Walden University

College of Psychology and Community Services

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Braxton Anthony Morrison

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Walden University
2023

Abstract

The Role of Stigma in Predicting Attendance at Critical Incident Stress Debriefings

by

Braxton Anthony Morrison

MPhil, Walden University, 2023

MS, Walden University, 2019

BS, Upper Iowa University, 2015

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Human Services

Walden University

November 2023

Abstract

Emergency services personnel (ESPs) have been found to have increasing numbers of behavioral health conditions and suicidality due to the traumatic stress they endure in the line of duty. Despite widespread efforts to combat and reduce mental health stigma, rates remain elevated, and responders continue to suffer and lose their lives to suicide. Critical incident stress debriefings (CISDs) are one form of crisis intervention designed initially for ESPs to mitigate and normalize acute posttraumatic reactions while building unit cohesion. The purpose of this quantitative, cross-sectional study was to examine how the presence of stigma in ESPs (law enforcement officers, firefighters, EMS clinicians, 911 telecommunicators, and medicolegal death investigators) and the number of years spent in emergency services predict attendance at CISDs. This study was viewed through the theoretical lens of Richmond's person-in-environment theory due to its holistic and inclusive foundation. The research question for this study was to examine to what extent stigma and years of service among ESPs could predict attendance at CISDs. Results of the study were not statistically significant, X^2 (3, n = 171) = 1.594, p >.001, meaning years of service, when coupled with stigma, could not predict attendance at CISDs. However, future research may consider gender as a variable to study, as over 60% of participants were females. Furthermore, ethnicity and age are recommendations for future research, as many variables may impact attendance when coupled with stigma. Various social change implications may arise from this study, such as researching new variables affecting stigma, as well as impacting crisis organizations' research and interventions for ESPs in the United States.

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Dedication

This dissertation is dedicated to veterans and emergency services personnel who risk their lives every day for the betterment of our communities and experience traumatic stress in the line of duty and service. You are not forgotten, and there are people in the world working to better support you and understand how trauma has impacted your life. I will never forget your sacrifices. This dissertation is also, and most importantly, dedicated to my brother and sister. You are beautiful, amazing young people who can do absolutely anything you set your mind to. I will be here to support and encourage you through any challenge. I love you both more than you will ever know.

Acknowledgments

I would like to acknowledge several people who have made this dissertation possible. Dr. Gregory Hickman, you, possibly most of all, not only made this dissertation possible but made it relatively easy and enjoyable to write. I will be forever grateful that you arranged for me to be in your dissertation shell. There really are not enough words for me to accurately express my gratitude to you. Dr. Ann Morgan, I am honored to have had you as my second member. You were incredibly thoughtful and prompt in your responses. Your feedback was always to the point and encouraging. To both of you, my deepest gratitude.

The “Diss Fam” was a place of support and encouragement that I did not know I needed. The sense of camaraderie and support in the Diss Fam is unmatched by other groups, especially virtual, that I have ever been a part of. I am in a debt of gratitude to all of the Drs. and future Drs. of the Diss Fam I had the pleasure of working with. A special recognition and thanks to future Dr. Darren Stanely. Your guidance throughout this process was more helpful than you probably realize.

I would like to acknowledge my editor, Jennifer Kozar, for her willingness to review my work and provide feedback and suggestions where necessary. Your guidance and mentoring significantly expedited this process and allowed me to more precisely convey my message. I will be happy to return the favor, future Dr. Jennifer Kozar.

Last but certainly not least, I would like to acknowledge all of my family and friends who made this journey of not only the dissertation but the entire PhD program possible, particularly Dr. Michael Leary, for your mentorship and guidance throughout

the process. You were a wonderful resource and always provided sound feedback from your experiences. My family provided unconditional love and support throughout this very long journey, especially my brother and sister. Calli and Alex, I acknowledge the sacrifices we had to make as a family and you as individuals, from not doing things to me spending hours on end in my office to my irritable moods from being on the computer and researching. The sacrifices you and our family made for me to complete this journey are not lost to me, but I am grateful you both remained my biggest and most enthusiastic supporters. Finally, I could never have gotten through this without my best friend and service animal, Niko. You kept me grounded, focused, and unconditionally loved.

Table of Contents

List of Tables

Chapter 1: Introduction to the Study

Emergency services personnel (ESP), historically referred to as first responders, consist of different subgroups including but not limited to law enforcement, emergency medical services (EMS), fire, 911 telecommunications (dispatchers), and the less recognized field of death investigation (Hazell et al., 2022; Miner et al., 2022; Tessier et al., 2021). ESPs respond to various emergency scenes that may be deemed critical or traumatic (Bryant, 2022). Critical or traumatic incidents may cause ESPs to have acute posttraumatic stress (PTS) reactions (Lentz et al., 2021; Tessier et al., 2021). Acute PTS reactions may persist, developing into more chronic and severe conditions such as generalized anxiety disorder (GAD), major depressive disorder (MDD), posttraumatic stress disorder (PTSD), substance use disorder (SUD) and/or alcohol use disorder (AUD) due to barriers in help-seeking impacted by the stigmatization of mental health interventions (Anderson et al., 2020; Fogarty et al., 2021).

Many programs have been developed to alleviate the impact of traumatic events, facilitate and reinforce healthy coping skills, and reduce stigma (Andrews et al., 2022; Carleton et al., 2020; Fogarty et al., 2021; Hazell et al., 2022). Critical Incident Stress Management (CISM) is one of those programs designed to mitigate the impact of traumatic events (Carleton et al., 2020; International Critical Incident Stress Foundation [ICISF], 2023). Through CISM, one intervention tactic known as critical incident stress debriefing (CISD) was specifically designed for homogenous groups to facilitate the processing of the traumatic event and promote group cohesion (Price et al., 2022). Furthermore, CISDs naturally normalize participants' reactions to the traumatic event

they endured, further reducing mental health stigma through knowledge and education (Krakauer et al., 2020).

Despite widespread efforts to reduce stigma, elevated levels remain, with ESPs demonstrating increasing rates according to recent research (Burzee et al., 2022; Drew & Martin, 2020; Johnson et al., 2020; O'Toole et al., 2022). These elevated stigma levels combined with cultural aspects of the professions have created substantial barriers, real and perceived, in terms of ESPs' help-seeking behaviors for mental health challenges (Andrews et al., 2022; Krakauer et al., 2020). This study examined how stigma among five emergency services subgroups (law enforcement, firefighters, EMS clinicians, 911 telecommunicators, and medicolegal death investigators [MDIs]) and years spent in emergency services may predict their attendance at CISDs. Cultural aspects were assessed by examining stigma among different subgroups to define why the barriers may be higher among ESPs than in the general population. The major sections covered in this research are the introduction, the literature review defining the theoretical foundation and history of the relevant areas, the research design and methodology, results from collected data, and implications for future research and discussion. This research has the potential to benefit many crisis, traumatic stress, and emergency services organizations, individual ESPs, their families, and the community of the U.S. While the results were not as hypothesized, continuing to implement education with younger responders and making CISDs more common may result in less stigma overtime, which in turn may reduce behavioral health challenges among ESPs.

Background

In the 1970s, Jeffrey Mitchell created the group crisis intervention tactic called Critical Incident Stress Debriefing for ESPs to mitigate acute PTS reactions after they endured a critical incident (O'Rourke, 2021; Tjin et al., 2022). The program was intended to be comprehensive of other components, but CISDs became the only intervention ESPs were using as research today demonstrates (Anderson et al., 2022). Critical components of the model, such as one-on-one interventions, clergy support, family support, and pre-incident education, which are part of the later-developed overall package of CISM, were ignored by emergency services subgroups and crisis interventionists (Carleton et al., 2020; Dangermond et al., 2022). Results from studies on populations that were not intended to receive CISDs have been used for research since the program's inception, potentially skewing results because of negative outcomes and criticism, invoking confusion, and reinforcing the circle of stigma among ESPs by discrediting the program and disputing its effectiveness (Ricciardelli et al., 2020; Wessman et al., 2019). Mitchell realized this and renamed the package of interventions to Critical Incident Stress Management, with CISDs being one tactic of the comprehensive model.

Through the ICISF, the governing body of CISM, it has become a program known worldwide, with a mission to be a leader in crisis intervention for all communities (ICISF, 2023). Numerous studies have been conducted regarding the stigma that surrounds the mental health of ESPs, but no study has been found that specifically assesses if stigma can predict attendance at CISDs when coupled with years of service (Carleton et al., 2020; Fogarty et al., 2021; Horan et al., 2021). Furthermore, no recent

peer-reviewed research has been found that includes MDs in these studies with other ESPs or individually assesses their perceptions of traumatic events, mental health, or stigma.

By eliminating years of services as a variable, even while insignificant, this study yielded further insight into how attendance at CISDs can be predicted and what can be done to increase attendance with that knowledge. Since CISDs are designed to provide education, normalize reactions to the event, and mitigate acute stress reactions, which they have been found to do, stigma reduction may be a natural result (Andrews et al., 2022). Even though numerous programs exist to provide ESPs with immediate mental health intervention through stigma reduction, levels of stigma continue to rise along with behavioral health conditions and suicidality in the emergency services population (Krakauer et al., 2020; Tiesman et al., 2021). Furthermore, stigma is a community-wide issue, meaning the reduction of stigma surrounding mental health requires a community approach to be successful (Hilbrink, 2022). ESPs are often highly regarded in their professions and serve as the saviors and protectors of society (O'Toole et al., 2022; Rikkers & Lawrence, 2021).

Problem Statement

The stigma surrounding help-seeking behaviors for mental health among ESPs (law enforcement officers [LEOs], firefighters, EMS personnel, and 911 telecommunicators) has continued to be prevalent, preventing them from utilizing resources to treat or potentially prevent behavioral health conditions (Carleton et al., 2020; Horan et al., 2021; Krakauer et al., 2020). Two types of stigmas appear to influence

the help-seeking behaviors of ESPs: public and self-stigma (Drew & Martin, 2021; Krakauer et al., 2020). Public stigma refers to the negative attitudes that others hold about mental illness or related concepts such as help-seeking (American Psychiatric Association [APA], 2020). Public stigma in the emergency services culture can take the form of social or peer stigma or workplace stigma, which can be detrimental to ESPs mental health due to the lack of social supports that are integral in resilience and recovery after a traumatic event (Drew & Martin, 2021; Hilbrink, 2022; Sanatkar et al., 2022). Self-stigma is the internalization of stigma, such as individuals' shame or guilt about their mental illness (APA, 2020). Public stigma often leads to self-stigma and is linked to how peers react to and perceive other peers who disclose mental illnesses (Ricciardelli et al., 2020).

Increased levels of stigma among ESPs have led to increased behavioral health conditions among the subgroups and an increase in suicidality (Lowery & Cassidy, 2022; Tiesman et al., 2021). CISDs, initially developed for ESPs, is a group crisis intervention tactic utilized to manage acute PTS reactions following a critical (traumatic) incident (Andrews et al., 2022). CISDs fall under a more extensive program called Critical Incident Stress Management, a multi-component crisis intervention approach intended to be delivered by peers (Donovan, 2022). Andrews et al. (2022) found CISDs were more effective than other programs at reducing stigma, improving mental health, and increasing knowledge.

The research of Carleton et al. (2020) is consistent with others regarding stigma as a barrier to ESPs seeking support but also suggested that stigma may be more about their

willingness to access support versus their perception of access. Even though the literature has established that the increased prevalence rate of ESPs experiencing traumatic events leads to increased behavioral health problems, and attending a CISD may mitigate symptoms and stigma associated with those behavioral health concerns, rates of stigma remain elevated among all subgroups of ESPs (Anderson et al., 2020; Bowers et al., 2022; Carleton et al., 2020; Tiesman et al., 2021). CISDs as a peer-driven intervention are needed to further reduce the stigma surrounding help-seeking behaviors among ESPs (Horan et al., 2021).

Although the aforementioned research regarding the presence of public and self-stigma in ESPs illuminates important findings, I have found no research that has examined whether the presence of stigma and the number of years spent in emergency services can predict attendance at CISDs. Given the lack of findings, further research is warranted that could examine whether the presence of stigma and the number of years spent in emergency services can predict attendance at CISDs in an effort to address the documented problem of stigma help-seeking behaviors of ESPs (Horan et al., 2021; Krakauer et al., 2020).

Purpose of the Study

The purpose of this quantitative, cross-sectional study was to examine how the presence of stigma in ESPs (LEOs, firefighters, EMS clinicians, 911 telecommunicators, and MDIs) and the number of years spent in emergency services predict attendance at CISDs.

Research Questions and Hypotheses

The gap in literature has produced the following research question (RQ).

RQ: How does the presence of stigma in ESPs (LEOs, firefighters, EMS clinicians, 911 telecommunicators, and MDIs) and the number of years spent in emergency services predict attendance at critical incident stress debriefings?

H_0: $\beta 1 = \beta 2$: Stigma and years spent in emergency services have no relationship on attendance at critical incident stress debriefings.

H_a: $\beta 1 \neq \beta 2$: Stigma and years spent in emergency services have a relationship on attendance at critical incident stress debriefings.

Theoretical/Conceptual Framework

The person-in-environment (PIE) theory was used as the theoretical framework for this study. In 1917, Mary Richmond, who has been described as the mother of social work, introduced the concept of the PIE theory by producing a visualized diagram showing how a person is affected by their environment and how the person affects their environment (Universiteit Antwerpen, 2009). Rollo (2022) further states that the PIE theory looks at the individual as a whole, including their background, to understand the reasoning for the changes that have occurred. Rollo noted that the steps taken to apply the PIE theory are assessing an individual's environment, identifying how environmental influences affect their behavior, and providing care on a macro level. The PIE theory is a unique approach because of the holistic nature of the theory factoring in the individual and the environment (University of Calgary, n.d.). The PIE theory comprises four factors: social roles in relationships with others, mental health, social environment, and physical

health. Furthermore, in addition to addressing the ‘why’ behind the influencing factors in the behavior, it provides the next steps for the clinician to take in terms of intervention or treatment. This was an imperative step in integrating this theory, as Carleton et al. (2018) noted, that clinician understanding of mental health challenges among ESPs will better inform their assessment.

The PIE theory was the framework used to guide this research process by facilitating an understanding of the environment of ESPs and the responders themselves through the holistic approach (University Calgary, n.d.). ESPs may be in a unique position within their roles where they are routinely exposed to traumatic events, but help-seeking is commonly stigmatized, and the social environments promote maladaptive coping (Burzee et al., 2022; Donovan, 2022; Fogarty et al., 2021). Examining the social roles and relationships to other factors allowed the connection to be made to how organizational support, social support, and supervisory support all influence stigma and help-seeking behaviors (Hilbrink, 2022). Martinez and Shaw (2016) indicated that a theoretical model examining stigma should include the person doing the stigmatizing and the person being stigmatized and that stigma reduction must consist of multilevel interventions. Numerous mental health disorders were examined in this research, all of which ESPs have been proven to be at an increased risk. The social environment is related to the social roles of ESPs because of the cohesion and camaraderie experienced in these professions (Bowers et al., 2022; Donovan, 2022). Physical health is directly related to mental health and vice versa, making holistic wellness the most suitable option

for ESPs, considering the detrimental effects traumatic events can have on health (Kim et al., 2021).

ESPs as a whole and as subgroups may have different professional cultural aspects within their respective roles than other organizations or civilians. Using the PIE theory to understand how those cultures affect (promote, reduce, discourage) mental health stigma was the first step in assessing the environment of the ESPs in the U.S. This theory has also been used successfully with LEOs to examine the impact wrongful death lawsuits had on them and how they acted as a stressor (Powers, 2022). The PIE theory then facilitated an understanding of how those influences affect mental health stigma within the organization(s) and how when coupled with years of service, did predict attendance at CISDs. Through understanding the environments of ESPs and how the influences affect them, this research may be the primer to enacting the next steps of intervening on a macro level and exploring different variables with stigma. The PIE theory may also provide the framework for future research to determine which stigmatizing factor plays a more significant role from the individual ESPs or their organizations as a whole in predicting attendance at CISDs. Furthermore, given that the PIE theory is a holistic approach, it considers all factors affecting stigma within the emergency services culture.

Nature of the Study

The method chosen for this study was a quantitative, cross-sectional design. The purpose of this quantitative, cross-sectional study was to examine how the presence of stigma in ESPs and the number of years spent in emergency services predict their

attendance at CISDs. This was a suitable method for the study since the purpose was to determine what impact the independent variables (IVs) had on the dependent variable (DV) at a single point in time (Babbie, 2016).

