2022

The Relationship Between Types of Workplace Trauma Exposure, Burnout, and PTSD in Mental Health Workers

armando dominguez
Walden University

Walden University

College of Social and Behavioral Sciences

This is to certify that the doctoral dissertation by

Armando Dominguez

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Yoly Zentella, Committee Chairperson, Psychology Faculty
Dr. Maxwell Rainforth, Committee Member, Psychology Faculty
Dr. Peggy Gallaher, University Reviewer, Psychology Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
2022

Abstract

The Relationship Between Types of Workplace Trauma Exposure, Burnout, and PTSD in Mental Health Workers

by

Armando Dominguez

MS, Angelo State University, 2008

BS, Angelo State University, 2006

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Health Psychology

Walden University

May 2022

Abstract

In the human services field, acute care mental health workers occupy professional jobs that are at higher risk for aggression, assault, and injury resulting in various types of exposure to potentially traumatic events and experiences as a result of working with the acutely mentally ill. Work-related traumatic exposure has been studied but has not been concisely defined in the widest range of research studying trauma exposure. Specifically, it is not known from previous research whether direct, indirect, and vicarious trauma exposure predict burnout and PTSD in acute care mental health care workers. The emotional processing theory was used as theoretical foundation informing this study as the habituation of response to stress and trauma has been shown to occur incidentally and cumulatively; the theory supports the concept of dichotomous and continuous type of trauma exposure over time. The purpose of this study was to use a concise definition of trauma exposure types: direct trauma and indirect trauma and vicarious trauma to determine if there exists a relationship between type of work-related trauma exposure and burnout and PTSD while controlling for nonwork-related trauma exposure. This study used an electronic survey design using a quantitative multifactorial correlational design to analyze the survey data as they relate to the research questions. The findings of this study indicated a higher level of variance in emotional exhaustion and PTSD when measured quantitatively and a low level of variance in depersonalization across the data set. These findings may be used by administrators for positive social change to reduce trauma exposure in human service workers that work with the acutely mentally ill in communities.

The Relationship Between Types of Workplace Trauma Exposure, Burnout, and PTSD in Mental Health Workers

by

Armando Dominguez

MS, Angelo State University, 2008

BS, Angelo State University, 2006

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Health Psychology

Walden University

May 2022

Dedication

I dedicate this work to those who undertake the journey of academia and seek to understand deeply. Like the fierce enlightened ones that have gone on before, may you walk on.

Acknowledgments

In all journeys undertaken often it is not just the first step that is most important, but, the fact that one does not journey alone. I want to thank my parents Armando and Angelina Dominguez for their modeling for me persistence and determination in those things that are important. May you both rest in peace. The most prolific of my life influences second to my parents is Mark D. Hachey whom through our beloved martial art taught me to walk as an honorable and principled individual. You walk with me daily Si Hing. A spirit-felt thank you to Dr. Glenn Morris as his writings and letters mentored me when I walked through the shadows of man and into academia. May you rest in peace. A special thanks to my friend Ruben Robles who put me on the college path with his words to me that said" Mando, if you don't go to college that would be a waste of a beautiful mind". I jumped into college shortly thereafter. I want to say thank you to my sons Josh, Jonathan and Jacob for being the light in my life that still shines ever brightly; Dad is the best job in the world because of you all. I am grateful to your mom Julie, for giving me three sons. You were the reason I kept going when things got hard. I love you. I want to say thank you to Dr. Yoly Zentella my chairperson and Dr. Maxwell Rainforth my methodologist and Dr. Peggy Gallaher my URR for your time, efforts and teaching-patience with me on this doctoral journey. I want to emulate the patience, kindness and depth you have shown me with my students so they can become more.

Table of Contents

Table of Contents i

Chapter 1: Introduction to the Study 1

Background 6

Problem Statement 9

Purpose 13

Research Questions and Hypotheses 14

Theoretical Framework 24

Nature of the Study 26

Definitions 27

Assumptions 28

Scope and Delimitations 29

Limitations 30

Significance 33

Summary 33

Chapter 2: Literature Review 35

Introduction 35

Literature Search Strategy 37

Theoretical Foundation 38

Foa and Kozak's Emotional Processing Theory 38

Literature Review of Key Variables 42

Direct Trauma 42

Indirect Trauma 43
Vicarious Trauma 45
Burnout 49
Posttraumatic Stress Disorder 51
What is Known and Not Known About Trauma Exposure Type 53
Summary and Conclusions 54
Chapter 3: Research Method 56
Introduction 56
Research Design and Rationale 56
Methodology Population 59
Sampling and Sampling Procedures 59
Procedures for Recruitment, Participation and Data Collection 61
Instrumentation and Operationalization of Constructs 65
Operationalization of Variables 69
Threats to Validity 89
Ethical Procedures 89
Summary 91
Chapter 4: Results 93
Research Questions and Hypotheses 94
Data Collection 103
Descriptive Characteristics 105
Analyses and Correlations 110

Outcome Variable Correlations 111

Results 112

Evaluation of Research Question 1 112

Chapter 5: Discussion, Conclusions, and Recommendations 136

Introduction 136

Interpretation of the Findings 136

RQ1-RQ6 137

Contrasting IV's as Dichotomous Versus Quantitative Variables 139

Emotional Processing Theory 141

Limitations of the Findings 143

Recommendations 145

Implications 146

Summary 148

References 150

Appendix A: Consent Form 166

Appendix B: Demographic Questionnaire 169

Appendix C: MBI/HS-M 172

Appendix D: PCL-5 173

Appendix E: Debriefing Statement 175

Appendix F: IRB Approval 178

Appendix G: Certification for Research 181

List of Tables

Table 1. Frequencies and Percentages of Nominal Demographic Data (N=8)..... 107

Table 2. Demographic Characteristics of Trauma Exposure in ACMHWs (N=8)..... 108

Table 3. Intercorrelations for MBIEE, MBIDP, and PCL/PTSD Scores with Cronbach Alpha Scores 111

Table 4. Results of Multiple Regression Analysis for Work-related Direct Trauma Exposure as a DochotomousPredictore of MBI/EE in ACMHWs 113

Table 5. Results of Multiple Regression Analysis for Work-related Direct trauma as a Dichotomous Predictor of MBI/DP in ACMHWs..... 114

Table 6. Results of Multiple Regression Analysis for Work-related Direct trauma as a Dichotomous Predictor of PCL/PTSD in ACMHWs 115

Table 7. Results of Multiple Regression Analysis of Work-related Indirect trauma as a DichotomousPredictore Variable of MBI/EE in ACMHWs 117

Table 8. Results of Multiple Regression Analysis of Indirect trauma as a Dichotomous Predictor Variable of MBI/DP in ACMHWs..... 118

Table 9. Results of Multiple Regression Analysis of Work-related indirect trauma as a Dichotomous Predictor Variable of PCL/PTSD in ACMHWs..... 119

