indicate that you have read and understand the information provided above and that you consent to participate in the research study. If you do not consent to participate in this research study, simply exit the survey now.

Yes, I have decided to volunteer as a research participant. I attest that I am at least 18 years of age and have read and understand the information provided above.