Quantitative research is used to extrapolate data and compile it into analyses to make predictions better informing the intended populations (Burkholder et al., 2020; Orlin, 2018). This research utilized a cross-sectional design where the participants took a single survey on whether stigma affects their attendance at CISDs. The survey was available through electronic means for 30 days which ESPs may have completed to determine if their attendance at CISDs was affected due to stigma. The resulting survey answers were categorized into dichotomous would or would not attend answers. Years of service is a continuous variable that was measured through the demographic form (see Appendix C). Personnel that were eligible to complete the survey were certified firefighters, certified and/or licensed EMS clinicians, certified LEOs, and anyone with the authority to arrest, enforce laws, and carry a firearm as part of their duties (e.g., special agent), 911 telecommunicators, and MDIs, including coroners, medical examiners, and anyone with authority to investigate deaths independently.

A total sample size of 149 was found to be appropriate using G*Power calculation with the following parameters: alpha (a) = 0.05 and power = 0.80. Simple random sampling was chosen for this study. Simple random sampling was chosen as a national study of different ESP subgroups was warranted, and it allowed for a more accurate population estimation, adding to the validity of generalizations in the completed study (Frankfort-Nachmias et al., 2020; Polit & Beck, 2010). Furthermore, random sampling

reduced the risk of bias by the researcher. The participants were recruited through national efforts and organizations with ties to emergency services, such as FireHouse, Journal of Emergency Medical Services (JEMS) (as the organization, not the Journal), the American Board of Medicolegal Death Investigators (ABMDI), and other national sources. Participants were also recruited through personal connections across the nation.

The first IV that was measured in this study was mental health stigma (X_1) (continuous). Stigma was measured using the Self-Stigma of Seeking Help (SSOSH) scale from Vogel, Wade, and Haake (2006). The SSOSH scale is a 10-item scale used to predict attitudes toward help-seeking. The SSOSH is a 5-point Likert scale (1 = Strongly Disagree, 2 = Disagree, 3 = Agree & Disagree Equally, 4 = Agree, 5 = Strongly Agree). Participants were asked to answer the questions, self-reporting levels of stigma they may be experiencing. The score from the results is averaged; the higher the score, the more stigma an individual may be experiencing about seeking psychological help. The scale had positive reliability (.91) and has been cross-validated with reliable test-retest scores (Furthermore, the scale has demonstrated validity or holds truth across samples (Burkholder et al., 2020).

The second IV was the number of years an ESP had spent in emergency services (X_2) (continuous). This was measured on the survey using a drop-down menu with categories to choose from, allowing the participant to provide a specific range for the number of years. The DV was would an ESP attend a CISD (Y) which was a “Would attend”, or “Would not attend” (categorical or dichotomous) answer on the survey.

Results were analyzed using multiple logistic regression. Multiple logistic regression is a statistical test used when the researcher wants to use two or more independent variables to predict the dependent variable (Frankfort-Nachmias et al., 2020). Furthermore, logistic regression is used when the outcome variable is dichotomous (Warner, 2012). Lastly, logistic regression is used to estimate the maximum likelihood that something may occur and the probability of that happening (Zach, 2021). Given the parameters of this research, multiple logistic regression was an appropriate choice.

The Institutional Review Board (IRB) approval process was followed, as it is crucial to successful ethical research. Confidentiality concerns were addressed and minimized or eliminated, and the data was and will continue to be kept secure. The survey solicitation was done for departments of the identified emergency services subgroups within the U.S. All survey responses were collected anonymously, with no identifying information obtained. The survey request contained clear, detailed information about the purpose of the study and who was conducting it.

Definitions

Acute Stress Disorder (ASD): The diagnosis when someone has had exposure through witnessing or directly experiencing threatened death or serious harm and has symptoms of intrusion, negative mood, dissociation, avoidance, and arousal from three to 30 days post-incident (APA, 2022).

Alcohol Use Disorder (AUD): According to the APA (2022), “A problematic pattern of alcohol use leading to clinically significant impairment” (p. 490-491)

Crisis: The subjective turning point in one's life after an emotionally significant event or acute distress that interferes with their ability to cope (Merriam-Webster, 2023; Yeager, 2015).

Crisis Intervention: The temporary, active, and supportive intervention with someone or a group experiencing a crisis (Mitchell, 2015).

Critical (Traumatic) Incident: Powerful, traumatic events that have the ability and potential to overwhelm one's normal coping mechanisms (Mitchell, 2015).

Critical Incident Stress (CIS): A state of heightened arousal that does not dissolve after experiencing a critical incident (Mitchell, 2015).

Critical Incident Stress Debriefing (CISD): A group support process designed to facilitate a homogenous group through processing a traumatic event by going from the cognitive domain to the affective domain and then back to the cognitive domain (Mitchell, 2015). CISDs are not psychotherapy nor a substitute for professional mental health services. The group must be homogenous and have experienced the same incident with multiple people experiencing distress, impairment, and/or dysfunction.

Critical Incident Stress Management (CISM): Also stands for comprehensive, integrated, systematic, and multicomponent. CISM is a "specialized package of interventions designed to alleviate the impact of a traumatic event" (Mitchell, 2015, p. 26-27).

Culture: The guiding factor that serves to shape the basic principles of organizations, groups, and individuals (Johnson, 2013).

Emergency Services Personnel (ESP): For the purposes of this study, ESPs are anyone who responds to emergency scenes. This study included LEOs, firefighters, EMS clinicians, and MDIs.

Generalized Anxiety Disorder (GAD): The diagnosis given to someone who meets the diagnostic criteria in the DSM-5-TR based on excessive anxiety and worry (APA, 2022).

Major Depressive Disorder (MDD): The diagnosis given to someone who meets the diagnostic criteria in the DSM-5-TR based on symptoms of depressed mood and loss of interest or pleasure over a 2-week period (APA, 2022).

Peer: Someone who is in the same workgroup (unit, team) and/or part of the same culture.

Peer Support: The support provided to peers by others in the same workgroup or culture.

Post-Traumatic Growth (PTG): A positive psychological transformation after experiencing a traumatic event (Donovan, 2022).

Post-Traumatic Stress Disorder (PTSD): The diagnosis when someone has had exposure through witnessing or directly experiencing threatened death or serious harm and has symptoms of intrusion, negative mood, dissociation, avoidance, and arousal for more than one month (APA, 2022).

Psychoeducation: A form of education designed to deliver information on health and well-being in times of stress (Wild et al., 2020).

Public (Workplace) Stigma: Mental health stigma occurring specifically in the workplace (Beyond Blue Ltd., 2015).

Resilience: For the purposes of ESPs, resilience is the ability to bounce back after exposure to a traumatic event.

Self-Efficacy: The belief in one's own self to handle a situation or accomplish a task (Shakespeare-Finch et al., 2015).

Self-Forgiveness: The ability to forgive oneself after a traumatic event (Carpenter et al., 2019).

Self-Stigma: The internalization of stigma, such as individuals' shame or guilt about their mental illness

Social Support: The received or perceived emotional, informational, or practical support from family, friends, coworkers, peers, or social networks (Barrera, 1986; Thoits, 2010).

Substance Use Disorder (SUD): The diagnosis of a problematic pattern of using a substance, meeting at least two criteria, such as using larger amounts than intended, persistent desire, or withdrawal (APA, 2022).

Traumatogenic: Reactions experienced from a traumatic event.

Vicarious Trauma (VT): Indirect experience of trauma through countertransference that causes negative changes (Renkiewicz & Hubble, 2023; Substance Abuse and Mental Health Services Administration [SAMHSA, 2023).

Assumptions

There were several assumptions related to this study. First, there was the assumption that ESPs who took the survey would be experiencing CIS to the level they would benefit from a CISD since they should only be provided if a group of individuals is experiencing distress, impairment, or dysfunction (APA, 2008; Mitchell, 2015). Furthermore, as CISDs should never be used as single interventions and the CISM package is comprehensive of other recommended and necessary components, it is assumed that ESPs had some type of pre-incident training and immediate intervention prior to the CISDs, as well as follow-up care. The study also assumed that the surveyed ESPs were experiencing some level of stigma toward mental health. Another assumption was that a relatively equal number of participants would out the survey from each subgroup and be representative of the population equally throughout the U.S. The quantitative method of research to obtain data could also be considered an assumption, given that people's emotions and feelings are being interpreted statistically.

Scope and Delimitations

This study was delimited to the following subgroups of ESPs, including but not limited to anyone classified as an LEO who has the authority to arrest, enforce laws, and who carries a firearm in the performance of their duties (e.g., police officer, special agent), firefighters, EMS clinicians, 911 telecommunicators, and anyone with the independent authority to investigate deaths (e.g., medical examiners, coroners, and investigators). There was no preferred time in the position as the study aimed to achieve a sample of different years of service as a predictor variable. Participants were recruited

from national websites such as *Journal of Emergency Medical Services* (JEMS), FireHouse, and the American Board of Medicolegal Death Investigators (ABMDI), as well as word of mouth and referrals. Participants gained access to a survey link in which they answered questions verifying the subgroup(s) they represented and if they were currently employed as an ESP in the U.S.

Limitations

Internal validity consists of eight variables that may affect a study's internal validity, limiting or discrediting the results if not controlled for (Campbell & Stanley, 1963). These factors are history, maturation, testing, instrumentation, statistical regression, experimental mortality, and selection maturation. Cross-sectional research designs have the inherent flaw with the history of capturing the data at a single point in time but then generalizing the data to be applicable all of the time and inferring a causal relationship (Babbie, 2016). Maturation of this study could be a limitation due to the respondent participating at a time that they may be experiencing unusually high levels of stigma due to a recent traumatic event, if they have attended a CISD with low fidelity, or simply being fatigued (Campbell & Stanley, 1963). ESPs participating in this survey could have had other surveys or tests of a similar nature measuring something related to stigma and/or mental health in a short period affecting the testing. Experimental mortality is a cause for concern due to the internal validity. Given that the response rate for surveys may be as low as half, those participants who began may not have completed or finished the survey affecting the already relatively small sample size needed for this research (Holtom et al., 2022).

These factors that may have affected the study's internal validity were mitigated, considering the researcher was aware of them and followed the model of the chosen design (Babbie, 2016). Correlation designs are specific to when the variables cannot be manipulated (Burkholder et al., 2020). While the participants may feel differently on different days, those feelings are still valid because they are theirs. Furthermore, years of service is specific to how long they have been an ESP, and attendance at a CISD is dichotomous. ESPs may also respond to daily emergency calls, and how they perceive that call is outside the researcher's control. The G*Power calculation has accounted for participants who may not respond and/or finish the survey to still have a valid sample size. Lastly, while generalizability may be difficult among correlation designs, it can be an accurate way to make predictions and use the results for future research.

Significance

This study holds significance in the human services field and several areas identified by Adtalem as Social Determinants of Learning: physical health, psychosocial health, physical environment, social environment, economic stability, and self-motivation (Adtalem, 2022; Sanderson et al., 2021). Psychosocial health and physical health are equally important and affect the overall wellness of a person (Centers for Disease Control [CDC], 2023). Psychosocial health has been proven to increase the risk for many types of physical ailments, such as hypertension or heart disease, often due to chronic stress, lack of social interaction, and physical activity (Carl, 2021; Ohrnberger et al., 2017). While this research focused on mental health stigma and mental health intervention, CISM is a holistic approach that considers all aspects of wellness (Blaney, 2009). The environments

ESPs find themselves in, specifically their organizational environments encompassing their social interactions, may benefit significantly from this research.

The stigma ESPs are experiencing may originate in these physical environments and could be the areas where change must first occur (Horan et al., 2021). While the significance of economic stability in the sense of job security is not addressed in this research, PTS reactions have been found to reduce the performance of ESPs, potentially creating safety hazards (Andrews et al., 2022; Richins et al., 2020). Depending on how the organization is funded, this can create hardships for the organization, the individual ESP, their families, and the community. Lastly, many ESPs may begin work in emergency services due to their willingness and desire to serve and give back to their community with high self-motivation (Pittwire, 2019). However, research has found that over time and with the accumulation of traumatic events and PTS reactions, self-motivation declines as a psychological consequence, leading back to a potential lack of economic stability and safety (APA, 2022; Lowery & Cassidy, 2022). Addressing the stigma of attendance at CISDs can significantly impact human services through each of these social barriers, many of which are also identified as Social Determinants of Health by the World Health Organization (2023). ESPs must have their basic needs supported and fulfilled, including physical and psychological needs, before learning and growth can occur (Kanel, 2007).

The results of this study, while found not to be predictive, still have the potential to provide much-needed insight into how mental health stigma predicts the attendance of ESPs at CISDs. While there has been significant research on CISM/CISDs, stigma, and

the mental health of ESPs, the use of stigma and the number of years in emergency services to predict attendance at CISDs among responders have not been investigated. Since CISDs are used by many local, state, and national agencies, this research could support hundreds of agencies but, more importantly, thousands of ESPs (Anderson et al., 2020; Donovan, 2022). Organizations that could benefit from this research include the ICISF, American Academy of Experts in Traumatic Stress (AAETS), Green Cross Academy of Traumatology, Benton County Critical Incident Stress Management Team, Iowa Peer Support Network, Iowa Peer Support Foundation, and organizations dedicated to reducing stigma. Aside from potentially predicting attendance due to stigma, researchers may be able to predict stigma based on these factors allowing for early behavioral health intervention. Furthermore, ESPs are part of a community, and increased awareness and social support are proven to aid in the reduction and recovery of mental health challenges, promoting positive social change (Hilbrink, 2022).

Summary

ESPs are prone to experiencing high incidences of critical incidents, putting them at adverse risk of experiencing PTS reactions (Carleton et al., 2020; Drew & Martin, 2021; Johnson et al., 2020; Jones et al., 2020). CISDs are a tactic designed under the umbrella of CISM to mitigate acute PTS reactions and promote cohesion among unit members (Price et al., 2022). Given the fact that social support is one of the best protective factors in preventing and treating post-traumatic stress reactions, as well as the cohesive culture of ESPs, CISDs may be a highly valuable component in preventively addressing the mental health challenges of ESPs (Barrera, 1986; O'Toole et al., 2022;

Prati & Pietrantoni, 2010). However, mental health stigma among ESPs is higher than in the general population creating barriers to treatment seeking. This study investigated to what extent mental health stigma and years of service predict ESPs' attendance at CISDs and how they may be correlated to reducing stigma in emergency services professions and subcultures.

Chapter 2 discusses in-depth the aspects of crises and critical incidents, including CISM and CIS. The cultural and organizational aspects of emergency services culture are also discussed, providing insight as to why some mental health challenges exist and how some may be similar and differ among the subgroups. The trauma membrane concept is also discussed and how promoting the use of CISDs when needed and actively working to eliminate stigma may benefit ESPs (Martz & Lindy, 2010). The theoretical foundation for this research is discussed as well, giving insight as to how the PIE theory may be helpful in moving toward the goal of eliminating the stigmatization of mental health help-seeking in communities and why stigma is a community-wide issue (Hilbrink, 2022).

Chapter 2: Literature Review

Emergency services personnel (ESPs) are at an increased risk for developing posttraumatic stress reactions due to the nature of their job duties (Anderson et al., 2020; Brondolo et al., 2008; Fogarty et al., 2021; Krakauer et al., 2020). PTS, along with other factors of their jobs, such as a lack of organizational support and mental health stigma, may lead to increased development of mental health challenges and suicidality among emergency services subgroups (Anderson et al., 2020; Brondolo et al., 2008; Carleton et al., 2020; Drew & Martin, 2021; Haugen et al., 2012; Tiesman et al., 2021). Several programs exist among the emergency services professions to address mental health stigma, such as CISM, which encompasses a tactical group crisis intervention known as CISD. Despite global efforts to reduce stigma, recent research suggests mental health stigma among ESPs remains elevated in comparison to the general population (Burzee et al., 2022; Jones et al., 2020; Jones & Martin, 2021; O'Toole, 2022). Mental health stigma has been found to be the most significant barrier to help-seeking among individuals and has remained so throughout the literature on ESPs (Andrews et al., 2022; Brondolo et al., 2018; Corrigan, 2004; Krakauer et al., 2020).

This issue is further complicated among ESPs because of the cultural, identity, and perception aspects more prevalent in these populations due to the cohesiveness and homogeneity experienced in emergency services cultures (Bowers et al., 2022). This research examined the stigma surrounding help-seeking behaviors among ESPs and how it may act as a barrier for them utilizing resources to prevent or mitigate behavioral health conditions and mental health challenges (Carleton et al., 2020; Horan et al., 2021;

Krakauer et al., 2020). This research discusses two types of stigmas: public and self-stigma. Workplace stigma as a form of public stigma, along with self-stigma, appears to influence ESPs the most (Carpenter et al., 2019; Clement et al., 2015; Drew & Martin, 2021; Hilbrink, 2022; Sanatkar et al., 2022). These, in turn, can ultimately lead to label avoidance for the ESPs to deter being perceived or labeled as weak, lazy, dangerous, devalued, or insufficient by their peers (Bowers et al., 2022; Clement et al., 2015; Ricciardelli et al., 2020). Overall, ESPs may feel they lack the organizational support to seek mental health treatment or intervention due to workplace stigma, which can then lead to self-stigma increasing, reducing further the likelihood of help-seeking behaviors, and increasing the risk of mental health challenges (Sanatkar et al., 2022).