Table 10. Reslult of Multiple Regression Analysis of Vicarious Trauma as a Dichotomous Predictor Variable of MBI/EE in ACMHWs 120

Table 11. Results of Multiple Regression Analysis of Vicarious Trauma as a Dichotomous Predictor Variable of MBI/DP in ACMHWs..... 121

Table 12. Results of Multiple Regression Analysis of Vicarious Trauma as a Dichotomous Predictor Variable of PCL/PTSD in ACMHWs..... 123

Table 13. Results of Multiple Regression Analysis of Work-related Direct Trauma as a Quantitative Predicor Variable of MBI/EE in ACMHWs..... 124

Table 14. Results of Multiple Regression Analysis of Work related Direct Trauma as a Quantitative Predictor Variable of MBI/DP in ACMHWs..... 125

Table 15. Results of Multiple Regression Analysis of Work-related Direct Trauma as a Quantitative Predictor Variable of PCL/PTSDin ACMHWs..... 126

Table 16. Results of Multiple Regression Analysis of Work-related Indirect Trauma as a Quantitative Predictor Variable of MBI/EE in ACMHWs..... 128

Table 17. Results of Multiple Regression Analysis of Work-related Indirect Tauma Exposure as a quatitative Predictor Variable of MBI/DP in ACMHWs..... 129

Table 18. Results of Multiple Regression Analysis of Work-related Indirect Trauma Exposure as a Quantitative Variable of PCL/PTSD in ACMHWs..... 130

Table 19. Results of Multiple Regression Analysis of Vicarious Trauma as a Quantitative Predictor Variable of MBI/EE in ACMHWs..... 131

Table 20. Results of Multiple Regression Analysis of Work-related Vicarious Trauma as a Quantitative Variable of MBI/DP in ACMHWs..... 132

Table 21. Results of Multiple Regression Analysis of Work-related Vicarious Trauma as a Quantitative Variable of PCL/PTSD in ACMHWs..... 133

Chapter 1: Introduction to the Study

Traumatic events in the workplace are not a new area of research in the field of psychology and have been studied extensively since the early stages of the discipline (Monroe &Slavich, 2016; Selye, 1953). External events can affect a person physically and psychologically (Pitman et al., 2012; Sabin-Farrell & Turpin, 2003). It is also generally agreed upon that not all work stress is traumatic (Selye, 1953). However, in certain work environments due to the type of work, the risk of exposure to elevated levels of stress and danger can occur. Police, firefighters, emergency medical personnel, nurses, and acute care mental health care workers work in fields where interactions with emotional, resistant, traumatized individuals are common occurrences therefore increasing the risk of exposure to high-stress events and potentially trauma-inducing events in the work environment (Overstreet et al., 2017, Newell & McNeil, 2010). Few researchers have examined the effects of job-related trauma exposure relative to burnout and post-traumatic stress disorder (PTSD) in those who work in an acute mental health care setting. There is a gap in the literature identified in this research concerning mental health workers and trauma exposure. Specifically, it is not known from previous research whether direct, indirect, and vicarious trauma exposure predict burnout and PTSD in acute care mental health care workers.

Exposure to traumatic events can potentially illicit pathological responses in the person exposed to the event. From a medical psychology perspective, Selye's (1953) general adaption theory proposes stages of organismic response to stress, which include alarm, resistance, and adaption to environmental stressors. Individuals can subjectively

interpret events as traumatic based on rigid beliefs that the world is a dangerous place and the individual is incompetent in their respective environment (Foa & Kozak, 1986). These beliefs would suggest difficulty after the stress response that, if unremitting, could lead to job dissatisfaction and possible burnout and PTSD. In their study of social workers who worked with violent patients in a residential setting, Winstanley and Hale (2015) found that the social workers reported elevated levels of burnout. Temitope and Williams (2015) also found that trauma exposure was significantly correlated with burnout in social workers. The MBI/HSSM Emotional Exhaustion (EE) and Depersonalization (DP) scales were used to measure burnout as Emotional Exhaustion and Depersonalization are the main indicators of the negative aspects of burnout (West et al., 2012). These findings suggest that there could be a relationship with exposure to various types of traumatic stressors and reports of burnout and PTSD in professions where stressful events and trauma exposure can occur.

When PTSD was first introduced as a diagnosis category in the *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed. [*DSM-3*]; American Psychiatric Association [APA], 1980), it was becoming more widely understood that trauma-inducing events impacted the affected person due to events being extreme and outside of the normal range of human experience. The definition changed in 1994 to have the following components:

- Direct personal experience of an event that involves actual or threatened death, serious injury, or threat to physical integrity;

- Witnessing an event that involves death, injury, or threat to the physical integrity of another person; or
- Learning about a violent or unexpected death, serious harm, or threat of death or injury experienced by a close associate. (APA, 1994, p. 424)

The new definition suggests that trauma has a cognitive, subjective component to it that determines whether an event is interpreted as traumatic to the individual. The three types of trauma exposure may have a differing degree of impact and if this is so, needs to be specifically investigated in ACMHW's. For example, DT may involve threat or injury to an individual experiencer which may be more impactful than witnessing trauma to another individual (IT). Similarly, IT may be more impactful than hearing about a traumatic event afterward(VT).

Current researchers (Loeb et al., 2018; Veronese et al., 2017) generally focus on the frequency and cumulative effects of trauma exposure. The literature (Briere et al., 2016; Briere et al., 2015) also suggested that there are numerous types of traumas that could occur in human experience and that work-related trauma could encompass a broad range of events (e.g., seeing a person die or incurring an injury from an environmental incident or accident or an intentional act directed at the worker in the work environment). Exposure type thus encompasses a broad range of possible events and is hard to operationalize for organizations and individual therapeutic practitioners committed to improving work conditions and enhancing recovery in traumatized individuals. Narrowing the categories of trauma exposure to three simple categories could facilitate

debriefing post trauma and the development of strategic therapeutic interventions specific to the traumatized person's needs based on severity and type of exposure.

APA has continued to revise the definition of trauma in response to current research findings. Its 2008 definition of trauma indicates three types of trauma exposure: direct exposure to trauma (DT), witnessing of a trauma or indirect exposure (IT), and vicarious exposure (VT) from hearing about or recalling trauma (APA, 2008). The updated definitions align with current research findings from Krupnik et al (2004) suggested that trauma is unique to an event and is affected by trauma-exposure type and an individual's interpretation of an event. Roglan et al. (2016) studied mental health workers exposed to traumatized individuals resulting in job-related burnout involving VT. Cooper and Long (2003) studied exposure to trauma among ACMHWs and found them to be potentially at risk for PTSD due to their potential exposure to DT, IT, and in particular VT may put clinicians at risk for Burnout and PTSD.