The purpose of this quantitative, cross-sectional study is to examine how the presence of stigma and years spent in emergency services predict attendance at CISDs. Andrews et al. (2022) found that CISDs were more effective than other programs at reducing stigma. Given that CISDs are intended to be delivered by peers and encompass an array of topics in the intervention, such as education, healthy coping skills, and normalizing the incident, they appear to be an encompassing intervention designed to mitigate the impact of CIS and direct to further [higher-level] resources and care (Mitchell, 2015). However, if ESPs are not attending CISDs due to stigma, the intervention cannot serve its intended purpose by mitigating, assessing, and referring. Determining if stigma plays a role in attendance at CISDs may allow for more concentrated efforts to eliminate mental health stigma among ESPs, specifically

regarding attendance at the interventions designed to reduce stigma further (Horan et al., 2021).

This section is followed by the search strategies used to conduct this research, along with the major sections. The first major section is on ESPs, in which a background on the various subgroups and current statistics and research is provided as to how they are affected by mental health stigma. Next, mental health stigma to be discussed includes seminal and current research on the severity of the problem and specifically discusses sub-topics such as public, workplace, self-stigma, labeling, and devaluing. These two sections are followed by crisis, crisis intervention, CIS management, CISD, the trauma membrane, organizational support, social support, pertinent mental health disorders, and suicidality.

Literature Search Strategy

A comprehensive literature search was conducted, with the Walden University Library being the primary search tool. Google Scholar was also used, which produced similar research articles to the Walden University Library. The primary searches began broad using individual terms consisting of *critical incident stress management, CISM, critical incident stress debriefing, CISD, peer support, police officers, law enforcement, emergency medical services, firefighters, first responders, emergency services workers or personnel, public safety personnel, MDIs, medical examiner investigators, and stigma*. These searches yielded several hundred articles combined, which were then narrowed by combining search terms specific to each subgroup of emergency services. For example, law enforcement was used in conjunction with CISD and stigma. A mix of search terms

combined with an individual subgroup was conducted until enough articles, or lack thereof, were found to provide saturation of the literature.

All articles were peer-reviewed, as that was set as a parameter for searching in the Walden Library. Over 100 articles were reviewed in total, with approximately 50 being selected for perceived relevance to this topic. One of the main goals for selecting relevant literature was for it to be current in the last five years, of which most of those 50 articles were. Several other articles were selected to be used as seminal works pertinent to defining things such as stigma, CISM, and the emergency services subgroup cultures. Furthermore, very little research consists of the perceived effects mental health stigma has on MDIs personnel and how it may affect their help-seeking behaviors; therefore, the only research that could be found was incorporated.

Theoretical Foundation

The theoretical foundation used for this research was the Person-in-Environment (PIE) theory. The PIE theory is a theoretical framework designed specifically for social work and related disciplines (Kondrat, 2015). In 1917, Mary Richmond introduced the PIE theory through a visualized diagram showing how a person was affected by various aspects of their environment, such as political, spiritual, and family (Kondrat, 2015; Universiteit Antwerpen, 2009). The PIE theory was developed to be a person-centered theory from the foundational framework of understanding the environment to understand behavior to the interventions offered when a treatment plan was being formulated. Because the PIE theory considers an individual's entire background, the steps of the theory can be applied to holistically address the client's needs and apply appropriate

intervention strategies (Kondrat, 2015; Rollo, 2009). Lydia Rapoport (1962) stated that "people may be more susceptible to influence during a state of crisis" and through utilizing the PIE theory, the clinician may be able to direct their interventions better (p. 49).

The PIE theory was chosen as the theoretical framework for this research because of the two-way relationship between understanding the person and the environment (Biscontini, 2023). Understanding mental health stigma and how it affects and impacts ESPs is a unique and multi-level concept due to the personal, organizational, and structural aspects of the culture (Ricciardelli et al., 2020). The PIE theory sought to understand the underlying elements and how they may affect ESPs' attendance at CISDs. Furthermore, given the PIE theory's comprehensive approach to understanding the individual as a whole, care on micro and macro levels can be provided for a more holistic approach (Bisontini, 2023; Rollo, 2009). This approach is necessary when providing crisis intervention, especially through a tactic with the format of a CISD where there are numerous goals, such as providing education, normalizing reactions, promoting group cohesion, and mitigating traumatic reactions (Mitchell, 2015). A significant aspect of crisis intervention work, including CISM and CISDs, is referring the client to further resources and a higher level of care when necessary. Using the holistic approach, the PIE theory allowed each aspect to be considered from first contact to the last University of Calgary, n.d.).

Literature Review

Emergency Services Personnel

Historically, law enforcement, EMS, and fire personnel have been called *first responders* as these professionals are typically the first to arrive at an emergency scene (Bowers et al., 2022; Horan et al., 2021; Jones et al., 2020). These subgroups of ESPs serve many different roles in communities. For example, law enforcement is typically thought of as *serving and protecting* the public and enforcing local, state, and federal laws, depending on the agency's authority and jurisdiction. Firefighters are the ESPs responding to a fire at a home or place of business, as well as some hazardous materials operations, and to provide extrication from structures and vehicles of entrapped victims. EMS clinicians have many roles and functions in the community but are commonly the professionals responding to an injured person and transporting them to a hospital.

Across the country, states have been passing bills to now include 911 telecommunications personnel, commonly referred to as *dispatchers* or *public safety telecommunicators* as first responders. The National Emergency Number Association (NENA) has a current list of states who have incorporated these legislative changes. 911 telecommunications operators may often be one of the least considered ESPs when considering their mental health because they do not physically respond to an emergency scene (Shakespear-Finch et al., 2015). However, data suggests these individuals are also at increased risk of developing mental health challenges such as PTSD (Lilly & Pierce, 2013). Tiesman et al. (2021) found that "17-24% of 911 telecommunicators experienced PTSD, and 24% experienced MDD" (p. 1). 911 telecommunicators may also take calls

from one emergency services subgroup (e.g., police dispatcher) or all the subgroups in a given locality. 911 telecommunicators may be required to take specific training known as Emergency Medical Dispatcher (EMD) certification acting as the medical specialty via phone until EMS arrives (Shakespeare-Finch et al., 2015).

EMS is one of the newer branches of emergency services, with its official history beginning in 1970 (National Registry of Emergency Medical Technicians [NREMTs], 2023). EMS clinicians respond to people needing medical assistance and transport them to an appropriate medical facility. They can provide care based upon a tiered system of four levels: emergency medical responder (EMR), emergency medical technician (EMT), advanced emergency medical technician (AEMT), and paramedic. The skills for each level become more invasive and advanced. The vast array of ways to serve as an EMS clinician with additional education and certification provides more opportunities and recognition for the profession. Many people may think of ground ambulances and the EMS clinicians on them when thinking of EMS; however, there are also helicopter emergency medical services (HEMS), tactical emergency medical services (TEMS), wilderness emergency medical services (WEMS), critical care transport EMS, community paramedicine, among others (International Board of Specialty Certifications [IBSC], 2023). Furthermore, increasing numbers of fire departments require firefighters to have a minimum certification level of EMT, with “only 37% nationwide providing no EMS care” (Fahy et al., 2022).

Firefighting may be the oldest emergency services profession in the U.S., tracing back to 1608 with the first recorded fire in Jamestown (Merrimack Fire-Rescue-EMS,

n.d.). Firefighting at that time was predominantly volunteer, which it still is in the U.S., "with 676,900 firefighters being volunteers out of 1,041,200" (Schwartz, 2022). As with law enforcement and 911 telecommunicators, firefighters may be seeing an increase in duties, such as being tasked with responding to emergency medical calls (Fahy et al., 2022). There are also specializations a firefighter can seek, including but not limited to hazardous materials training, officer training, wildland firefighting, and technical rescue. As with other subgroup specialties, each of these subspecialties may require advanced and extensive training.

The official history of law enforcement in the U.S. dates to 1635 when the city of Boston created a night watch program where officers served in a volunteer capacity, unlike today, where it is a career profession (National Law Enforcement Officers Memorial Fund, 2023). Law enforcement is a profession that appears to have increasingly growing responsibilities, from responding to crimes and attending to traffic violations to now intervening in emergency mental health crises, community-oriented policing actions, and homelessness (Heffren & Hausdorf, 2016; Johnson, 2019; Lentz et al., 2021). However, LEOs and all ESPs could potentially use one component of this advantageously, as Fogarty et al. (2021) found that contact with people experiencing mental illness had a stronger effect than education alone. There are also numerous ways to serve as an LEO among different jurisdictional levels, with commonalities being carrying a firearm in the performance of their duties, arrest authority, and the enforcement of laws. Some ways or subspecialties of serving as an LEO include but are not limited to specialized units, such as drug task forces or tactical units, motorcycle or

equine units, canine units, or investigations. Each of these subspecialties and being a patrol officer may come with their own risk and rate of exposure of experiencing traumatic events.

These subgroups of ESPs all have similar cultural characteristics among them. Law enforcement, fire, and EMS clinicians often respond to the same scenes and must maintain cohesion and collaboration in the public's best interest (Smirnova et al., 2021). Often, none of this collaboration and effort to address the emergency at hand would be possible without 911 telecommunicators (Shakespeare-Finch et al., 2015). The subgroups typically work as a team throughout their shifts or interact with other ESPs frequently, depending on the rurality of the jurisdiction. 911 telecommunicators may frequently work in teams of two or more, pending the size of the jurisdiction, or be a unit of one. These ESPs often thrive on their cohesive culture and become friends with their coworkers and other ESPs, eliminating others from their social lives because of stress and organizational challenges and demands (Kronenberg et al., 2008; Tiesman et al., 2021).

There is another subgroup of ESPs that may often not be considered when researching the effects of traumatic events but has an equally important role in protecting the public and should not be left out of communication and research (Brondolo et al., 2017). MDIs, including medical examiners, medical examiner investigators, coroners, pathologists, and any other title with the independent authority to investigate deaths within a given jurisdiction, often respond to emergency scenes as well (Crawford & Flannery, 2002; Flannery & Greenhalgh, 2018). This subgroup of ESPs, however, is only needed when a death has occurred at an emergency scene to determine the cause and

manner, potentially alienating them from any efforts to mitigate the impact of traumatic events or research into their mental health (Brondolo et al., 2017; Brondolo et al., 2018; Crawford & Flannery, 2002; Flannery & Greenhalgh, 2018). Furthermore, MDIs may differ from other ESP subgroups in their response and isolation. Law enforcement, fire, and EMS are typically at the station or in an on-call status. Regardless, they will likely have a partner or interact with other ESPs during and after the incident. On the other hand, MDIs may be working solely in an on-call capacity, responding from home, and returning home after the incident with little interaction from other ESPs during the call and potentially no follow-up afterward. This isolation could place them in an outcast setting, differentiating them from other ESPs because they are not typically viewed as first responders (Brondolo et al., 2012).

While receiving less attention than more familiar emergency services subgroups (fire, EMS, law enforcement), the field of death investigation is still stigmatized, and MDIs may be at increased risk for developing MDD, PTSD, and vicarious trauma (VT) (Brondolo et al., 2012; Brondolo et al., 2018; Coleman et al., 2016). Death investigator personnel are thought to be at increased risk for these mental health disorders in large part due to the alienation of their role and negative cognitions (Brondolo et al., 2018). Negative cognitions regarding the alienation aspect were found to be a direct link between VT and PTS symptomology and were found to predict depression over time. Furthermore, MDIs were found to encounter common emergency scenes similar to that of other ESP subgroups. MDIs were also found to have more contact with family members, through which they appeared to endure higher levels of VT and depressive

symptomology (Brondolo et al., 2018; Flannery & Greenhalgh, 2018). However, psychological debriefing, such as CISDs, has been found to alleviate VT (Everly et al., 1999). Introducing new terminology or redefining *first responder*, *ESP*, or *public safety personnel* may be the first step in alleviating some of the alienation among this subgroup which could, in turn, reduce some of the stigmatization.

Mental Health Stigma

Stigma is a complex multi-component term consisting of several different layers. The term stigma in the context of mental health refers to negative stereotyping or a mark of shame or disgrace, leading to discrimination and rejection (Corrigan & Penn, 1999; World Health Organization [WHO], 2001, p. 16). Stigma was defined by Corrigan (2004) as the most significant barrier impacting the help-seeking behaviors of individuals, which has held true, especially among ESPs.

Stigma among ESPs appears even more complex than among the general population due to the cultural factors that come into context. While each subgroup (fire, EMS, law enforcement, etc.) has some different cultural aspects, many are similar, and the stigma is constructed from the social norms among these subgroups (Bullock & Garland, 2018). These factors often include being male-dominated professions, valuing strength and self-reliance, and being the helpers or protectors of society, not the ones needing help (Bowers et al., 2022; O'Toole et al., 2022). Stigma among ESPs is often negatively correlated with being discredited for showing weakness and being viewed by peers as dangerous, unreliable, deviant, and crazy (Ricciardelli et al., 2020). Furthermore, using mental health services among peers in the emergency services professions can be

seen as “milking the system” and causes a fear of negative evaluations, resulting in the professional feeling devalued (Ricciardelli et al., 2020, p. 266). Stigmatization leads to a substantial help-seeking barrier when responders need mental health care, whether professional or informal, due to the potential change in one’s sense of self but do not seek it (Kushner & Sher, 1989).

Self-stigma is a subset of stigma that can be developed from public stigma in one of its various forms. Self-stigma is defined by the APA (2020) as the internalization of stigma, such as shame or guilt individuals possess about their mental illness and is thought to be the most detrimental component (Braaten, 2018). When public stigma is present in ESPs, self-stigma may then be formed among individuals, leading to a significant barrier to treatment seeking (Corrigan, 2004; Horan, 2021; Jones et al., 2020). Public (workplace) stigma can be thought of on the macro level and self-stigma on the micro level (Braaten, 2018). Carpenter et al. (2020) noted that self-stigma can then be broken down further in the aspect that individuals may have stigma regarding a current mental health challenge they have been experiencing and stigma toward help-seeking, potentially because of the public stigma they have experienced. Self-stigma causes an individual to self-label and, in return, be defined by the mental health challenge(s) they are experiencing with residual effects of lowered self-esteem, self-worth, self-efficacy, and perceived acceptability among peers (Carpenter et al., 2020). These factors may discourage ESPs from attending a CISD where they divulge potentially intimate emotions about an event and how it has affected them, even though peer-based interventions provide emotional support (Horan et al., 2021).

Public stigma takes many forms and is a complex concept when discussed regarding ESPs. Public stigma is the general public's reactions, feelings, or misconceptions regarding mental health challenges (Carpenter et al., 2020; Corrigan, 2004). These reactions, feelings, and misconceptions are turned into prejudice that discredits and devalues individuals in the population that are experiencing mental health challenges (Corrigan, 2004; Ricciardelli et al., 2020). The discrimination from public stigma then becomes a significant barrier for individuals wanting to seek mental health intervention or disclose any perceived weakness to their peers for fear of retribution. In the context and culture of emergency services, public stigma may be better defined as workplace stigma.

Workplace stigma is essentially public stigma, but it occurs specifically in the workplace affecting the population within (Sanatkar et al., 2022; Beyond Blue Ltd., 2015). Workplace stigma may be a more appropriate term for research into emergency services cultures because they are essentially their own population and often act as a family or a unit. Andrews et al. (2022) found that “67.5% of Canadian public safety personnel (PSP) would only access support from a colleague and 75.7% from leadership as a last resort” (p. 1). This is a significant barrier considering CISDs, and all CISM interventions are designed to be peer-run and are consistent with the reasoning being the stigmatization of mental health in emergency services (Carleton et al., 2020; Mitchell, 2015). Andrews et al. (2022) also found that “63.7% of Canadian PSPs would never or only, as a last resort, access their employee assistance program (EAP)” (p. 11). This is consistent with Carleton et al. (2020) and Leary (2021), who found that stigma plays a

substantial role in accessing an organizational program, even if designed to reduce mental health challenges and decrease stigma.