Using three discrete categories of trauma could assist researchers in identifying the type of exposure in complex PTSD cases that involve cumulative and complex trauma versus a single traumatic event. Categorization can help researchers and clinicians identify the possible development of burnout and PTSD in the workplace based not only on the type of exposure but on the length of exposure, with the recognition that not all trauma requires prolonged or cumulative exposure to have an impact. Trauma can happen in one single event. In a military study conducted in the 1940s, Grinker and Spiegel (1945) examined the cumulative effects of what was determined the maximum number of hours of exposure to combat before a soldier was operationally fatigued or shell-shocked.

The state of operational fatigue symptoms included symptoms of elevated anxiety and negative psychological states. More recently, some researchers have included trauma type and traumatizing event in the operational definition of trauma (Wamser-Nanney et al.,2018). Wanklyn et al (2016) identified trauma type as a predictor of PTSD and Major Depressive Disorder (MDD) however, their operational definition included interpersonal nonsexual and undisclosed traumatic event as the basis for trauma type leaving a broadly defined type of trauma exposure.

The use of DT, IT, and VT as discrete categories of trauma exposure could offer a useful model of trauma exposure that could assist in minimizing time to receive care and services. A study of the variables' correlation is needed because the early identification of trauma exposure type could allow ACMHWs and attending health care personnel to make better recommendations for care to mitigate the long-term effects of PTSD. Adding a recurring check-in with a health care provider specifically focused on post trauma symptomology may encourage a culture of caring for ACMHW personnel who often are expected to minimize the effects of trauma exposure and keep working. ACMHWs that have been affected by work-related traumatic exposure as a result of their trauma-related organizational beliefs could prevent them from seeking help after trauma exposure. The social change implications of this study include encouraging a more trauma-informed approach toward ACMHWs who have been exposed to trauma or are reporting burnout and PTSD. This chapter contains the background, problem statement, purpose, research questions, theoretical framework, nature, definitions, assumptions, scope and

delimitations, limitations, and significance of the study. It concludes with a summary of key points.

Background

Trauma type plays a significant role in the impact and potential development of PTSD and PTSD like symptoms. A quantitative study conducted by Boudoukha et al.(2016) the impact of trauma type on the eventual development of PTSD was investigated. The number of direct exposures to trauma and type of trauma were significant predictors in the development of PTSD symptoms. Bransford and Blizard (2017) reviewed the literature on the development of psychopathology as a result of trauma exposure. The authors concluded that mental health care workers exposed to trauma are undertreated, as peers perceive them to be protected by education, experience or professional roles. Bransford and Blizzard indicated that mental health workers are not perceived as vulnerable to the harmful effects of exposure to trauma. The nature of the job puts mental health care workers at greater risk to exposure to different trauma types.

The progression of exposure to trauma to PTSD starts from peritraumatic stress at the point of exposure to secondary traumatic stress (STS) within the first 2 weeks to 30 days after exposure to trauma the DSMV (American Psychiatric Association, 2013). Cieslak et al.(2015) conducted a meta-analysis of 41 studies on the relationship between STS and burnout among professionals working with trauma survivors, indirectly exposed to the traumatic material. The results indicated strong associations between burnout and STS. Ciezlak et al. (2013) supported STS has been shown to be involved in the development of burnout. This study also indicated that there is a possible relationship

between job-related-burnout and job-related-PTSD as STS is a progressive precursor to the eventual development of PTSD (APA, 2000).

Prior studies (Sabin-Farrell &Turpin, 2003; Settia et al., 2016) involving trauma exposure, burnout and PTSD have under-emphasized the development of pathology as a result of exposure to trauma and focused on psychological and affective symptoms. Also, the impact of VT as well as DT and IT have been shown separately with other variables and as a precursor to compassion fatigue, but not discretely burnout and PTSD. However, Friedberg et al. (2007) conducted a quantitative study on cardiovascular reactivity in people exposed directly and indirectly (news media stories) and the significant similarity in cardiovascular reactivity in people exposed directly and indirectly to the trauma and events of September 11th, 2001. Friedberg et al. indicated that trauma exposure and proximity play a part in the development of VT/STS that studies have shown to play a role in the development of burnout and PTSD. Lounsbury (2006) studied the protective factors involved in coping with STS. Maladaptive coping correlated with higher reports of STS and burnout versus exposure to acute and cumulative stress and trauma over time.

The indicators of DT, IT and VT have been studied and shown to have a relationship with eventual development and frequency of reported PTSD. May and Wisco (2016) concluded through their literature review that both direct and indirect trauma exposure leads to PTSD. They noted that indirect trauma resulted in lower levels of reported PTSD versus direct exposure. The mental health care settings where traumatic patients are treated increases the chance for exposure to DT, IT, and VT. According to Pearson(2012) Pearson found psychiatric nurses exposed to trauma in the workplace.

Evidence from this study indicated that secondary traumatic stress could lead to PTSD symptoms and also can lead to job difficulties that lead up to burnout and eventual egress from the organization or hospitals where they work. Stadnyk (2011) also investigated psychiatric nurses exposed to workplace aggression in acute care psychiatric settings, hospitals, and correctional facilities. The findings indicated that exposure to trauma led to the development or enhancement of existing PTSD. There is a plethora of studies that focus on trauma exposure in nurses in psychiatric settings.

Others in the psychiatric field counselors, therapists, doctors and mental health technicians as well as law-enforcement and fire personnel and emergency first responders are also at risk for exposure to DT, IT, and VT due to proximity with acutely-ill mental health patients. Temitope and Williams (2015)studied a sample of New Zealand counselors focusing on STS, burnout, compassion satisfaction, resilience, social support the degree of exposure to trauma, and personal trauma history. Exposure to trauma victims and secondary exposure to their trauma were significantly related to the risk of development of STS and burnout. Zerach and Shalev (2015) examined the exposure to secondary trauma in psychiatric nurses, and community nurses. Psychiatric nurses were found to be more prone to develop PTSD and STS symptoms.

Currently, it is not known from previous research (May &Wisco, 2016) whether direct, indirect, and vicarious trauma exposure predict burnout and PTSD in ACMHW working in mental health settings. However, in high stress occupations directly involving caring for and euthanizing animals the levels of PTSD were five times the normal population and those involved directly and indirectly in euthanizing of animals reported

greater levels of burnout and STS (IJERD, 2020). The literature currently focuses on compassion fatigue as a precursor to development of burnout and PTSD. I focused on type of trauma exposure versus the antecedent, individual differences of coping. This study supports the assertion that direct exposure to violence can lead to the development of STS and illness attributions as compared to nurses not in mental health because of the development of PTSD and STS symptoms. This study is needed because it illuminates the fact that mental health workers similarly to psychiatric nurses are in an environment that puts them at higher risk for development of PTSD and STS.

Problem Statement

The problem of focus in this study is work-related exposure to trauma in ACMCW and the development of burnout and PTSD. Exposure to different types of trauma can be part of a mental health worker's experience (Lanzaet al., 2006; May &Wisco, 2016). High burnout levels of 35.4 % out of 1297 were reported by psychologist trainees due to the nature of the stress of the job (Kaeding et al., 2017). Mental health workers include psychologists, psychiatrists, therapists, counselors, social workers, nurses, mental health technicians, and nonpsychiatrist medical doctors who provide direct psychological support care and medical care with varying times of patient exposure defined by the responsibilities of their job. Overstreet et al. (2017) identified that 81.8% out of 6120 subjects out of a college population sample at large, not exposed to acute mental health patients on a daily basis reported having at least one traumatic event in their lives. Overstreet et al. further indicated that exposure to potentially traumatic events was known to be a predictor of eventual development of psycho-pathology.

Overstreet et al. (2017) provided a contrast of reporting trauma exposure in a lifetime versus working in a job where one is at risk on a daily basis for exposure to various trauma types. Traumatic exposure for the purpose of this study will be defined as DT, IT, and VT exposure types with ACMHW in a clinical setting involving direct, indirect or vicarious patient care interaction or supervision. Pearson (2012) found that psychiatric nurses were exposed to patient traumas due to the nature of the professional job setting involving direct care contact with patients reporting or discussing trauma exposure.

Types of traumatic exposure vary in a clinical setting and tend to fall into three major categories: direct trauma (e.g., a violent or aggressive act of human intent to harm another), indirect trauma (e.g., both incident and accident determined by individual witness) and vicarious trauma (e.g., hearing or listening to a retelling of a traumatic incident; May &Wisco, 2016). According to Boudoukha et al. (2016), indirect trauma can be further differentiated to include vicarious trauma from hearing of traumatic events involving a person or persons directly known to the listener, which could, but infrequently occur in a clinical setting due to ethical boundaries that are in place. Vicarious trauma involves being exposed to recall and recounting of traumatic events by people who were directly or indirectly traumatized and then as a result affecting the listener where there are an unpleasant emotional response and residual ruminating effect in the person listening to the patients retelling of their experience.

Exposure to aggression occurring at the workplace has been shown to effect reports of trauma and eventual development of PTSD (Stadnyk, 2011). Physicians

exposed to trauma in their line of work reported PTSD in 14.8% of 1660 male and female physician as compared to the prevalence among those that are survivors of war or torture that reported PTSD between 20 and 45% (Sendler et al., 2016).According to Winstanley and Hale (2015), residential social workers working with violent patients reported burnout symptoms.

Vasquez (2017) determined that counselors that worked with traumatized populations were at greater risk for development of job-related burnout. The need for this research is revealed through both the importance of burnout in mental health workers. Counselors who work in the prison system are faced with the demanding nature of the job restraints due to working in a correctional setting and the specificity of the population with which they work (Xanthanis, 2009).

Burnout research is thorough as it relates to both the burned-out individual acting as professional and the secondary impact that burnout has on others. Early research began in the mid-1970s and was subject to both definition and methodology problems (Maslach,1982). However, Freudenberger (1974) determined that individuals that were dedicated and committed to their work were more prone to developing burnout. The initial definitions of burnout as cited by Maslach (1982) included mental and physical exhaustion, a loss of idealism, feelings of depression, and despair including psychologically debilitating effects brought on by job-related frustration beliefs of lack of control.

Van Minnen et al. (2000) studied the effects of delivering trauma exposure therapy to patients and found that exposure therapy was traumatic to both the therapist

and trauma patients. Van Minnen et al. indicated a vicarious trauma exposure can lead to the development of burnout and PTSD. Crisis intervention counselors reported secondary traumatic stress reported using maladaptive coping such as negative thoughts of self and negative worldview (Lounsbury, 2006). According to Pearson (2012), unavoidable exposure to trauma leads to the development of STS, burnout and eventually PTSD. Lounsbury (2006) studied crisis counselors and their current and cumulative exposure to trauma victims related to reports of elevated STS and burnout. The percentage of trauma survivors on a weekly caseload was significantly correlated with burnout(Stamm, 2005), personal history of trauma, and percentage of trauma survivors in the weekly caseload was significantly correlated with PTSD(Lounsbury, 2006). Although Lounsbury collected data on the number of traumatic events to which clinicians had been vicariously exposed to trauma the correlations of this variable with PTSD and burnout symptoms were not addressed by this study.

Psychiatric nurses surveyed in Saskatchewan who experienced a traumatic event in the workplace were more likely to report a diagnosis of PTSD than nurses who did not experience a traumatic event in the workplace (Stadnyk, 2011). Nurses whose only source of trauma came from the work environment experienced more symptoms of PTSD compared to nurses who reported experiencing trauma outside the workplace. The number of traumatic events experienced during the lifetime correlated with severity of PTSD symptom. Stadnyk did not correlate the number or type of traumatic workplace events with PTSD symptoms.

Few researchers have found evidence on the effects of job-related trauma exposure relative to burnout and PTSD in ACMHW in a mental health setting (Bransford & Blizard, 2017; Cieslak et al., 2015; Pearson, 2012; Stadnyk, 2011). There is a gap in the literature identified in this research concerning mental health workers and trauma exposure. Specifically, it is not known from previous research (May &Wisco, 2016) whether direct, indirect, and vicarious trauma exposure predict burnout and PTSD in ACMHW working in mental health settings.

Purpose

The purpose of this study was to investigate whether there is a correlation between work-related direct, indirect and vicarious exposure to trauma and burnout and PTSD in ACMHW. I assessed work-related exposure to direct, indirect, and vicarious trauma. The exposure measured as over a 1-month limited timeframe and limited to work-related exposures in psychiatric, medical, clinical, and counseling settings. The quantitative method was used to gather data using a correlational study design to identify if there is a relationship between variables of direct, indirect, and vicarious trauma and the reporting of burnout, and PTSD using psychological self-report surveys. The independent variables are direct, indirect, and vicarious trauma exposure. The dependent variables are the two dimensions of burnout as measured by the MBI/HSSM EE and DP scales. These two dimensions are evidenced to be direct measures of negative of burnout (West et al., 2012) narrowed the focus of this study. These were examined as possible indicators of burnout that may be directly sensitive to trauma exposure.

PTSD was measured using the PCL-5. The trauma exposure variables DT, IT, and VT as measured using dichotomous scales to measure exposure to trauma over a period of time over an extended period to be measured in a YES/NO format and the trauma exposure variables were measured as quantitative variables in regards to frequency of exposure in the preceding month. The rationale for this approach is that it is important to investigate whether the impact of traumatic exposure in an in intense single traumatic event or whether it is a cumulative effect as a result of frequency of exposure in the work environment. The research questions are framed to investigate the effects of traumatic exposure measured dichotomously versus continuously and there are separate research questions to address the impact of DT, IT, and VT resulting in six research questions. A correlational model was used to determine if there exists a relationship between DT, IT, and VT and the two dimensions of burnout as measured by the MBI/HSSM EE, DP, and PTSD as measured by the PCL-5.