Workplace stigma may have more of an impact on ESPs than just promoting the stigmatization of mental health. Slade (2021) found that as chronic stressors and exposure to traumatic events increase in the workplace, the decrease in the motivation of help-seeking behaviors links to a reduction in the general health of ESPs. Workplace stigma directly violates the physical and mental natural culture of emergency services to be strong, supportive, cohesive, and group-oriented (Bowers et al., 2022). Furthermore, as fire and EMS alone respond to more than 50 million emergency calls every year (Jones et al., 2020), the public nor their colleagues or leadership would expect or allow them to stigmatize patients and victims the way recipients of trauma are blamed and devalued in the emergency services workplace settings (Ricciardelli et al., 2020). The concept of stigma in emergency services is of even further interest from the aspect of selflessness among ESPs. This culture of people is often comprised of a mindset to help others and make the world better (Pittwire, 2019). Yet, as a culture, research says colleagues cannot and will not talk to each other about their mental health challenges that are becoming an epidemic (Andrews et al., 2022).

As a result of being stigmatized, one's identity may be altered by being discredited and devalued (Ricciardelli et al., 2020). This may lead to a concept coined by Goffman (1963) known as virtual v. actual social identity. As Goffman notes, a virtual identity is the perceived social identity based on "assumptions rather than fact" about an individual. A virtual social identity may comprise what others expect of them regardless

of who they are or what they do. For example, ESPs are called and expected to consistently respond to any emergency call they are dispatched to and prevail as the rescuers, the heroes, for a positive outcome (Axelrod, 2018).

The assumptions and stereotypes from within ESPs' agencies are that showing any sign of mental health challenges will be deemed as a weakness and demonstrate the responder to be unreliable, crazy, and dangerous (Goffman, 1963; Ricciardelli et al., 2020). The lack of organizational and structural support may eventually lead to a self-fulfilling prophecy of the ESP experiencing negative stigmatizing effects due to a circle of reinforced stigma leading to a change in their actual social identity. Law enforcement may be at a particularly elevated risk of the consequences stemming from workplace stigma and how it affects their identity due to the machismo and masculinity commonly seen in the profession, as well as the requirement of carrying a firearm (Bullock & Garland, 2018; Drew & Martin, 2021; Van Hasselt et al., 2019; Wester et al., 2010). LEOs may think that if they disclose a mental health challenge, their firearms will be confiscated, altering their perceived identity.

The result of stigma, public and self, and the fear of one's identity being devalued and discredited by peers is label avoidance. Label avoidance is avoiding any label or "denying and hiding symptoms" to avoid detection by others (Bowers et al., 2022). Label avoidance results in ESPs ultimately avoiding help-seeking behaviors even when they may be available to them, such as professional mental health services or peer support services, such as a CISD (Bowers et al., 2022; Carleton et al., 2020; Tessier et al., 2021). This avoidance of help-seeking is causing ESPs to experience high rates of mental health

challenges and suicidality when they are already at an increased risk due to their frequent exposure to critical incidents (Horan et al., 2021; Krakauer et al., 2020; Tiesman et al., 2021). Furthermore, when ESPs do seek treatment, the reinforced stigma and desire to avoid stigmatizing labels reduce their rates of adhering to the treatment plan (Bowers et al., 2022; Tessier et al., 2021). This results in a public health crisis as a significant and necessary population are experiencing a layered structural barrier to help-seeking for mental health challenges that could be shifted through change such as CISM interventions (Blaney, 2009; Braaten, 2018).

Crisis

A crisis in the context of this research is in relation to mental health. The term crisis and the concept of crisis intervention can be dated back to the 1800s during the Franco-Prussian War when it was identified that rest, food, and discussion aided soldiers in returning to battle (Mitchell, 2015). Crisis (or psychological) intervention then became more expounded upon in 1916 during World War 1 when it was noticed that soldiers receiving emotional support in frontline hospitals from comrades (peers) were less likely to be evacuated from ‘war neurosis’ or ‘shell shock,’ what is today known as PTSD (Crocq & Crocq, 2000). Furthermore, these soldiers had a better prognosis for recovery, furthered by the soldiers remaining on the frontlines for treatment. This led Dr. Thomas Salmon to develop five fundamental principles for crisis intervention that remain true today. Those principles are *immediacy*, *proximity*, *expectancy*, *simplicity*, and *centrality* (further reading under *Crisis Intervention*).

The current history of crisis intervention, often referred to as early intervention or psychological intervention, became a topic of research and discussion after the Coconut Grove fire in 1942 when Erich Lindemann began studying the reactions of survivors (Kanel, 2007; Mitchell, 2015). Gerald Caplan started to work with community mental health and prevention and intervention in the 1960s. Lindemann and Caplan are known as the fathers of crisis intervention (Kanel, 2007). The APA (2023) defined crisis as "the turning point for better or worse in the course of an illness" or a "situation (e.g., a traumatic change) that produces significant cognitive distress." These are consistent with a definition from Mackey (1968) as "the decisive moment or turning point." Furthermore, these definitions are also consistent with the *Crisis Intervention Handbook*, defining crisis as "a subjective reaction to a stressful experience affecting the ability of the individual to cope…" (Yeager, 2015, p. 13), as well as Mitchell's (2015) definition in CISM literature of "an acute emotional, cognitive, and physical reaction to a powerful, horrible, awful, terrifying, threatening, or grotesque stimulus or an overwhelming demand or circumstances" (p. 18). While there may be variations in the wording defining crisis, nearly all definitions are consistent with the fact that it is a turning point in which one can grow with immediate and purposeful intervention. A crisis can also be defined through its three distinct phases: "A precipitating event, a perception of the event that causes subjective distress, and the failure of a person's coping methods, which causes them to experience a lower level of functioning than the pre-traumatic event" (Kanel, 2007, p. 1).

Crisis Intervention

Crisis Intervention is the response to a crisis that can mitigate the impact and turn what could be a negative experience into the potential for growth. While education on stress management and healthy coping skills before experiencing a crisis would be preferred, crisis intervention should commonly occur in the subjective distress phase to aid the person in returning to their normal adaptive functioning (Kanel, 2007; Mitchell, 2015). There are numerous models, programs, and tactics for crisis intervention, CISM is only one. Gerald Caplan postulated in 1961 that a "relatively minor force, acting for a relatively short time, can switch the balance to one side or another, to the side of mental health or the side of mental ill health" (p. 248). Lydia Rapoport (1965) is famously quoted as saying, "A little help rationally directed and purposely focused at a strategic time, is more effective than extensive help given at a period of less emotional accessibility" (p. 38).

Nearly all crisis intervention literature, including that of CISM, is consistent with the basic principles a model or program must incorporate to be successful. Stemming from the principles Salmon created in 1917, the principles used in CISM are *simplicity*, *brevity*, *innovation*, *pragmatism*, *proximity*, *immediacy*, and *expectancy* (Crocq & Crocq, 2000; Mitchell, 2015). Interventions are for individuals or groups experiencing distress, impairment, and/or dysfunction (APA, 2008). Therefore, they must be inclusive of these principles to ensure they are simple to understand and respond to, short, creative, practical, occur close to the incident if possible, or in someone's comfort zone, as soon as possible after the incident, and setting reasonable expectations for positive outcomes.

Peer Support

Often differentiated from crisis intervention tactics such as CISM, peer support refers to a broader range of services offered to ESPs. These services typically include personal, financial, or work stressors, along with CISM at times (Donovan, 2022). The level of assistance a peer support team offers will depend on the team members' training. For example, to provide CISM interventions, one must have taken the required training and have mental health oversight, whereas to provide general guidance, support, and suggestions for further resources, one does not need any formal training (Donovan, 2022; Price et al., 2022). Donovan (2022) also argued that peer support can occur anytime, unlike CISM, where interventions are at specified times post-incident. Peer support is generally the "supportive relationship among peers who have similar lived experiences" and come from the same culture (Andrews et al., 2022; Price et al., 2022, p. 2).

In emergency services cultures, peer support may be perceived well by ESPs because of the informality and peer-to-peer contact versus supervisor support (Donovan, 2022; Shakespeare-Finch et al., 2015). Peers have been found to be more "relatable and authentic" and offer a supportive relationship without fear of retribution due to power differentials associated with supervisory roles (Anderson et al., 2020; Donovan, 2022; Fogarty et al., 2021, p. 5-6). Peer support has been found to influence AUD and overall barriers to treatment seeking among ESPs and serve as a protective factor (Price et al., 2022). Furthermore, peer support facilitates psychological safety, allowing peers to be authentic in return (Donovan, 2022; Price et al., 2022). Peer support has been found to have the highest impact on improving mental health overall (64.1%) among ESPs and

serves as a protective factor in preventing further mental health challenges (46.2%) in one study done by Andrews et al. (2022). Peer support in any form appears to be a crucial component of ESPs, and CISM is a peer-driven package of crisis intervention tactics addressing many of the areas above and may be an effective model in reducing stigma among the population (Andrews et al., 2022; Tessier et al., 2021).

Critical Incident Stress Management (CISM)

CISM is a program designed by Dr. Jeffery Mitchell throughout the 1970s and formally launched in 1983 to mitigate the acute stress reactions of critical incidents (Mitchell, 2015; Sacks et al., 2001; Sommer, 2013). CISM is also an acronym for comprehensive, integrative, systematic, and multi-component, and these components are demonstrated through the package of interventions offered in the pre-crisis, crisis, and post-crisis phases (Everly Jr. et al., 2000; Mitchell, 2015). The interventions provided in CISM are in two categories, informational and interactive. The informational interventions are crisis management briefings (CMB) and Rest, Information, and Transition Services (RITS). The interactive interventions are defusings and CISDs. Each of these interventions is designed with the same goals to facilitate recovery, restore normal adaptive functioning, and encourage effective coping (Mitchell, 2003). Through the comprehensive and integrative processes, CISM encompasses support from mental health professionals, clergy, and members of the respective ESP subgroups being intervened with. This allows the interventionists (peers) to provide intervention and assessment across the spectrum of well-being, including spiritual, emotional, cognitive, behavioral, and physical (Blaney, 2009).

The interventions and support functions are designed for individuals and groups, both homogeneous and heterogeneous. The crisis intervention tactics and supportive functions falling under CISM are pre-incident education, assessment, strategic planning, individual crisis intervention, informational groups, interactional groups, family intervention, pastoral intervention, and follow-ups and/or referrals (Mitchell, 2015). Mitchell noted that it is contraindicated for these intervention tactics, specifically CISDs, to be used as one-off interventions, but they should be used in concert with each other (Robinson, 2004; Tuckey & Scott, 2014). For example, a group of ESPs may experience a critical incident, to which prior they would have received pre-incident education, post-incident they would have an immediate defusing or crisis management briefing (CMB). Several days later they would then have a CISD, concluded with the crisis interventionists providing follow-up care to people they deemed necessary and providing referrals to behavioral health clinicians when appropriate. This is consistent with the literature on crisis intervention recommending approximately four-six contacts (Kanel, 2007).

CISM emphasizes resistance, resilience, and recovery as core concepts and encompasses components before, during, and after critical incidents (Andrews et al., 2022; Mitchell, 2015; Price et al., 2022). This package of interventions, specifically CISDs, may be a beneficial tool in the elimination of stigma regarding mental health as they demonstrate and encourage the cohesiveness of units and communities and that people are not individually experiencing problems lessening the chance of dismissing resilience concepts (Crane et al., 2021). CISM may be seen as a reactive program when

only using the reactive components, defusings and CISDs, but when used in a comprehensive, integrated, systematic, and multi-component package, pre-incident education is a foundational concept that may often be ignored (Andrews et al., 2022; O'Rourke & Hyland, 2021). Furthermore, informational interventions can be provided during and immediately after critical incidents to provide information on PTS reactions. O'Rourke and Hyland found that due to the open communication and social support offered in the CISM package, attitudes toward the interventions were positive, and responders found it beneficial. Similarly, Price et al. (2022) found that CISM was well perceived by ESPs and unaffected by demographics, such as years of service.

Price et al. (2022) also found that their use of coping skills obtained in CISM interventions was unaffected by demographics. Johnson et al. (2019) found that firefighters with more years of service were less likely to seek informal support over professional support; however, "68% of the study would not recommend behavioral health services to others" (p. 306). Firefighters in one study were also found to have the lowest levels of stigma and were the most likely to disclose their mental health challenges while experiencing less stigma (Bowers et al., 2022). This may indicate that if the results of this study are as hypothesized, targeting ESPs with more years of service and promoting the use of CISDs may reduce stigma. CISM also reduced the likelihood of screening positive for AUD and GAD, two common comorbid mental health conditions associated with trauma-related disorders (APA, 2022; Price et al., 2022).

Critical Incident Stress Debriefing (CISD)

Under the CISM model is a specific intervention tactic called Critical Incident Stress Debriefing. The CISD is a group intervention tactic known as the Mitchell Model designed for homogenous working groups who have spent time working together, have an established relationship, and/or have experienced the same incident(s) (Mitchell, 2015; Richards, 2001; Robinson, 2007). CISDs should typically occur three to five days post-incident but no less than 24 hours unless there are extenuating circumstances, such as the incident being extremely traumatic. The process of a CISD is designed to take the participants from the cognitive to the affective and back to the cognitive domain through a seven-phase process of questions and prompts (Levenson, 2007). This provides several opportunities for the unit or team to restore cohesion, mitigate the impact of the traumatic incident, facilitate restoration to their normal adaptive functioning, and identify individuals requiring professional support (Everly Jr. et al., 2000; Mitchell, 2015). Furthermore, CISDs are an interactive process allowing individuals to talk to peers, which O'Rourke and Hyland (2021) and Blaney (2009) found to be the most effective means of stress management. Traumatic memories that are not processed will begin to construct themselves with whatever information they have, making the interactive portion crucial to the healing of ESPs (Martz & Lindy, 2010). While the process may resemble psychotherapy, CISDs are not psychotherapy or counseling and are designed to be a peer-run process with professional mental health support present for guidance and observation (Robinson, 2004).

Anderson et al. (2020) found CISDs were the most used intervention post-critical incident in a study of Canadian PSPs. In the same study, Anderson et al. found CISDs reduced alcohol consumption post-CI, which is consistent with Andrews et al. (2022). However, their study demonstrated that any mental health training was consistent with a reduction of AUD/SUD. Knowledge should be gained through training, which may reduce stigma (Krakauer et al., 2020). CISDs specifically were also found to be most effective for improving mental health, reducing stigma, increasing mental health knowledge, and responding to members of the public experiencing a mental health challenge (Andrews et al., 2022). CISDs alone also reduced positive screening for Major Depressive Disorder (MDD), a common comorbid mental health disorder with trauma-related diagnoses (APA, 2022). CISDs appear to be an established intervention that incorporates several components, including but not limited to camaraderie, normalizing, psychoeducation, and resources necessary to reduce the stigmatization of mental health challenges among ESPs (Donovan, 2022). CISDs have also been found to reduce the impact of acute PTS reactions when appropriate psychological resilience is implemented (Andrews et al., 2022; Boothroyd et al., 2019). Blaney (2009) found that CISDs were a helpful intervention to provide a cathartic environment and education in one setting.

Organizational Support

Organizations within the emergency services sub-culture(s) play a crucial role in promoting and maintaining the stigmatization of mental health help-seeking behaviors or being active in eliminating the stigma. Workplace stigma could create structural stigma on the macro level through system-level processes, being active in preventing

organizational peer-based interventions (Horan et al., 2021; Braaten, 2018; Ricciardelli et al., 2020; Tessier et al., 2021). Structural stigma may be present when the well-being of a stigmatized population is occurring (Ricciardelli et al., 2020). Many emergency services agencies are developing internal peer support teams and electing to handle peer-to-peer interventions in-house (Price et al., 2022). However, this may be one of the stigmatizing factors acting as a barrier to ESPs help-seeking behaviors toward interventions like CISDs by the organizational structure not allowing outside help-seeking to be acceptable.

Any intervention held at an organization, whether general peer support or a structured CISD, will always work against the backdrop of that existing culture (Horan et al., 2021). For example, suppose the organization's overall culture stigmatizes mental health intervention, and two peer support team members offer an in-house CISD. In that case, the CISD may not be well attended due to the lack of support. Interventions are best held and most effective, practicing two of the basic principles: immediacy (early) and proximity (close) (Crocq & Crocq, 2000; Mitchell, 2015; Richins et al., 2020). A place of comfort and safety where basic needs can be met is essential to any crisis intervention tactic, which may be the organizational *home* the ESPs are from (Kanel, 2007; Tjin et al., 2022). Tjin et al. found that ESPs may prefer using organizational or peer support, but inadequate communication and disempowerment were two significant barriers. Organizational demonstration of support and commitment to prioritizing ESPs well-being may be an initial step in re-establishing effective communication.