Research Questions and Hypotheses

RQ1: Among acute care mental health workers is direct trauma exposure at work (when measured as a dichotomous variable) associated with symptoms of burnout and PTSD?

$H1_o$:Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 18a) is not a predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17)

$H1_A$:Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 18a) is a predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire17a).

$H2_o$:Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 18a) is not a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17a)

$H1_A$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 18a) is a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17a).

$H3_o$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 18a) is not a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17a)

$H3_A$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 18a) is a predictor of

predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17a).

RQ2: Among acute care mental health workers is indirect trauma exposure at work (when measured as a dichotomous variable) associated with symptoms of burnout and PTSD?

$H4_o$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 18b) is not a predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after statistically controlling for exposure to non-work-related trauma exposure and work-related direct trauma exposure (as reported on the Demographic Questionnaire, items 17a and 18a).

$H4_A$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 18b) is a predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale) after statistically controlling for exposure to non-work-related trauma exposure and work-related direct trauma (as reported on the Demographic Questionnaire, items 17a and 18a).

$H5_o$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 18b) is not a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure and work-related direct trauma exposure (as reported on the Demographic Questionnaire, items 17a and 18a).

$H5_A$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 18b) is a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure and work-related direct trauma (as reported on the Demographic Questionnaire, items 17a and 18a).

$H6_o$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 18b) is not a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure and work-related direct trauma exposure (as reported on the Demographic Questionnaire, items 17a and 18a).

$H6_A$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 18b) is a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure and work-related direct trauma (as reported on the Demographic Questionnaire, items 17a and 18a).

RQ3: Among acute care mental health workers is vicarious trauma exposure at work (when measured as a dichotomous variable) associated with symptoms of burnout and PTSD?

$H7_o$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 18c) is not a predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after

statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, items 17a, 18a and 18b).

$H7_A$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 18c) is a predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after statistically controlling for exposure to non-work-related trauma exposure and work-related direct and indirect trauma (as reported on the Demographic Questionnaire, items 17a, 18a and 18b).

$H8_o$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 18c) is not a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, items 17a, 18a and 18b).

$H8_A$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 18c) is a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure and work-related direct and indirect trauma (as reported on the Demographic Questionnaire, items 17a, 18a and 18b).

$H9_o$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 18c) is not a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure

to non-work-related trauma exposure and work-related direct and indirect trauma (as reported on the Demographic Questionnaire, items 17a, 18a and 18b).

$H9_A$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 18c) is a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure and work-related direct and indirect trauma (as reported on the Demographic Questionnaire, items 17a, 18a and 18b)

RQ4**:** Among acute care mental health workers is direct trauma exposure at work (when measured as a quantitative variable) associated with symptoms of burnout and PTSD?

$H10_o$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 19a) is not a predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b)

$H10_A$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 19a) is a predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b).

$H11_o$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 19a) is not a predictor of

Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b)

$H11_A$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 19a) is a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b).

$H12_o$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 19a) is not a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b)

$H12_A$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 19a) is a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b).

RQ5: Among acute care mental health workers is indirect trauma exposure at work (when measured as a quantitative variable) associated with symptoms of burnout and PTSD?

$H13_o$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 19b) is not a predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b)

$H13_A$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 19b) is a predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b).

$H14_o$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 19b) is not a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b)

$H14_A$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 19b) is a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b).

$H15_o$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 19a) is not a predictor of

predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b)

$H15_A$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 19b) is a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b).

RQ6: Among acute care mental health workers is vicarious trauma exposure at work (when measured as a quantitative variable) associated with symptoms of burnout and PTSD?

$H16_o$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 19c) is not a predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b)

$H16_A$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 19c) isa predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b).

$H17_o$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 19c) is not a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b)

$H17_A$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 19c) is a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b).

$H18_o$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 19c) is not a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b)

$H18_A$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 18c) is a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17a).

Theoretical Framework

The theoretical base for this study is Emotional Processing Theory(EMP; Foa & Kozak, 1986). The EMP theory (Foa et al.,1999)furthered the scientific application of Lang's (1979) forerunner of EMP, bio-informational theory. The EMP theory has previously supported the concept of anxiety disorders and the development of approaches to treating PTSD by recognizing the effects of habituation of reactivity post traumatization (Foa et al., 1999).The EMP theory supported the variables of this study to explain if a correlation can be found concerning the various types of trauma exposure with onset of burnout and PTSD as burnout and PTSD both have as a component in their development, repetition and habituation of response as proposed in EMP Theory (Foa & Kozak, 1986).

According to EMP theory, the potential habituation and development of emotional reactivity occur after being exposed to direct, indirect, and vicarious trauma. EMP theory offers an explanation that clarifies why working in mental health setting might result in the reporting of the two dependent variables burnout and PTSD. The EMP theory (Foa & Kozak, 1986) provides details on how traumatic event exposure produces emotional events resulting in pathology and disturbance in those exposed to trauma. EMP theory provides a framework to better understand the relationship of trauma exposure with subsequent development of stress burnout and PTSD. According to EMP theory, anxiety and prolonged stress reactions, such as burnout and PTSD are results of habituation of response or an emotional processing style that may stem from cultural

upbringing, personal self-concept, prior traumatic reactions and responses, and typical everyday emotional reactions and beliefs (Cooper, 2017).

Emotional processing theory provides an understanding of underlying mechanisms of stress and anxiety that assist in understanding the long-term effects of anxiety, burnout, and PTSD by recognizing the recurrent thinking that habituates and conditions a person's emotional reactions to the level of life disruption and dysfunction. EMP theory indicates that responses to trauma are often evasive of aversive stimulus (Foa et al., 1999).Within a work environment that could involve avoiding the traumatizing work environment that could result in dysfunctional responses, that is, anxiety/panic-attack symptoms and ruminations (Lang, 1979). Avoidance of work and work-duties after traumatic exposure are potential for disruption of work, work-environment, and possibly termination of the ACMHW if symptoms of burnout and PTSD are not identified. The researcher will elaborate more on the theoretical propositions in Chapter 2.

The research questions address whether direct, indirect, and vicarious trauma exposure are predictors associated with burnout symptoms and whether the variables mentioned above are also predictors associated with PTSD symptoms in ACMHW. The research questions approach exposure to trauma in ACMHW in a clinical setting from the perspective that considers single work -related exposure and cumulative work-related exposure to traumatic events possibly being predictors of burnout and PTSD. The quantitative approach was used to measure discretely single exposure versus cumulative

exposure to trauma and allowed me to determine if there exists a relationship with trauma exposure type and the subsequent development of Burnout and PTSD.

The quantitative approach provides a simple means to measure and determine if there exists a relationship with the three types of trauma exposure with the development of Burnout or PTSD. The quantitative approach can also measure if both burnout and PTSD are a result of exposure to the three types of traumas. Both burnout and PTSD are adaptive responses to aversive stimulus and may have a habituation effect based on what EMP theory states in relation to traumatic stress exposure.

Nature of the Study

The proposed study used a quantitative correlational approach to investigate whether there exists a relationship between job-related direct exposure, indirect exposure and vicarious exposure to trauma and the subsequent reporting of burnout and PTSD in ACMHW. The study was set in an online environment using the Survey Monkey website. The data were be analyzed using SPSS. Participants were recruited through a data gathering service Survey Monkey Audience and announcements placed in Facebook Mental Health Professionals Network and Mental Health Workers Vicarious Trauma Self-Care groups, Linkedin, and the Walden Student pool.

The participants were asked to complete an online survey. The participants were ACMHW that work in psychiatric care settings primarily within Texas but not limited to Texas. The Demographic survey inspired by the RPN Workplace Questionnaire (Stadnyk,2011) was used to identify prior nonwork-related vicarious, indirect, and direct traumatic exposure and work-related vicarious, indirect and direct traumatic exposure in

ACMHW. The MBI (Maslach & Jackson, 1996) was used to measure levels of burnout (dependent variable). The PTSD Checklist (Blevins et al.,2015) measured PTSD (dependent variable). These instruments were used to identify if a correlation exists between direct, indirect and vicarious exposure to trauma (independent variables) and burnout and PTSD (dependent variables) in ACMHW.

Definitions

*Acute Care Mental Health Workers(ACMHW):*Subjects will be the participants of the study that responded to this study survey limiting the subject pool that work with acute mental patients regularly and that spend a minimum of 10 hours per week of their work time interacting with them face-to-face. This will include counselors, therapists, psychologists, psychiatric nurses, psychiatrists, clinical social workers, emergency room nurses, nursing assistants and mental health technicians. (Sabin-Farrell & Turpin, 2003).

Acute Mental Health Patients: The population that will be encountered as a result of the nature of the profession where the job duty entails interacting with the acutely mentally ill intermittently or exclusively as a part of their job that are experiencing an acute mental health emergency that would include people with a diagnosis of mental illness or a new emergent or recurrent mental health crisis requiring professional assistance through counseling and psychiatric intervention(Anderson and Jensen, 2019).

*Burnout :*Loss of self-efficacy and engagement in work as a result of job-related stressors (Cieslak et al., 2015)

*Direct Trauma (DT):*Indicates a trauma experienced by an individual (Boudoukha et al., 2016).

*Indirect Trauma (IT):*Indicates a trauma witnessed by an individual (May and Wisco,2016).

*Vicarious Trauma (VT):*Trauma by hearing a retelling of an individual's trauma (Temitope & Williams,2015).

Psychiatric Setting: A setting where a professional in a helper profession that encounters people that may be afflicted with psychiatric, emotional and behavioral disturbances as a regular or intermittent part of their job such as mental health clinics, emergency rooms, mental health authority agencies, psychological counseling agencies, private practice psychiatric offices, medical clinics, and mental hospitals (Anderson and Jensen, 2019).

PTSD: Symptoms involve hyper-vigilance, symptoms of arousal, and stress reactivity after a traumatic incident or series of traumatic incidents that recur often outside of the control of the experience (APA, 2000).

Trauma exposure type: Trauma and type of trauma exposure in this study will separate traumatic exposure into three simple categories DT, IT, VT (APA, 2000).

Assumptions

It is assumed that ACMHW are vulnerable to the disruptive effects of job-related DT, IT, and VT. It is also assumed that as a result of the disruptive effects of trauma exposure that ACMHW are vulnerable to possible development of job-related burnout and PTSD. It is also assumed that the participants in this study will represent the population of ACMHW who interact and treat acute mental health patients. It is further assumed that the ACMHW will range in age from 18to 65 years old. In consideration of

the age range, it is also assumed that the population is literate and able to read and understand the survey questions. It is also assumed that the participants understanding the purpose of the study will answer the survey questions honestly and accurately

Scope and Delimitations

The scope of this study will be the examination of DT, IT, and VT and to determine if there exists a relationship between trauma exposure type and subsequent reporting of job-related burnout and PTSD. The participants surveyed were mental health care workers that are exposed regularly to acutely mentally-ill patients. Those surveyed included both licensed professionals and non-licensed workers who work with the acutely-mentally-ill. ACMHW's encompasses, therapists, counselors, psychiatrists, mental health technicians, nurses, and doctors. Nonclinical personnel who do not directly interact with acutely mentally-ill as a regular part of their job were excluded.

One theory that could be used in the present study, but was not, is cognitive theory that was originated in the 1950s by Piaget (Barrouillet, 2015). Cognitive theory asserts that PTSD symptomology relates that trauma goes against strongly-held global belief systems of the traumatized individual (Brewin & Holmes, 2003).

Cognitive theory asserts that trauma has deleterious effects on a person's beliefs about the safety and predictability of the world (Dagliesh, 2004). Cognitive theory was not used for this study as the focus of this study did not involve the quality of thoughts as a result of traumatic exposure but rather the reporting of exposure to trauma and the subsequent reporting of burnout and PTSD. Cognitive theory addresses thoughts and beliefs about one's environment after the event; however, EMP theory addresses the

habituation of the traumatized person that encourage faulty beliefs, but takes into consideration the biological arousal that occurs as a result of the traumatic event (Foa & Kozak, 1986). EMP theory (Foa & Kozak, 1986) emphasizes the habituation response to stress and trauma which with increased frequency of exposure to stress could mean increased risk of burnout and PTSD which would reasonably support the possibility of relationship between exposure to trauma and burnout and PTSD.

ACMHWs that are actively working in their respective fields of discipline where exposure to acutely mentally ill can potentially expose them to trauma. Trauma exposure, burnout, and PTSD are not limited to just ACMHWs. Honsinger (2018) concluded in her study of vicarious trauma as a predictor variable that there was little agreement in the conventions of identifying exposure to trauma in the existing literature. Three categories of trauma exposure were explored in this study to discreetly clarify and simplify the type of traumatic exposure and also to provide an example of how to improve standards in the discipline. This study's findings may provide a view of trauma exposure type and could potentially be replicated and generalized to other populations of workers that have been exposed to trauma.

Limitations

I utilized self-report measures as this method will be useful in compiling data. The limitations of using the survey methodology relies on the honesty and accuracy and forthrightness of the participants so dishonesty over reporting or under-reporting to minimize could affect the survey information gathered.