Organizational support and endorsement are essential to the success of programs and may approve attendance for ESPs (Blaney, 2009; Kraffa & Tochkov, 2013; Tessier et

al., 2021). Furthermore, even minor logistical issues can deter an intervention from occurring because individuals experiencing a crisis do not have the distress capacity to overcome further hurdles (Brondolo et al., 2018; Richins et al., 2020). These types of logistical issues may be resolved by using an organization's station. Support from an organizational perspective also typically correlates to supervisory support, which is one of the most significant barriers ESPs perceive to help-seeking due to fear of career repercussions (Carleton et al., 2020). Brondolo et al. (2008) found that perception from employees lacking supervisory support could increase PTS reactions through negative cognitions about future potentially traumatic events. Allowing the organization to be used for interventions may be a step in demonstrating buy-in that the organization is committed to eliminating stigma and serving as a future protective factor among its ESPs (Horan et al., 2021; Jones et al., 2020; Tessier et al., 2021). In the future, a new circle of reinforcement may be created, positively encouraging the elimination of stigma through disclosure and intervention, fostering positivity and well-being (Krakauer et al., 2020; Wild et al., 2020).

Organizations may also consider viewing this from an economic perspective, especially considering that many ESP organizations are volunteer-based and/or funded by the taxpayers of local jurisdictions (Fahy et al., 2022). Andrews et al. (2022) found that PTS reactions could reduce performance among ESPs, creating a potential safety risk and an economic burden on the agency. Suppose an ESP is unable to perform their duties, whether it be due to physical or mental challenges. In that case, this poses significant risks and challenges that could be financially irresponsible if the challenges could be

mitigated with early intervention (Richins et al., 2020). Furthermore, organizations should realize that the ESPs serving their communities are experiencing these traumatic events and potentially developing a moral injury on behalf of the organization (Brondolo et al., 2018). These disrupted cognitions could harm the organization and individual ESP that may dissipate or be reduced with support.

Social Support

A discussion on social support is warranted in culminating the concepts of ESP culture, mental health stigma, and how organizations factor into hindering or fostering cohesion and support. Social support appears to be first discussed specifically in the context of crisis work by Gerald Caplan in 1974. Caplan (1974) noted the importance of support for individuals experiencing a crisis. Barrera (1986) noted the types of diseases and social issues that social support was proven to affect, such as psychological distress. Barrera also emphasized the concept of perceived social support and that it may not be whether the support is or is not available but how others perceive it, similar to Carleton et al. (2020). Social support has also been found to be a protective factor against traumatic events (or a risk factor if absent), possibly acting as a buffer from the adverse effects (Cohen & Wills, 1985; Prati & Pietrantoni, 2010). ESPs are at a particularly advantageous or disadvantageous position in receiving and perceiving social support based on the organizational culture and how public stigma has potentially induced or reinforced self-stigma.

Social support promotes social connectedness among ESPs, aiding in normalizing traumatic events and reinforcing peer and unit cohesion (Hilbrink, 2022; Smirnova et al.,

2021). Cohesion among ESPs has been found to promote psychological health and act as a protective factor (Smirnova et al., 2021). Social support and connectedness also promote wellness, resilience, and post-traumatic growth among ESPs (Hilbrink, 2022; Donovan, 2022). Donovan (2022) noted the influence CISDs have on the concept of social support by reinforcing the camaraderie due to the peer-to-peer nature of the intervention. To achieve PTG, many factors typically are involved, such as social support, but another one is the positive use of coping skills. Social support is also linked to the increased use of healthy coping skills and positive reframing, which are commonly linked to avoidant coping strategies in PTS symptomology (Chen et al., 2022). Hilbrink (2022) found that a program emphasizing social connectedness among ESPs reduced traumatogenic reactions and, in some participants, mitigated PTSD symptomology completely. Overall, Hilbrink (2022) found that "97% of participants found an activity of social nature beneficial to their well-being" (p. 67).

Self-efficacy is another factor that social support has been found to increase (Karademas, 2006). An ESP's attitudes and beliefs toward resilience and whether they will or will not overcome a mental health challenge or challenges are directly related to their ability to do so (self-efficacy) (Crane et al., 2019). Self-efficacy is also found to be a factor in promoting PTG and, when coupled with social support, was able to predict PTG in 911 telecommunicators, which may be necessary given Donovan's (2022) finding that they may be at an increased need for social support (Shakespeare-Finch et al., 2015). This could be advantageous to ESPs considering the personality traits that make them excel at their professions, such as managing stress and being problem-focused, if social support

and connectedness are present as a base protective factor (Donovan, 2022). Given that CISDs incorporate peer-to-peer support, provide a cathartic environment, and work to restore unit cohesion through a supportive environment, they may be an optimal intervention for groups who have experienced a critical incident and to promote the elimination of stigma regarding mental health (Blaney, 2009; Mitchell, 2015).

Self-forgiveness is another trait that reduces stigma and increases help-seeking behaviors among ESPs (Carpenter et al., 2019). Self-forgiveness in the context of ESPs is the ability to regulate negative cognitions about a traumatic event in a nonpunitive manner and accept that the effort given was all that could be done. However, hallmark symptoms of PTSD are feelings of shame, disgrace, and negative cognitions, meaning the earlier an ESP is provided intervention and closure of the incident is facilitated, the better chance for a positive outcome (APA, 2022; Richins et al., 2020). Hirsch et al. (2011) found self-forgiveness to be associated with decreased rates of depression, a common mental health challenge among ESPs. Boothroyd et al. (2018) noted that ESPs found self-forgiveness to be one of the most important coping mechanisms for processing their trauma. CISDs may be part of a multi-component approach in alleviating or mitigating different symptomology they are at risk for if provided the opportunity (Mitchell, 2015; O'Rourke, 2021).

Trauma Membrane

When someone is physically injured in a traumatic way, such as a fall, the injured area and surrounding tissue become swollen in an effort to protect the damaged tissue (Martz & Lindy, 2010). Lindy (1985) suggested a similar ideology through the trauma

membrane concept. Lindy stated that a trauma membrane might develop around individuals or communities who experienced traumatic stress, allowing the healing process to begin as a psychological barrier (Martz & Lindy, 2010). It was suggested that individual survivors would form a trauma membrane, but if there was a group of survivors who experienced the same trauma and had a close relationship, such as ESPs, then an interpersonal trauma membrane would be formed. Lindy went on to describe that similar to a physical wound, the metaphorical concept of the trauma membrane is that as it heals from the inside out, the wound will reduce in size. CISDs could be viewed as a rehabilitative intervention that can aid in forming a trauma membrane (Martz & Lindy, 2010). The formation may allow the human factor to heal physically and psychologically.

The trauma membrane concept is particularly interesting among ESPs because of the complexity of their critical incident experience. Terr (1991) proposed several types of traumatic stress responses: trauma after one-time unanticipated events, traumatic reactions after long-term exposures, and crossover traumas (sudden events causing disability). Martz and Lindy (2010) focused on the last two, which are also the ones ESPs appear most prone to encounter. ESPs are repeatedly exposed to traumatic events, which may be one-time events; however, frequency and exposure to traumatic events have been found to increase traumatogenic reactions (Anderson et al., 2020; Krakauer et al., 2020; Sanatkar et al., 2022). Furthermore, numerous researchers note the increased risk of ESPs developing SUD, MDD, and PTSD due to their duties (Anderson et al., 2020; Sanatkar et al., 2022). Each is recognized as a disability under the DSM 5 Text Revision (DSM-5-TR) (APA, 2022). The trauma membrane concept is highly relevant to ESPs and may

play an essential role in their recovery and how stigma and a lack of help-seeking behaviors hinder that.

Harvey (1996) discussed how each person's recovery from a traumatic event is unique given that each individual is complex and determined by the person, event, and environmental factors. While this is an ecological theoretical foundation, it supports the Person-in-Environment theoretical foundation of this research in that ESPs are affected by the stigma surrounding their culture and, in turn, appear to further reinforce the stigma (Ricciardelli et al., 2020). With the trauma membrane concept, people will decide who to emotionally let in and not let in following a traumatic event (Martz & Lindy, 2010). Immediately following a traumatic event, individuals who are experiencing critical incident stress will likely not be able to process the events because they are emotionally dysregulated (APA, 2022; Martz & Lindy, 2010). Regarding Martz and Lindy's (2010) discussion on civilian populations, ego, and vulnerability and how it affects who crosses the trauma membrane, this concept is more complex in ESPs due to the culture of strength and self-reliance that has been established in previous sections (Bowers et al., 2022). Lastly, Martz and Lindy (2010) discussed the two types of disasters and how they may determine the strength of the trauma membrane. Centrifugal is localized destruction and may result in a weakened trauma membrane, whereas centripetal is more extensive destruction bringing more cohesiveness, typically due to having to recover in the community that was destroyed. ESPs typically respond to isolated incidents temporarily, then return *home*, indicating they may not form strong trauma membranes.

Mental Health Disorders

Post-Traumatic Stress Disorder

Posttraumatic Stress Disorder has become a common-place term in emergency services due to the increased risk of ESPs developing it (APA, 2022; Sanatkar et al., 2022). PTSD is a diagnosis that affects the lower, mid, and higher brains, deeply embedding it into the brain and body (Boothroyd et al., 2018; Bremner, 2006; Van der Kolk, 2014). Pending the severity of one's PTSD, this could potentially affect nearly all or many aspects of an ESP's life. The base concept in the formation of PTSD is the violation of a perception or belief that someone holds (Park et al., 2012). This is commonly a strong belief, and when said belief is violated, the symptomology ensues with negative cognitions. Common symptoms of PTSD include but are not limited to nightmares, anxiety, panic attacks, depression, substance use, memory impairment, isolation, flat affect, irritability, dissociation, intrusive thoughts, and avoidance (APA, 2022). These symptoms, along with many others, may affect the performance of ESPs in their duties, increasing the risk of developing concurrent comorbid behavioral health disorders.

PTSD is a complex diagnosis that has several criteria that need to be met for diagnosis. While the DSM-5-TR includes criteria for all ages and persons, this criterion will specify what ESPs need to be diagnosed. The recognized criteria for diagnosing ESPs with PTSD according to the DSM-5-TR (APA, 2022, p. 301-303):

A. Exposure to actual or threatened death, serious injury, or sexual violence in (or more) of the following ways:

1. Directly experiencing the traumatic event(s).
2. Witnessing, in person, the event(s) as it occurred to others.
3. Learning that the traumatic event(s) occurred to a close family member or friend. In cases of actual or threatened death of a family member or friend, the event(s) must have been violent or accidental.
4. Experiencing repeated or extreme exposure to aversive details of the traumatic event(s) (e.g., first responders collecting human remains; police officers repeatedly exposed to details of child abuse.)

B. Presence of one (or more) of the following intrusion symptoms associated with the traumatic event(s), beginning after the traumatic event(s) occurred:

1. Recurrent, involuntary, and intrusive distressing memories of the traumatic event(s).
2. Recurrent distressing dreams in which the content and/or effect of the dream are related to the traumatic event(s).
3. Dissociative reactions (e.g., flashbacks) in which the individual feels or acts as if the traumatic event(s) were recurring. (Such reactions may occur on a continuum, with the most extreme expression being a complete loss of awareness and present surroundings.)
4. Intense or prolong psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event(s).

5. Marked physiological reactions to internal or external cues that symbolize or resemble an aspect of the traumatic event(s).

C. Persistent avoidance of stimuli associated with the traumatic event(s), beginning after the traumatic event(s) occurred, as evidenced by one or both of the following:
    1. Avoidance of or efforts to avoid distressing memories, thoughts, or feelings about or closely related with the traumatic event(s).
    2. Avoidance of or efforts to avoid external reminders (people, places, conversations, activities, objects, situations) that arouse distressing memories, thoughts, or feelings about or closely associated with the traumatic event(s).

D. Negative alterations in cognitions and mood associated with the traumatic event(s), beginning or worsening after the traumatic event(s) occurred, as evidenced by two (or more) of the following:
    1. Inability to remember and important aspect of the traumatic event(s) (typically due to dissociative amnesia and not to other factors such as head injury, alcohol, or drugs.)
    2. Persistent and exaggerated negative beliefs or expectations about oneself, others, or the world (e.g., “I am bad,” “No one can be trusted,” The world is completely dangerous,” “My whole nervous system is permanently ruined”).

3. Persistent distorted cognitions about the cause or consequences of the traumatic event(s) that lead the individual to blame himself/herself or others.
4. Persistent negative emotional state (e.g., fear, horror, anger, guilt, or shame).
5. Markedly diminished interest or participation in significant activities.
6. Feelings of detachment or estrangement from others.
7. Persistent inability to experience positive emotions (e.g., inability to experience happiness, satisfaction, or loving feelings).

E. Marked alterations in arousal and reactivity associated with the traumatic event(s), beginning or worsening after the traumatic event(s) occurred, as evidenced by two (or more) of the following:
    1. Irritable behavior and angry outbursts (with little or no provocation) typically expressed as verbal or physical aggression toward people or objects.
    2. Reckless or self-destructive behavior.
    3. Hypervigilance.
    4. Exaggerated startle response.
    5. Problems with concentration.
    6. Sleep disturbance (e.g., difficulty falling asleep or staying asleep or restless sleep).

F. Duration of the disturbance (Criteria B, C, D, and E) is more than 1 month.

G. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

H. The disturbance is not attributable to the physiological effects of a substance (e.g., medical, alcohol) or another medical condition.

Acute Stress Disorder

Acute Stress Disorder is similar to PTSD but more acutely diagnosed within three days to one month (APA, 2022). Due to the nature of the work ESPs endure and the frequency of exposure and intensity, ESPs may be at an increased risk for developing personal and professional disruptions, which may manifest as traumatic stress (Boothroyd et al., 2018; Fogarty et al., 2021; Lanza et al., 2018; Price et al., 2022). While not a pre-requisite for PTSD, ASD symptoms may be visible in the days or weeks following a traumatic exposure allowing for more immediate intervention, increasing the likelihood and success of recovery (APA, 2022). Cahill and Pontoski (2005) found that "77.8% of participants in a study who met full ASD diagnostic criteria met full PTSD criteria at follow-up." More recently, Li et al. (2021) also confirmed that ASD can predict the likelihood of PTSD and severity. While the diagnostic criteria are similar, they are clustered differently under ASD. For example, under section B, one must experience nine or more symptoms, whereas, under PTSD diagnostic criteria, the clusters are more individualized. To be diagnosed with ASD, the following criteria must be met by an ESP (APA, 2022, p. 314-316):

A. Exposure to actual or threatened death, serious injury, or sexual violence in (or more) of the following ways:

1. Directly experiencing the traumatic event(s).
2. Witnessing, in person, the event(s) as it occurred to others.
3. Learning that the traumatic event(s) occurred to a close family member or friend. In cases of actual or threatened death of a family member or friend, the event(s) must have been violent or accidental.
4. Experiencing repeated or extreme exposure to aversive details of the traumatic event(s) (e.g., first responders collecting human remains; police officers repeatedly exposed to details of child abuse).

B. Presence of nine (or more) of the following symptoms from any of the five categories of intrusion, negative mood, dissociation, avoidance, and arousal, beginning or worsening after the traumatic event(s) occurred:

Intrusion Symptoms

1. Recurrent, involuntary, and intrusive distressing memories of the traumatic event(s).
2. Recurrent distressing dreams in which the content and/or effect of the dream are related to the event(s).
3. Dissociative reactions (e.g., flashbacks) in which the individual feels or acts as if the traumatic event(s) were recurring. (Such reactions may occur on a continuum, with the most extreme expression being a complete loss of awareness and present surroundings).

4. Intense or prolong psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event(s).

Negative Mood

5. Persistent inability to experience positive emotions (e.g., inability to experience happiness, satisfaction, or loving feelings).

Dissociative Symptoms

6. An altered sense of reality of one's surroundings or oneself (e.g., seeing oneself from another perspective, being in a daze, time slowing).
7. Inability to remember and important aspect of the traumatic event(s) (typically due to dissociative amnesia and not to other factors such as head injury, alcohol, or drugs).

Avoidance Symptoms

8. Efforts to avoid distressing memories, thoughts, or feelings about or closely associated with the traumatic event(s).
9. Efforts to avoid external reminders (people, places, conversations, activities, objects, situations) that arouse distressing memories, thoughts, or feelings about or closely associated with the traumatic event(s).

Arousal Symptoms

10. Sleep disturbance (e.g., difficulty falling asleep or staying asleep or restless sleep).
11. Irritable behavior and angry outbursts (with little or no provocation) typically expressed as verbal or physical aggression toward people or objects.
12. Hypervigilance.
13. Problems with concentration.
14. Exaggerated startle response.

C. Duration of the disturbance (symptoms in Criterion B) is 3 days to 1 month after trauma exposure.

D. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

E. The disturbance is not attributable to the physiological effects of a substance (e.g., medication or alcohol) or another medical condition (e.g., mild traumatic brain injury) and is not better explained by a brief psychotic disorder.