In consideration of individual differences in interpretation of the wording of the self-reporting scales used to gather information this may limit the accuracy of the reporting by participants which could possibly act as a confounding effect when surveying for the specific variables that are being studied. An additional limitation was the use of non-random sampling in the use and selection of study participants that could be a threat to internal validity that could be viewed as a confound due to self-selection bias that may lead to higher-than-normal reported responses on the survey questions. Self-selection bias occurs when participant may possibly identify with certain variables in a study and may be apt to over-report when surveyed and therefore putting surveyed response validity at risk. Self-selection bias could skew possible results in the data occurring in one direction. To prevent the skewing of data by self-selection bias, the study criterion used profession as criterion to participate in the survey. The Stadnyk (2011) survey that was used to identify whether or not there is a preexisting nonwork-related DT, IT, and VT. This kept participants from simply endorsing having been exposed to trauma in a simple yes or no format.

Although this study cannot rely on the random sampling method, the degree of possible generalization of this study's results to all ACMHW's may be debatable. External validity determines how generalizable the gathered data applies to a real-world population (Depaoli et al, 2018). However, threats to external validity may be mitigated by using a sampling method using inclusion and exclusion criterion allowing me to be reasonably sure the sample gathered will represent the population ACMHWs. Possible threats to internal validity could come from not using a randomized method of participant

gathering. Using participants that are assumed to be at higher risk to exposure to trauma by the nature of their jobs may make the data only generalizable to a narrower group versus beyond the scope of ACMHWs.

Construct validity is the degree of which a variable is accurately measured by the instruments being used to survey the variables (Harpur et al., 1986). Possible threats to construct validity could be self-selection bias. Self-selection bias could vary responses where a participant could possibly overly-endorse negative events by endorsing direct exposure to trauma versus witnessing or vicarious exposure therefore possibly bloating the reported exposure numbers. The *p* value will be set to 0.05 to allow for such error in reporting of data and still maintain validity and reliability.

To avoid confirmation-bias, I avoided ambiguity in terms as much as possible and used other readers to identify if there has been researcher bias in the writing of this document. The research questions are written in a manner that does not lean toward one outcome or another in wording and leaves the data gathered to be the determining factor of validation or rejection of the null hypothesis. The reliability and validity of the chosen instruments should minimize threats to construct validity and the Stadnyk questionnaire should mitigate self-selection bias as it discretely asks about non-work-related trauma exposure. The measures that will be used however have shown to be valid psychometric devices (Cornybeare et al., 2012, Rotsein et al., 2019; Stadnyk, 2011) The survey design could threaten internal validity as participants will be limited to their responses without having access for clarification. Responses could be affected. Nevertheless, the most feasible tool for this study was a survey design.

Significance

I addressed the present gap in the literature. Currently there is a lack of focus in the current literature on the three discrete categories of exposure to trauma in ACMHWs reporting burnout and PTSD as a result of exposure to DT, IT, and VT. I focused on ACMHW that are working in environments that put them at elevated risk for job-related exposure to direct, indirect, vicarious trauma and possible development of burnout and PTSD. This study is unique in that I examined job-related DT, IT, and VT exposure as possible predictor variables of job-related burnout and/or PTSD within the high-risk work environment that specifically ACMHW work within(May &Wisco, 2016).

If this study does indeed find relationship with job-related DT, IT, and VT exposure as possible predictor variables for job-related burnout and PTSD, early identification and preemptive treatment interventions could possibly be used to mitigate the effects of job-related trauma exposure in ACMHW's. The field of psychology and traumatology could benefit by understanding the residual effects of work-related trauma exposure type and the development of PTSD that may often go untreated as the worker is often assumed to be stronger or more resilient than acute mental health patients they care for and therefore may be less apt to be offered assistance and support for post trauma exposure effects.

Summary

This chapter focused on job-related trauma exposure types and subsequent reporting of job-related burnout and PTSD among ACMHWs. Definitions of the three

categories of trauma exposure DT, IT, and VT that any traumatic event can be categorized within.

This chapter also included an examination of job-related burnout and PTSD and the literature that supports trauma exposure and PTSD. The purpose of this study is to determine if there exists a relationship between job-related DT, IT, and VT and the job-related burnout and/or PTSD. The purpose of this study is to create social change in the way we view trauma type in the psychological field so we can develop more effective means of treating traumatized individuals. This chapter addresses the current approach to defining trauma being too diffuse and not being reliable as predictive variables across literature as the current definitions of trauma type often other variables with trauma exposure as amalgams of trauma involving events versus discretely defining trauma type. In the current literature the definition for VT will vacillate. Lounsbury (2011) identifies VT and STS as a predictive variable toward the eventual development of PTSD. I discuss the need for discrete definitions of trauma type.

Chapter 2 will contain an introduction a discussion of the literature search strategy the theoretical foundation including the conceptual framework and literature review focusing on the key variables and a summary and conclusion.

Chapter 2: Literature Review

Introduction

I examined the relationship between work-related exposure to trauma and the development of burnout and PTSD in ACMHWs. The purpose of this study was to investigate whether there is a correlation between work-related DT, IT, and VT exposure to trauma and burnout and PTSD in ACMHW.

Currently the literature reflects that DT, IT, and VT are not distinctly separated in terms of type of exposure to trauma versus traumatic type of event. There are a few terms that have been used synonymously and interchangeably when addressing trauma exposure and trauma exposure type (Wankelyn et al., 2016) leading to obfuscation of how a person might experience trauma as an individual.

Trauma type has been explored in the existing literature with a focus on differences in type of traumatic event versus how the traumatized person experienced the trauma and perceived it, which may be DT, IT or VT to the individual (Wankelyn et al.,2016).McCann and Pearlman (1990) addressed exposure to what in their description sounds like VT, but encompasses IT, but does not differentiate DT exposure and does not address habituation of hypervigilant responses, The Constructivist theory (Mcann & Pearlman, 1990) assists in understanding the traumatizing effects of repeated exposure to traumatic narrative when exposed to traumatized populations but does not separate seeing a traumatized individual from the narratives of the traumatized populations. However, McCann and Pearlman did provide a theory that supports vicarious traumatic exposure as

having a potent enough impact that an individuals' schemas change, disrupting normal life behaviors, and beliefs that as a result could develop into job burnout and PTSD.

Figley (1995a) stated that secondary traumatic stress disorder (STSD) manifests in individuals as a conditioned state as a result of exposure severely traumatized populations. *Compassion fatigue* was coined as a substitute term for STSD by Figley describing the same phenomenon. The continuum of the exposure to trauma IT and VT appears to be the pertinent points in Figley's theory of secondary traumatic stress by recognizing the effect of the trauma as well as hearing the recounting of the traumatized and their traumatic experiences but failing in differentiating exposure type.