Major Depressive Disorder

MDD is a depressive disorder found to be highly prevalent among ESPs (Anderson et al., 2020, APA, 2022; Carson et al., 2022; Price et al., 2022). The DSM-5-TR diagnostic criterion for diagnosing MDD is based on experiencing five or more of the listed symptoms within a two-week period (APA, 2022). Some of those symptoms are depressed mood, lack of interest and pleasure, significant weight loss, and feelings of worthlessness. ESPs are at an increased risk of MDD due to the traumatic experiences

they are exposed to and the increased rate of dual diagnoses (comorbidity) with PTSD, of which it has been established that ESPs are at increased risk (APA, 2022). Furthermore, MDD is a risk factor for suicidality among ESPs, possibly more so those working in isolation, such as telecommunicators and MDIs (Brondolo et al., 2018; Flannery & Greenhalgh, 2018; Tiesman et al., 2021).

Generalized Anxiety Disorder

The diagnosis of anxiety has numerous sub-diagnoses, but for the context of this research with ESPs, GAD is used in isolation. GAD is characterized in the DSM-5-TR by "excessive anxiety and worry" (APA, 2022, p. 250-251). The diagnostic criterion for GAD is the previous symptom, the inability or difficulty in controlling the worry, and three or more out of a cluster of symptoms such as restlessness, irritability, or sleep disturbances. The criterion also states that the anxiety must cause clinically significant impairment and not be attributed to another more appropriate diagnosis or other factors (e.g., alcohol or medication). Due to the increased frequency of exposure established in this literature review, ESPs are at an increased risk of developing GAD. Along with other mental health disorders in this research, GAD is a comorbid diagnosis of PTSD and MDD (APA, 2022).

Substance Use Disorder & Alcohol Use Disorder

ESPs are found to be at an increased risk for SUD and/or AUD (Anderson et al., 2020; Carleton et al., 2020; Price et al., 2022). This may commonly be due to initial use for coping with exposure to traumatic events as a maladaptive coping mechanism (Fogarty et al., 2021; Price et al., 2022). SUD is largely identified and diagnosed by the

"cognitive, behavioral, and psychological symptoms indicating the individual continues to use the substance despite related problems" (APA, 2022, p. 545). Other criteria exist as clusters of symptoms, similar to the diagnostic criteria of PTSD. Some of those criteria include social impairment, lack of impulse control, increased risk-taking, using the substance more than intended, seeking the substance out or craving the substance, and feelings of an intense urge to use. The criterion for diagnosing AUD is similar to SUD, but in the fact that it is only alcohol versus all substances (APA, 2022). SUD and/or AUD are common comorbid conditions to trauma-related diagnoses, MDD, and GAD, with people experiencing PTSD likely to experience one or more of the others (APA, 2022). Furthermore, Carson et al. (2022) found that ESPs were more likely to have a higher level of substances in their body at the time of suicidal death. This could further prove that substance abuse is a predictive factor for suicidality among ESPs.

Suicidality

Suicidality presents a growing concern among ESPs, given that the literature supports the increasing risk they face of being repeatedly exposed to critical incidents and developing traumatogenic reactions, such as PTSD, which have been proven to be comorbid conditions with MDD, GAD, and SUD/AUD (APA, 2022; Carson et al., 2022; Stanley et al., 2016). These mental health diagnoses are also comorbid conditions to suicidality (APA, 2022). The prevalence rate of suicidality among EMS clinicians in one study was found to be 24.5%, with other studies indicating the rates of suicidal ideations may be as "high as 41% among ESPs" (Carleton et al., 2018; Renkiewicz et al., 2022, p. 5). Carson et al. (2022) found over half (58%) of the suicides in their study to be LEOs,

"18% were firefighters, and 2% were 911 telecommunicators" (p. 4). Suicidality typically consists of three components known as the Interpersonal Theory of Suicide, being thwarted belongingness, perceived sense of burdensomeness, and the capability to carry out the ideation (Ahmadboukani et al., 2022; Chu et al., 2017; Van Orden et al., 2010). The theory postulates that the ability to carry out the act of suicide happens habitually, which is concerning for ESPs given their relatively easy access to lethal means (e.g., firearms for law enforcement, which is the most common means, and desensitization overtime to injury and death commonly witnessed, whether directly or vicariously by all subgroups (Carson et al., 2022; Stanley et al., 2023). Furthermore, through their increasing exposure to critical incidents and the severity of their traumatogenic reactions and accumulation of mental health diagnoses, the risk factors for suicidality may increase given the symptoms of many or all the diagnoses are isolation, substance use, panic, and negative cognitions (Brondolo et al., 2018).

Summary and Conclusions

ESPs are at an elevated risk of experiencing critical incidents due to the dangerous and emotionally disturbing nature of their work in times of trauma (Bowers et al., 2022; Haugen et al., 2017; Price et al., 2022). This increased risk of exposure increases their risk of developing traumatogenic reactions such as acute PTS reactions, which can, in turn, develop into mental health disorders (Anderson et al., 2020; Boothroyd et al., 2019; Lanza et al., 2018). These traumatogenic reactions are best mitigated with early crisis intervention techniques when the ESPs coping mechanisms are not working as normal (Kanel, 2007). With effective crisis intervention applied at a

proper time, ESPs may experience PTG versus PTS reactions. These positive reactions and outcomes can be encouraged and facilitated through resilience, self-efficacy, self-forgiveness, and social support.

CISM is a crisis intervention program that has proven to be effective, particularly among ESPs (Andrews et al., 2022). CISDs, a tactic under the CISM umbrella, is a group tactic that is highly effective with ESPs and promotes natural concepts needed to act as protective factors and recovery, such as restoring unit cohesion, camaraderie, social support, resilience, and psychoeducation. Furthermore, these interventions are peer-run and found to be safe, relatable, and beneficial from other ESPs (Andrews et al., 2022; Donovan, 2022; Krakauer et al., 2020). CISM and CISDs were also found to reduce and/or mitigate the symptoms of PTSD, ASD, GAD, MDD, and SUD/AUD in ESPs. CISDs have also effectively reduced stigma among ESPs, the most significant barrier in the culture of help-seeking behaviors (Andrews et al., 2022).

In emergency services culture, two types of stigmas are prevalent, public stigma, which leads to self-stigma and, in turn, creates a concept of label avoidance within the ESPs. A lack of social support, organizational support, and perceived weakness all factor into the stigma that acts as a barrier to help-seeking for ESPs (Ricciardelli et al., 2020). These personnel then experience higher rates of mental health challenges than the general public when they are also at an increased risk. Implementing, supporting, and normalizing programs such as CISM and utilizing the intervention tactics such as CISDs may be an initial step to eliminating stigma among ESPs and breaking the circle of negative reinforcement.

Chapter 3: Research Method

The purpose of this quantitative, cross-sectional study was to examine how the presence of stigma in ESPs (LEOs, firefighters, EMS clinicians, 911 telecommunicators, and MDIs) and the number of years spent in emergency services predict attendance at CISDs. Mental health stigma has been proven to be a significant barrier to ESPs seeking mental health treatment or intervention, leading to an increase in behavioral health challenges (APA, 2022; Brondolo et al., 2018; Jones et al., 2020; Newell et al., 2022). The years an ESP has spent in emergency services were examined to determine if there is a relationship between stigma and attending a CISD. While found to be insignificant, more educational efforts may still be effective in continuing to eliminate the stigma surrounding help-seeking behaviors among ESPs after they experience a traumatic event. A description of the research design and methodology and how it pertains to the current research question and purpose is provided. This chapter will also provide information on instrumentation, data collection and analysis, threats to validity, and ethical procedures.

Research Design and Rationale

The variables examined in this study were mental health stigma (X_1) (continuous) and the number of years spent in emergency services (X_2) (continuous), which are independent variables, and attendance at CISDs (Y) (categorical or dichotomous), which is the dependent/outcome variable. This research used a cross-sectional design with survey methodology. A cross-sectional design was warranted since this research intended to gather participant data at a single point in time (Babbie, 2016). Cross-sectional designs are also typically low-cost and manageable for a graduate student researcher to conduct,

creating a snapshot for potential future research (Wang & Cheng, 2020). Furthermore, cross-sectional designs with survey methodology allow the researcher to observe and compare the population again at a different point in time.

The survey aimed to establish if stigmatization affects an ESP's help-seeking behaviors by not attending a CISD and if years of service is a factor. The survey was conducted anonymously, and participants were not asked to disclose any identifying information. Anonymous surveys have promoted greater disclosure of sensitive topics such as mental health stigma and attending mental health interventions (Murdoch et al., 2014). The survey consisted of the Self-Stigma of Seeking Help Scale (SSOSH) (Appendix B) and was distributed online through emergency services websites, social media, forums, or other applicable places where ESPs could access it.

Methodology

A quantitative methodology was used for this research. Burkholder et al. (2020) indicated that quantitative research is used when a researcher wants to understand a behavior using statistical analysis. Quantitative research is also intended to be generalizable to a larger population than the studied sample (Yilmaz, 2013). Given that this research studied how stigma and years of service among ESPs affect the behavior of attending a CISD through a representative sample, then inferring generalizations, a quantitative methodology was appropriate. The purpose and applicability of using a quantitative methodology in this research was to generalize the data obtained to eliminate the barrier of help-seeking to CISDs and other mental health interventions among ESPs.

Target Population

The target population of this study included the following ESPs: LEOs, EMS clinicians, firefighters, 911 telecommunicators, and MDIs. Qualifying LEOs were those with the authority to enforce laws, arrest, and carry a firearm in performing their duties. EMS clinicians and firefighters were certified and/or licensed as such, and 911 telecommunicators and MDIs were those currently working in those respective roles. Participants could have been employed or volunteered for multiple ESP roles. No minimum experience was required, and a representative sample of the United States was warranted from all subgroups. Given that ESPs are required to be at least 18 years old, this study did not include minors.

Sampling Procedures

This study was restricted to ESPs in the identified subgroups who were 18 or older. Given the national scope of this study and the different subgroups of ESPs included, simple random sampling was appropriate and allowed for more accurate population estimation in the study (Frankfort-Nachmias et al., 2020). Probability sampling may have also reduced the risk of bias, given that there was no opportunity to choose participants (Burkholder et al., 2020). Furthermore, this was a cost and time-effective way to gather the data while yielding an adequate sample size (Drosdick-Sigafoos, 2022). A minimum sample size of 149 was needed for generalizability using G*Power calculations. The following parameters were used for the G*Power calculation: alpha (a) = 0.05 and power = 0.80.

Websites, forums, and social media sites that agreed or were accessible published a link to the survey with open access for members and visitors to complete. Due to ethical concerns, no personal invitations were sent to anyone to complete the survey. Participation was voluntary, with expressed consent obtained before accessing the survey questions. Participants had to identify whether they met the criteria to complete the survey with three pre-screening questions. The survey was available for 30 days and terminated by the closure of the survey link, ending data collection.

Recruitment

Recruitment was done by contacting identified organizations that regularly disseminate information to ESPs through online portals, such as JEMS, ABMDI, and FireHouse, to determine if they would post the survey on their website. An email was sent to multiple organizations soliciting approval. Other avenues for recruitment were through personal contacts and social media. The survey was created and disseminated using SurveyMonkey. Using SurveyMonkey allowed for more confidentiality and anonymity for the participants and more accurate and faster data collection for the researcher (Wyatt, 2000). There was a description of the survey at the beginning and a consent statement that the participant must have acknowledged to continue, serving as informed consent. Furthermore, the inclusion criteria identified in the Target Population section were clearly stated in the survey.

After the participants completed the survey, they saw a ‘Thank You’ message and exited or navigated away from the survey page. While I did not have the ability to verify, participants must have self-affirmed their eligibility for participation. Many of the

organizations through which the survey was disseminated also require membership with verification of employment or status, and therefore other outside factors may have aided in the inclusion process. During recruitment, it was made clear that the survey was anonymous, and any identifying data would not be collected.

Data Collection

The survey was launched for a 30-day timeframe after receiving approval from Walden's Institutional Review Board (IRB). The web-based survey hosted on SurveyMonkey collected the participants' responses. Once a participant clicked on the link to the survey, the informed consent consisting of the risks, inclusion criteria, and agreeing to their willingness to complete the survey loaded onto the page. Once the participants agreed, they had the opportunity to complete the survey. After the participants completed the survey, they were thanked for participating. If the participants withdrew or exited the survey before submission, the link closed out with no repercussions to the individual.

Instrumentation and Operationalization of Constructs

Demographic Form

Participants completed a 12-question demographic form (Appendix C). This form consisted of three pre-screening questions ensuring that participants met the requirements to complete the survey, such as age, confirmation of being an emergency services professional, and whether they worked in the United States. These were followed by eight demographic questions related to gender, ethnicity, years of education, what discipline of emergency services they represented, what region they worked in, how

many years they had been in emergency services, and in what capacity they served (e.g., full-time, volunteer), and ended with the final question to determine if they would attend a CISD after they experienced a traumatic event (Yes or No).

Self-Stigma of Seeking Help Scale (SSOSH)

The data for this study was collected via a web-based survey on SurveyMonkey using the SSOSH scale. The SSOSH scale is a 10-item scale designed by Vogel et al. (2006). The score a participant receives on the scale is averaged, and higher scores correlate to higher levels of perceived stigma an ESP may be experiencing to seeking psychological help. Since stigma was an independent variable being measured, a valid and reliable stigma scale was warranted, and the SSOSH scale was appropriate. The SSOSH has been established as valid and reliable (.91) and cross-validated with reliable test-retest scores.

The SSOSH scale has been used successfully with ESPs in the past (Leary, 2021). Leary established validity and reliability of the study by setting the alpha to $p < .05$ and exporting data directly into SPSS from SurveyMonkey, reducing the potential for error (Frankfort-Nachimas et al., 2020). Furthermore, Vidales et al. (2023) note that the scale has been cited over 1,400 times and is the most widely used measure for the stigma of help-seeking behaviors. The SSOSH scale was posted online with a statement expressing its open accessibility to the public (see Appendix A).

Years of Service

The second independent variable in this study was years of service to examine if how long ESPs serve impacted stigma and their willingness or tendency to attend a

CISD. Years of service was a continuous variable that was coded as a ratio variable to categorize and rank the data (Warner, 2012). As noted throughout this research, ESPs are at an increased risk of experiencing traumatic events and developing traumatogenic reactions (Anderson et al., 2020; Horan et al., 2021; Krakauer et al., 2020). Lopedito (2021) noted that "law enforcement officers may be exposed to 180% more critical incidents than the average person over a 30-year career." With levels of stigma remaining the same or rising, years of service was a crucial variable to evaluate to determine if CISDs are attended more or less throughout the ranks (Burzee et al., 2022; Drew & Martin, 2020; Johnson et al., 2020; O'Toole et al., 2022). This variable was one of many options to examine and did not hold significance when combined with stigma. However, unique data such as differences, general differences among subgroups, and geographical regions and years of service was still obtained from the demographic information that may be useful to future researchers. (Salkind & Frey, 2020).

Attendance at Critical Incident Stress Debriefings

Attendance at CISDs was the dependent variable for this study. The variable was measured as a categorical binomial answer of "Yes" or "No." This was appropriate given that this research was attempting to determine an outcome at a single point in time with logistic regression (Babbie, 2016; Zach, 2020b).

Data Analysis Plan

Data from the web-based survey was downloaded into the current version of the IBM Statistical Package for the Social Sciences (SPSS) from SurveyMonkey. The data were screened to ensure accuracy. SPSS software was then used to gather descriptive

statistics and then run a multiple logistic regression analysis of the data to address the research question. To prevent missing data and incomplete surveys, all fields were marked as required, and if submitted without completing each field, the participant received an error message with the incomplete portion highlighted (Mirzaei et al., 2022). The participants still had the ability to exit the survey via the browser at any time with no repercussions. This was a crucial step, as missing data can negatively impact the sample size and potentially create biasing effects (Wirtz, 2004).

Logistic regression was appropriate for analyzing this data since the study intended to predict an outcome (Penn State, 2018b; Warner, 2012). Having two predictor variables and one binary outcome variable, multiple logistic regression was warranted and allowed for generalizations of the data across the ESP population. The probability was analyzed using the odds ratio of the data and comparing pre- and post-models and allowing the variables to be analyzed for which, or if both, impacted the dependent variable significantly (Penn State, 2018b). Considering that the predictor variables were not significant in this study, future regression research could focus on different variables to evaluate what factors are significant barriers.

Data Cleaning & Assumption

Utilizing a paid subscription to SurveyMonkey, the survey results were downloaded directly into the current version of SPSS for data analysis. After the results were downloaded, the data was reviewed for missing data and errors. Logistic regression research comes with six assumptions which are that the response variable is binary, the observations are independent, there is no multicollinearity among the explanatory

variables, there are no extreme outliers, there is a linear relationship between explanatory variables, and the logit of the response variable, and the sample size is sufficiently large (Zach, 2020a). These assumptions were addressed in several ways throughout this study.

In this research, the dependent variable of "Would you attend a CISD?", was binary with a "Would attend" or "Would not attend" answer on the survey. The independence of the test was verified by considering the z-score in the results (Peng et al., 2002). Multicollinearity has been assessed by examining the Variance Inflation Factor (VIF) to determine the strength of the relationship (Penn State, 2018a; Schreiber-Gregory, 2018). This was assessed through the scatter plots when the data is analyzed. Cooks D was used to evaluate for outliers by determining how high the value is (Schreiber-Gregory, 2018). Linearity was assessed through the scatterplot, and the sample size has been predicted through G*Power.

Research Question and Hypothesis

- RQ1: How does the presence of stigma in ESPs (LEOs, firefighters, EMS clinicians, 911 telecommunicators, and MDIs) and the number of years spent in emergency services predict attendance at critical incident stress debriefings?
- H_0: $\beta 1=\beta 2$: Stigma and years spent in emergency services have no relationship on attendance at critical incident stress debriefings.
- H_a: $\beta 1\neq\beta 2$: Stigma and years spent in emergency services have a relationship on attendance at critical incident stress debriefings.

Threats to Validity

External Validity

A correlation design was selected to understand the relationship between the naturally occurring variables; however, each research design comes with their flaws and this one could have posed a problem to the external validity, given that they cannot provide information about the direction of the relationship (Burkholder et al., 2020). Furthermore, a national study was warranted, but simple random sampling may have threatened the context-dependent mediation since ESPs were in various situations and environments throughout the U.S. when they completed the survey. ESPs may have felt the survey was mundane and that no change would occur from completing it or answering the questions honestly (Losh, 2017). The participants may have also suffered from reactivity, altering their answers because they knew they were being studied. The answers to the survey could have been affected by where they were completing them (e.g., at a fire station or in their own home) as well (Burkholder et al., 2020). Lastly, a threat to the external validity of quantitative designs is the assumptions of generalizability about the interactions observed and inferring causal relationships across the rest of the population.

Internal Validity

This research study contained numerous potential threats to internal validity from several categories. Burkholder et al. (2020) defined nine categories of internal validity which are history, maturation, testing, instrumentation, statistical regression researcher bias, selection, overall mortality, and differential mortality. This study includes threats in

the history, testing, statistical regression, researcher bias, and selection categories. Using a cross-sectional design, this research tested the participants at a single point in time that was uncontrolled and could in itself have affected their responses if they endured a traumatic event just prior or experienced a stigmatizing factor affecting the history. Testing could have been affected if participants had taken numerous surveys, especially correlating to mental health, and thought of the answers as mundane (Losh, 2017).

Statistical regression may have been an internal threat because the personality characteristics and moods of the participants cannot be verified or determined when they complete the survey. If an ESP was usually experiencing PTS symptoms and did not exhibit help-seeking behaviors but completed the survey on a day when they were less impacted, the results could be skewed (Burkholder et al., 2020). The researcher in this study had significant experience in emergency services and crisis intervention, specifically providing CISM interventions to ESPs experiencing first-hand the stigma that occurs. This could pose a potential threat if not continually assessed. Selection is a final threat that was considered in this research due to the web-based survey nature. Participants completed the survey voluntarily and were able to cease participation at any time (Losh, 2017).

Ethical Procedures

In order to proceed with collecting data from human participants, IRB approval was obtained. Recruitment for participants was conducted via an online web-based survey on websites ESPs may have frequented. The survey was anonymous and voluntary, with no participant-specific identifying information obtained. The participants

were able to self-select whether they completed the survey in its entirety, ended early, or truthfully answered questions with no repercussions (Losh, 2017). The survey responses were hosted on SurveyMonkey, a third-party vendor with data collection and privacy policies. All data was kept on a personal computer and has been and will continue to be password-protected and destroyed after its intended use. All data collected will be kept secure for the required time set by Walden University. The only people with access to the data are and will continue to be those involved with the study's research.

As stated, the researcher has specific experience in emergency services and crisis intervention providing CISM interventions. This could be viewed as an ethical issue; however, the researcher had no contact with the participants. This allowed the participants to exercise their full discretion of whether or not they completed the survey without outside bias. Furthermore, anonymity can increase the validity of responses when using survey methodology (Murdoch et al., 2014).

Summary

This quantitative, cross-sectional study examined to what extent mental health stigma and years spent in emergency services affected attendance at CISDs. Data was collected via an online web-based survey hosted on SurveyMonkey. After the data was collected, it was transferred from SurveyMonkey to SPSS, and multiple logistic regression analyses were conducted to determine the statistical relationship between the variables. The data was collected from the identified subgroups of ESPs in the U.S. IRB approval from Walden University was obtained prior to conducting any research. The researcher was responsible for all ethical, confidentiality, and research policies. Chapter 4

presents the results of the collected data and analyses for future research directions and implications.

Chapter 4: Results

The purpose of the quantitative, cross-sectional study was to examine how the presence of stigma in ESPs (LEOs, firefighters, EMS clinicians, 911 telecommunicators, and MDIs) and the number of years spent in emergency services predict attendance at CISDs. The IVs used for this research were stigma and years of service. Stigma was measured with the SSOSH scale, and years of service were measured categorically on via survey with six range options to choose from. The dependent variable for this study was would ESPs attend a CISD, measured binomially as "Would attend" or "Would not attend". A logistic regression was conducted to answer the following research question and hypotheses.

RQ: How does the presence of stigma in ESPs (LEOs, firefighters, EMS clinicians, 911 telecommunicators, and MDIs) and the number of years spent in emergency services predict attendance at critical incident stress debriefings?

H_0: $\beta 1=\beta 2$: Stigma and years spent in emergency services have no relationship on attendance at critical incident stress debriefings.

H_a: $\beta 1\neq\beta 2$: Stigma and years spent in emergency services have a relationship on attendance at critical incident stress debriefings.

Chapter 4 includes information on data collection, results, statistical assumptions, a summary of the data, and transition to Chapter 5. Tables and figures of the data output are also included to visualize the research results.

Data Collection

The IRB granted approval to begin collecting data on August 18, 2023 (approval number 08-18-23-0748376), expiring on August 17, 2024. Upon receiving IRB approval, the survey invitation and link created on SurveyMonkey were disseminated beginning on August 31, 2023. The survey was disseminated via social media and online organizations relevant to emergency services personnel, including but not limited to the JEMS, FireHouse, LinkedIn, ABMDI, and personal connections throughout the United States. Data was collected from the intended emergency services subgroups identified in this research.

Data Analysis

A binary logistic regression analysis was used to predict whether stigma and years spent in emergency services could predict attendance at CISDs. Using logistic regression allowed the researcher to determine the probability of attendance at CISDs (0 = Would not attend and 1 = Would attend).

The data was collected via an anonymous survey hosted on SurveyMonkey. One hundred forty-nine participants were needed per G*Power calculations; however, a goal of 12% more was preferred to account for any missing data. At 171 participants (a 13% increase over the G*Power calculation), the data was downloaded from SurveyMonkey to a Microsoft Excel file and then transferred into SPSS version 28. One hundred and sixty-six participants completed the survey, with five having missing data. Once the data was in SPSS, the stigma score was calculated from the 10 items on the Self-Stigma of Seeking

Help (SSOSH) Scale. To do this, items 2, 4, 5, 7, and 9 had to be recoded as the scale indicates they are reverse scored. Then, the 10 items were averaged for each participant.

Tests for Assumptions

Several tests in SPSS were computed to determine that the data did not violate any of the six logistic regression assumptions (Zach, 2020a). The first assumption with logistic regression is that the outcome (dependent) variable must be binary (yes or no). The dependent variable in this research assessed whether participants would attend a CISD if offered after a traumatic event with a yes or no option, then recoded "Would not attend" to 0 and "Would attend" to 1 in SPSS. The second assumption is that observations are independent and only measured once, which they were. The third assumption is to assess for multicollinearity, determining if the independent variables are too highly correlated and measuring the same thing. Pearson's correlation did not indicate multicollinearity; therefore, this assumption was not violated, as seen in Table 1.

Table 1

Correlations

		Years of Service	Stigma
Years of Service	Pearson Correlation	1	.101
	Sig. (2-tailed)		.194
	N	171	166
Stigma	Pearson Correlation	.101	1
	Sig. (2-tailed)	.194	
	N	166	166

The fourth assumption is that the data will not contain any extreme outliers, assessed by my computing Z-scores. Z-scores were computed for stigma and years spent

in emergency services and showed no outliers or response bias, as seen in Table 2 (Peng et al., 2002). According to Saleem et al. (2021), Z-scores should not be less than -3 or greater than 3.5; otherwise, they may be considered outliers. Z-scores for stigma or years spent in emergency services displayed no outliers, which does not violate this assumption.

Table 2

Descriptive Statistics - Zscores

	N	Minimum	Maximum	Mean	Std. Deviation
Zscore: (Stigma)	166	-1.63	3.00	.00	1.00
Zscore: Years of Service	171	-1.74	1.02	.00	1.00
Valid N (listwise)	166				

The fifth assumption in logistic regression is to determine whether the predictor (independent) variables (stigma and years spent in emergency services) were linearly related to the log odds (Zach, 2020a). A regression was used to analyze the interactions between Ln_Stigma and Ln_YearsofService in which no violations were found (displayed in Table 3)

Table 3

Log Odds Variables

								95% C.I.for EXP(B)	
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1[a]	Years of Service	-.262	.350	.559	1	.455	.770	.387	1.529
	Stigma	-.007	1.083	.000	1	.995	.993	.119	8.288
	Years of Service by LN_Independent	.070	.452	.024	1	.877	1.072	.443	2.599
	Constant	3.008	2.354	1.634	1	.201	20.252		

The sixth and final assumption is that the sample size will be large enough to allow for the generalizability of the data. The total sample size calculated by G*Power was 149 with factors: alpha (*a*) = 0.05 and power = 0.80. This study used a sample size of 171, which exceeded the minimum sample size calculated by G*Power.

Descriptive Statistics

A total of 171 ESPs participated in the study, determining the predictive nature of stigma and years of service on attendance at CISDs. Complete data were obtained from 166 of those participants, or 97%. The majority of the participants were white (75.6%) followed by Hispanics and Asian. The majority of participants were also female at 61.6%, nearly doubling male participants. The sample accurately represents the emergency services demographic with respondents from each of the subgroups being studied. Tables 4 and 5 provide a breakdown of the gender and ethnicity of the study participants.

Table 4

Ethnicity of Participants

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	White	130	75.6	76.0	76.0
	Hispanic	14	8.1	8.2	84.2
	Black	4	2.3	2.3	86.5
	Asian	9	5.2	5.3	91.8
	Pacific Islander	1	.6	.6	92.4
	American Indian	4	2.3	2.3	94.7
	Prefer not to answer	9	5.2	5.3	100.0
	Total	171	99.4	100.0	
Missing	System	1	.6		
Total		172	100.0		

Table 5

Gender of Participants

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	61	35.5	35.7	35.7
	Female	106	61.6	62.0	97.7
	Prefer not to answer	4	2.3	2.3	100.0
	Total	171	99.4	100.0	
Missing	System	1	.6		
Total		172	100.0		

Results

The research question for this study examined to what extent stigma and years of service could predict attendance at CISDs. The means and standard deviations of the

independent variables stigma and years of service are presented in Table 6, and Exp(B) is displayed in Table 7. The predictor variables accounted for the data provided in the logistic regression analysis. The variables were entered simultaneously as stigma and how many years have you been an emergency services provider, with the dependent variable listed as "Would you attend a critical incident stress debriefing if offered after a traumatic event?" The predictor variables were found to be insignificant in predicting whether an ESP would attend a CISD after a traumatic event.

Table 6

Statistics

		Years of Service	Stigma
N	Valid	171	166
	Missing	1	6
Mean		4.52	2.09
Median		5.00	2.10
Mode		6	2.20
Std. Deviation		1.448	.67
Variance		2.098	.45
Minimum		2	1.00
Maximum		6	4.10

Table 7

Variables in the Equation

								95% C.I.for EXP(B)	
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1[a]	Years of Service	-.216	.181	1.423	1	.233	.806	.566	1.149
	Stigma	.151	.375	.161	1	.688	1.163	.557	2.426
	Constant	2.690	1.133	5.636	1	.018	14.735		

Overall, the model was insignificant, X^2 (3, n = 171) = 1.594, p >.001, with three degrees of freedom, a sample size of 171, and a Chi-square value of 1.617 (see Table 8). Therefore, the results of this research fail to reject the null hypothesis. an The Classification Table (see Table 9) indicated that the model would correctly predict the outcome variable 88% of the time. This was true for step 0 (baseline) (see Table 7) and step 1 (see Table 8). The independent variables explained 1.9% of the variance in the dependent variable in the model, as indicated by Nagelkerke R Square, as shown in Table 9. Logistic regression was also run after eliminating the five missing data points for the stigma scale and came back with negligible differences.

Table 8

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	1.594	2	.451
	Block	1.594	2	.451
	Model	1.594	2	.451

Table 9

Classification Table[a]

			Predicted		
			Would you attend a Critical Incident Stress Debriefing if offered after a traumatic event?		
	Observed		Would not attend	Would attend	Percentage Correct
Step 1	Would you attend a Critical Incident Stress Debriefing if offered after a traumatic event?	Would not attend	0	20	.0
		Would attend	0	146	100.0
	Overall Percentage				88.0

Table 10

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	120.544[a]	.010	.018

Summary

This study examined the probability of stigma and years of service being able to predict attendance at CISDs. A detailed explanation of this study, data collection and analysis, and interpretation has been provided. The assumptions of logistic regression were provided and tested as well. While the results were insignificant, there are many other variables to consider when examining stigma to evaluate what barriers are present to help-seeking and how to eliminate them. The lack of significance provides further avenues and considerations for future research, which will be discussed in Chapter 5.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this quantitative study was to examine if stigma and years of service could predict attendance at critical incident stress debriefings among emergency services personnel. This study was conducted to fill a gap in the literature focusing on stigma and a crisis intervention tactic known as CISDs and what variables may act as a barrier to those interventions impacting attendance. This study used survey methodology to obtain an anonymous sample of five different subgroups of emergency services around the United States. The data was collected via SurveyMonkey and then transferred to SPSS version 28 for analysis. The key findings revealed that stigma combined with years of service as predictor variables could not predict attendance at CISDs.

Interpretation of the Findings

This study provided an in-depth analysis of variables that could impact attendance at CISDs for ESPs. This was necessary, as the research in Chapter 2 supported the notion that stigmatization of mental health remains the most significant barrier to help-seeking behaviors among ESPs. The findings in this study showed that years of service combined with stigma were not an accurate predictor of attendance at CISDs.

These results could be due to a variety of factors. Carleton et al. (2020) posited that willingness to access support may be one of the most important factors in perceived barriers to care. While research supports the notion that ESPs are less willing to seek support from their supervisors, years of service may not always equate to a supervisory role meaning more experience could be influencing their decision to attend CISDs positively (Donovan, 2022; Shakespear-Finch et al., 2015).

Another potential factor is the increased interest and success emergency services agencies have had in peer support programs over the last several years (Cnapich et al., 2022; Horan et al., 2021). Peer support programs, as noted in Chapter 2, are designed to decrease stigma, provide training, and create a confidential environment where ESPs feel safe to disclose mental health concerns. Andrews et al. (2022) findings that peer support had the most impact on improving mental health could be impacting CISDs. This would be beneficial, as also discussed in Chapter 2, CISM, and therefore CISDs are a form of peer support because they are done by ESPs who have lived similar experiences and have the ability to connect to further resources (Cnapich et al., 2022; Mitchell, 2015). Regarding peer support and CISM, some states, such as Maryland and Arizona, have been enacting legislation in recent years to protect the confidentiality of peer support and/or CISM interventions (Maryland General Assembly, 2022; Taylor, 2022). Meaning interventionists who provide peer support services cannot be subpoenaed to testify about what was said in an in intervention, which protects the ESP receiving help and the ESP providing help. Potentially one of the biggest factors that could be impacting how ESPs perceive CISDs and other peer support programs is a 2021 law signed by President Joe Biden vowing to improve mental health programs for federal first responders through "clearer confidentiality standards" (Gaskill, 2021). While this law is applicable to federal ESPs, it may be prompting states to do the same.

The number of respondents who were MDIs could have potentially impacted the results as well. Very little, if any, research has been done since 2018 on the effects of traumatic stress among MDIs, and none was found on their willingness to participate in

CISDs or any specific crisis intervention tactic. No research was also found examining any demographic data such as gender, years of service, or ethnicity and how those impacted stigma among this subgroup. The ABMDI disseminated this research survey to its members, potentially accounting for some of the more than 70% of participants who were MDIs. Other major organizations and individuals disseminated as well with less of a response rate, potentially indicating the desire for MDIs to be included in future studies. If the large number of MDIs did impact the results of the study, it could also mean that they are willing and interested in being included in CISDs held by partner emergency services organizations but may or may not currently be receiving invitations when they are held.

Interpretation of the Theoretical Lens

This research was viewed through the theoretical lens of the person-in-environment (PIE) theory. This research has examined in-depth CISM and CISDs, as well as mental health disorders. Both require a holistic, person-centered approach to treat or conduct and even begin mitigating symptomology. The Substance Abuse and Mental Health Services Administration (SAMHSA) (2022) has recognized this and put significant funding toward treating co-occurring disorders. Furthermore, Mitchell (2015) and Everly (2017), the founders of ICISF, discuss the necessity of using a holistic approach throughout their manuals on group and individual interventions. Basic crisis intervention principles also are clear on the fact that the interventionist should focus on the patient (ESPs) and not diminish or minimize their problem(s) while examining what

aspects of their life might be fueling the crisis (Kanel, 2007; Mitchell, 2015; Yeager, 2015).

The PIE theory, being a social work theory, provided a theoretical foundation with the ability to understand and analyze the variables and concepts in this research by looking at the person in a holistic manner and their environment (Biscontini, 2023; Kondrat, 2015). The PIE theory conceptually focuses on the person and the environment as a two-way street or a circle, as one will impact the other. Throughout Chapter 2, many factors were examined on what could be affecting stigma and ultimately leading to increased behavioral health conditions among ESPs, which called for a theory that examined a person's situation on a macro level but allowed the interventionist to intervene on a micro level, consistent with the foundation of the PIE theory (Biscontini, 2023; Lowery & Cassidy, 2022; Rollo, 2009; Tiesman et al., 2021).

The results of the study further promote the importance of the PIE theory. While the results were insignificant on a macro level, further research can now take place on a micro level examining different variables discussed throughout this chapter and in Chapter 2. On a macro level of emergency services subgroups, this research was the first time MDIs had been included in research with their more common law enforcement, EMS, and fire partners. As noted, this could have skewed the results, but further examination with a holistic, person-centered theory will need to occur. While each subgroup is different in some job duties and cultural aspects, overall, this research demonstrated consistent elevation in stigma among all vocational subgroups.

Future research needs to occur on a more micro level, examining MDIs (and continued research among other subgroups), but more research also must occur examining the subgroups together. The benefit of the PIE theory is the two-way street, and micro-level research can be taken as the basis for macro-level research or vice versa. The PIE theory also served the purpose of providing the foundation for this being a national study. National studies inclusive of all subgroups (macro level) are limited in the U.S. but have been successful in other countries such as Canada (cited throughout this research). More commonly found in the review of literature are individual studies of certain geographical areas and of certain subgroups (micro level), such as EMS Clinicians in North Carolina. Both macro and micro-level studies are needed to eliminate the stigma among ESPs, ultimately reducing the number of prevalent behavioral health conditions.

Limitations of the Study

There were several limitations to this study. One was the fact that the survey was disseminated via social media, websites, and other electronic forms anonymously. Therefore, no background or verification was taken of the participants, making it impossible to verify that they were indeed ESPs. While two verification questions were asked to determine if they were an ESP and what subgroup(s) they represented, there is no way to determine the honesty of respondents' answers. However, as noted in Chapter 3, the websites, social media forums, and individuals who disseminated were all affiliated with the different subgroups, and some required membership or were private mailing lists, so it is probable that only ESPs would have taken this survey. Furthermore, given

that terms like CISDs, years of service, and emergency services personnel may only commonly be used in these professions, the survey may have been difficult for someone outside of them to interpret.

Another limitation, as noted in Chapter 1, is the inherent flaws cross-sectional designs have in generalizing the results across the population (Babbie, 2016). This may hold more truth with this study, which encompassed five different emergency services subgroups and did not receive an equal number of respondents in each group (as anticipated). For example, the study had a large number of respondents from MDIs and EMS clinicians but a low response rate from LEOs. However, the results of this study will be generalized across the emergency services profession as a whole, which could serve as a limitation. Examining the same variables with a different design over time may yield different results.

The SSOSH scale could have been another limitation of the study. While the scale has been used successfully in other studies with ESPs and stigma, this study specifically asked about attendance at CISDs and not seeking professional mental health treatment. Prior to the SSOSH questions on the survey, a statement was input asking respondents to consider the next 10 questions in the context of attending a CISD after experiencing a traumatic event; however, there is no way to know whether they did. A more straightforward, potentially crisis-specific survey may yield different results. Another factor out of the researcher's control that could have served as a limitation is the inability to know or control whether a respondent took the survey more than once (Leary, 2021).

The survey was open access to any ESP with the link making it possible someone could have retaken it.

Another potential limitation, as noted in Chapter 1, is the inability to control or know how ESPs may have been feeling when they took this survey. If they were feeling the effects of traumatic stress, that could have altered their responses. Furthermore, participants could have experienced a negative CISD in the past that affected how they completed the survey. While all CISDs are designed to follow a specific model, there are no regulations to ensure that occurs, making deviation a possibility.

While nothing was found in this research to question the trustworthiness, reliability, or validity of the study, as mentioned, there were a considerably higher number of MDIs and EMS clinicians that participated than any other subgroup. Two other potential concerns that should be noted are that 75.6 % of the respondents were white and 61.6% were females (shown in Tables 4 and 5, respectively, in Chapter 4). As noted in Chapter 2, current research supports the notion that males tend to be the ones more stigmatized for help-seeking (Drew & Martin, 2021; Van Hasselt et al., 2019). These statistics may make it difficult to generalize across not only the emergency services subgroups but also gender and ethnicity.

Recommendations

There are several opportunities and recommendations for future research in this area. From the literature review conducted in Chapter 2, there are no studies including MDIs in research with other emergency services subgroups. The high response rate of that subgroup in this study may indicate their desire and willingness to participate and be

included in future research. With that being said, the opportunity to use a potentially more crisis-specific scale and gain a more equal number of participants for each subgroup may make the results more generalizable if doing an inclusive study. An opportunity to select so many participants and study them over the course of a certain time span may be beneficial to track changes in stigma levels as well as provide more data points.

While the results of this study demonstrated years of service did not appear to be a predictor variable when coupled with stigma, that does not necessarily equate to rank, which is another variable that could be studied. As noted in Chapter 2, supervisory support can be a protective factor if available or a risk factor if absent (Carleton et al., 2020). Including rank may elucidate when combined with years of service since all emergency services subgroups may not have ranks, like MDIs. Continuing to investigate males and females also presents future direction as it could be inferred from this research that women are still less stigmatized than males when help-seeking. While much of the current research in the United States tends to focus on specific cities and states for ESPs (Horan et al., 2021; Lowery & Cassidy, 2022; Renkiewicz et al., 2021), and this should continue, further national studies should be considered as the research demonstrated that the challenges of stigma being faced are common throughout the U.S. and not in any specific city or state.

While not directly related to this study, Acute Stress Disorder (ASD) and Posttraumatic Stress Disorder (PTSD) are both mentioned as behavioral health conditions in Chapter 2. The overall goal of this research was to examine if attendance could be predicted at a CISD designed to mitigate acute stress reactions. As research continues to

develop and PTSD becomes more understood, future research should increase in studying ASD. The end goal of studying PTSD should be how to best prevent and mitigate the symptomology in the acute stress phase prior to the diagnosable timeframe. As Kanel (2007) and Mitchell (2015) noted, early intervention is the key to crisis intervention. The earlier an individual is intervened with, the higher the likelihood they will recover and quicker.

Implications

While the results of this study were found to be insignificant, this was valuable in and of itself to provide more depth on how this and future research can impact positive social change. The indication that years of service, when coupled with stigma, does not impact attendance at CISDs allows the research community to explore new directions and variables for research, such as gender, rank, and/or ethnicity. Organizations such as the International Critical Incident Stress Foundation, the American Academy of Experts in Traumatic Stress, and state and local crisis response teams can be reignited to continue providing education and critical incident response to further decrease the stigma surrounding help-seeking. Years of service was only one of many variables to explore in the fight to eliminate stigma and increase help-seeking among ESPs. Carleton et al. (2020), as well as Drew and Martin (2021) both studied or noted the need for further demographic data to be studied among emergency services subgroups and how it may relate to stigma. Continued research in exploring these variables will demonstrate if any hold significance and provide further insight as to how stigma can be eliminated.

From a theoretical perspective, there are also implications relating to the PIE theory. The insignificance of the results from this study highlights the importance of a theory that evaluates the ESP as a whole because future research, whether qualitative or quantitative, may need to evaluate other variables coupled with stigma (Rollo, 2009). Determining what those variables are, such as gender or ethnicity, could be the key to eliminating stigma. When crisis, peer support, and mental health professionals are interacting with ESPs and continuing research, a theory that provides the foundation for a holistic approach may be essential.

Significance can also be drawn from the vast implications that could be inferred regarding Adtalem's Social Determinants of Learning and Social Determinants of Health (Adtalem, 2022; Sanderson et al., 2021). If the results of this study are an indication, training and education may be providing more knowledge therefore decreasing stigmatization of help-seeking. This, in turn, can affect the physical and psychosocial health of ESPs, as well as promote healthier social environments at home and work, increasing social support (Hilbrink, 2022). The end result of healthier and supported ESPs could be an improved workforce with better economic stability and self-motivation. While this study focused on the mental health of ESPs, it should be noted that these effects may then begin to be noticed by the general public with future macro-level benefits for society.

Conclusion

This quantitative study examined how stigma and years of service could predict attendance at CISDs for emergency services personnel. This study used survey

methodology and the SSOSH scale to gather data from five subgroups of emergency services. While years of service was not found to be predictive, gender, ethnicity, and rank may be potential areas for future research directions.

There is an epidemic happening among ESPs who are proven to experience an increased level of traumatic events due to the nature of their work and in turn, experience increased traumatogenic reactions. Due to the stigma that is still proven to exist within this population, there is a substantial barrier to ESPs seeking help, which results in increased levels of behavioral health conditions from these traumatogenic reactions. Future emergency services research must be inclusive of all subgroups, not just *first* responders, as other professionals responding to emergency scenes have been found to experience similar levels of traumatic stress. CISDs are one form of crisis intervention designed to mitigate the impact of acute traumatic stress, but they have to be used to be effective. By understanding and addressing the factors that contribute to stigma, we can eliminate it as the number one barrier to help-seeking among emergency services personnel.

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9

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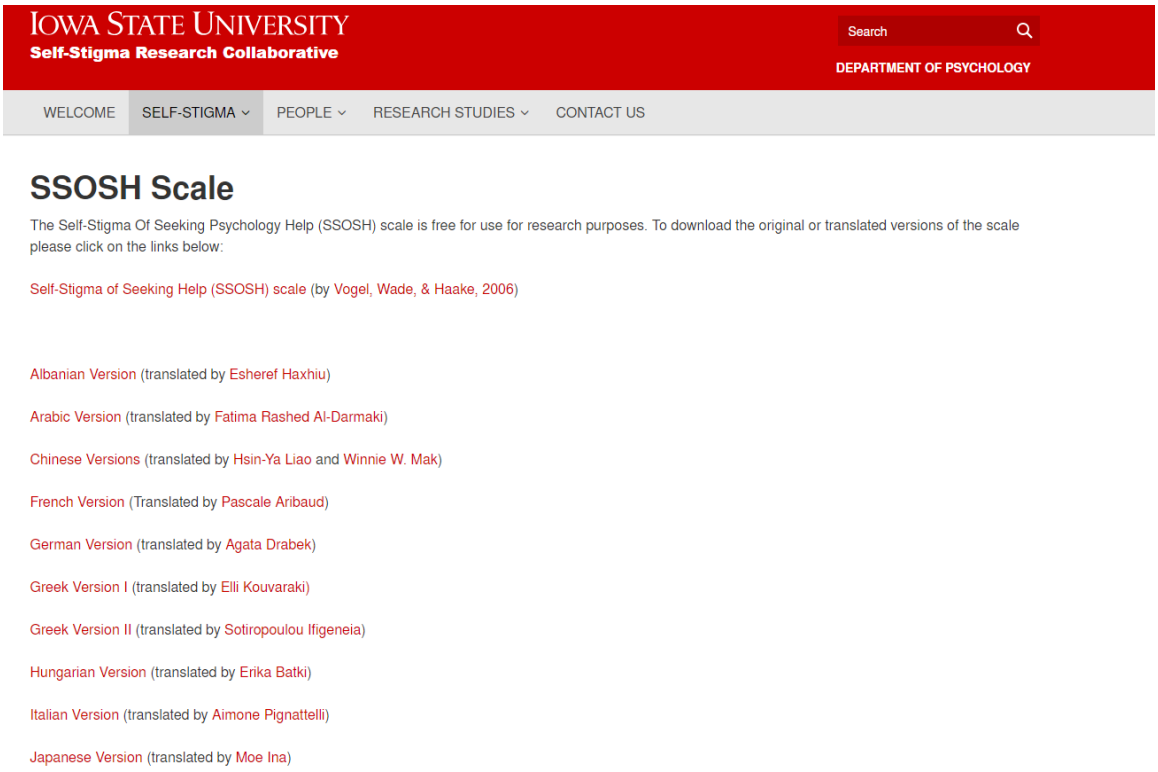
Appendix A: Permission for SSOSH Scale Use



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SSOSH Scale

The Self-Stigma Of Seeking Psychology Help (SSOSH) scale is free for use for research purposes. To download the original or translated versions of the scale please click on the links below:

Self-Stigma of Seeking Help (SSOSH) scale (by Vogel, Wade, & Haake, 2006)

Albanian Version (translated by Esheref Haxhiu)

Arabic Version (translated by Fatima Rashed Al-Darmaki)

Chinese Versions (translated by Hsin-Ya Liao and Winnie W. Mak)

French Version (Translated by Pascale Aribaud)

German Version (translated by Agata Drabek)

Greek Version I (translated by Elli Kouvaraki)

Greek Version II (translated by Sotiropoulou Ifigeneia)

Hungarian Version (translated by Erika Batki)

Italian Version (translated by Aimone Pignattelli)

Japanese Version (translated by Moe Ina)

Appendix B: SSOSH Scale

INSTRUCTIONS: People at times find that they face problems that they consider seeking help for. This can bring up reactions about what seeking help would mean. Please use the 5-point scale to rate the degree to which each item describes how you might react in this situation.

1 = Strongly Disagree 2 = Disagree 3 = Agree & Disagree Equally 4 = Agree 5 = Strongly Agree

1. I would feel inadequate if I went to a therapist for psychological help.
2. My self-confidence would NOT be threatened if I sought professional help.
3. Seeking psychological help would make me feel less intelligent.
4. My self-esteem would increase if I talked to a therapist.
5. My view of myself would not change just because I made the choice to see a therapist.
6. It would make me feel inferior to ask a therapist for help.
7. I would feel okay about myself if I made the choice to seek professional help.
8. If I went to a therapist, I would be less satisfied with myself.
9. My self-confidence would remain the same if I sought professional help for a problem I could not solve.
10. I would feel worse about myself if I could not solve my own problems.

Items 2, 4, 5, 7, and 9 are reverse scored.

Appendix C: Demographic Form

Pre-Screening Questions

I. Are you 18 years or older?
   a. Yes
   b. No

II. Are you an emergency services professional?
   a. Yes
   b. No

III. Are you located in the United States?
   a. Yes
   b. No

Demographic Questions

IV. What ethnicity best describes you?
   a. White
   b. Hispanic
   c. Black or African American
   d. Asian
   e. Native Hawaiian or Other Pacific Islander
   f. American Indian
   g. Prefer not to answer

V. What is your gender?
   a. Male
   b. Female
   c. Prefer not to answer

VI. What is your age? (e.g., 21 years old)

VII. What is your highest level of education?
   a. High School Diploma/GED
   b. Some College
   c. Associate degree
   d. Bachelor's Degree
   e. Master's degree
   f. Doctoral Degree

VIII. What discipline(s) do you represent?
   a. Law Enforcement
   b. Fire
   c. EMS
   d. 911 Telecommunications
   e. Death Investigation

IX. What region of the country do you provide emergency services work in?

a. Pacific Region
b. Rocky Mountain Region
c. Mid-West Region
d. Southwest Region
e. Southeast Region
f. Northeast Region

X. How many years have you been an emergency services provider? (e.g., 10 years) (Drop Down Menu on Survey).
a. Less than one year
b. One to five years
c. Five to ten years
d. Ten to fifteen years
e. Fifteen to twenty years
f. More than twenty years

XI. What employment status best represents your involvement in emergency services?
a. Full-time
b. Part-time
c. Volunteer
d. Contract

XII. Would you attend a Critical Incident Stress Debriefing if offered after a traumatic event?
a. Yes
b. No