Michalapoulos and Aparicio (2012) found that workers with personal trauma histories were at greater risk for developing vicarious trauma. The literature. also indicated that a personal trauma history increased the likelihood of experiencing secondary traumatic stress 88.9% versus 79.0% (Ewer et al., 2015). Hensel et al, (2015) in their meta-analysis found across 38 studies that a personal history of trauma positively related to secondary traumatic stress that is also interchangeably used as a term for VT.

By nature of certain human services jobs where personnel risk exposure to trauma there is an assumption of the potential of traumatic exposure by the worker. First responder emergency personnel, psychiatric nurses, therapists, and related professions that have contact with the traumatized are at significantly higher risk for development of STS and PTSD. Figley (1995a) theorized that the symptomology of PTSD was shared with STS to include exaggerated startle response, flashbacks, avoidance of people and

stimuli that can illicit negative recollections, nightmares, and recurrent intrusive thoughts that interfere with day-to-day life activities (APA, 2013).

This chapter will be comprised of an introduction, a literature search strategy, a theoretical foundation section, and a literature review related to key variables and a summary.

Literature Search Strategy

The search for pertinent literature used the following EBSCO databases: ProQuest Central, PsycArticles, PsycInfo, SAGE Premier, SocIndex with full text, Social Sciences Citation Index database, Thoreau Multi-Database, and Google scholar. Search parameters were peer reviewed, full text articles from 1990 to 2020. The following search terms and combinations of related terms that were used to search for resources for the literature review: *hearing trauma, indirect trauma, direct trauma, witnessing trauma, seeing trauma, direct traumatization, direct trauma, trauma impact, trauma type, trauma exposure type, vicarious trauma, secondary trauma, secondary traumatic stress, organizational trauma, trauma exposure, intent to turnover predictors, organizational climate, organizational factors, supervision,* and *leadership.* Additional literature was accessed from cited references in relevant articles, I found few studies and articles that addressed trauma exposure types and reported burnout and PTSD involving professionals that interact with people experiencing acute mental illness. Due to the limited findings involving trauma exposure, this researcher examined articles that involved the terms DT, IT, and VT and determined that their semantic descriptions of those variables were not distinct nor particularly clear as dichotomous variables and therefore I decided on an

approach for this study inspired by the Saskatchewan nurses study (Stadnyk, 2011) where DT, IT, and VT were discretely measured without additional sub-variables attached to the variable definitions that encourage ambiguity in variables.

Theoretical Foundation

The EMP theory (Foa & Kozak, 1986) was chosen for this study because it was my goal to understand if type of exposure to trauma affects reports of burnout and PTSD due to singular work-related exposure to trauma, as trauma can occur in one singular, isolated event resulting in vigilant responses that are fundamentally habituated responses or new learning as posited by Foa and Kozak. Foa and Kozak initially studied emotional image processing by embracing Lang's bio-informational theory in their EMP theory. Kozak's adaption of bio-informational theory was later developed into the EMP theory in conjunction with Foa (Molnar, 2020). EMP theory assumes that habituation occurs toward stress, anxiety, vigilance, and PTSD. The EMP theory supports the variables of this study and was used to examine if there exists a relationship between DT, IT, and VT with burnout and PTSD

Foa and Kozak's Emotional Processing Theory

EMP theory, according to Foa and Kozak (1986),asserted that emotional structures and emotionally associated are developed when a person is exposed to traumatic events that illicit a fear response that activates cognitive processes that lend meaning and valence to events that then condition or habituate a person to respond in presence of said stimulus resulting in vigilance, avoidant behaviors and thoughts, and beliefs that are generalized to protect the self. The basic premise of the EMP theory is

that there is a negative unconditioned stimulus (US; Wankelyn et al., 2016).A traumatic event such as an injury or violence, and an unconditioned-responses (UR) and a neutral conditioned stimulus (CS) a big city street for example. When an US such as a big city street with a UR are coupled together there are associations that are newly developed to protect the self, such as, big city streets are very dangerous. This association may be accurate about the initiating event stimulus but not accurate when broadly generalized across other similar events.

However, the emotional content of trauma and the associated elements according to EMP now have habituated into a cognitive and physiological schema based in associations whether accurate or inaccurate to protect the individual from experiencing that aversive stimulus again (Foa & Kozak, 1986).Depending on the severity of the trauma exposure and whether there was injury during the traumatic was shown to be a predictor of severity of PTSD symptoms (Hembreet al., 2004).

Foa and Kozak (1986)built on Lang's bio-informational theory founded in dysfunctional psychological structures developing as a result of aversive life events added that pathology also occurred that fundamentally changed the traumatized individual. The habituated avoidant thoughts and behaviors also prevented a person from experiencing nonconfirmatory evidence that could assist in changing the dysfunctional pathological reactivity that habituated as a result of the aversive stimulus (Foa & Kozak, 1986).

As a result of trauma, the use of avoidant, imaginal or physically avoidant coping strategies play a chronic part as a PTSD maintenance response preventing change in the

reactive trauma response. (Foa & Riggs, 2004). Anger was also found to be correlated in assault victims with PTSD and resistance to treatment (Riggs, 1992).

Response after the initial trauma exposure will often result in exaggerated emotional reactivity, avoidance of people, things and locations, hypervigilance, exaggerated startle response, and possible flashbacks (*Diagnostic and Statistical Manual of Mental Disorders* [5th ed., DSM–5]APA,2013) that are recurrent under certain circumstances indicating a development of a habituation or pathology (Rauch and Foa, 2006).

EMP theory addresses what occurs when exposure to trauma happens and provides a clear model of what occurs using the stimulus response model when trauma exposure occurs whether it be DT, IT, or VT. EMP theory also provides a simple model of what occurs post trauma exposure that may result from a single episodic exposure to trauma and when there is cumulative trauma. The predominant dysfunctional thought patterns that occur with trauma according to EMP theory are that (a) the world is a dangerous place, and (b) I am incompetent to handle the events that occur in the world resulting in anxiety, compulsions and PTSD (Foa & Kozak, 1986).

Prolonged Exposure Therapy was developed using the principles of EMP for treating PTSD (Foa & Kozak, 1986, Lily et al., 2019). Lily et al. (2019) related the mechanisms of change fundamentally are similar to what traumatized the individual in the first place, that is, fear-elicitation, habituation, or response conditioning during the session or recall and the habituation and maintenance of the change after fact (Zalta et al., 2014).

EMP theory recognizes the role that biological reactivity plays in the habituation of response to trauma. The difficulty in treating individuals after traumatization is in the over-engagement of the physiological fight-flight response therefore short-circuiting the verbal and cognitive processing keeping the person in the loop of dysfunctional reactivity. The symptomology of the traumatized are often repetitive and resemble OCD and depression (Huppert et al., 2014) and thereby making it difficult to reach out for assistance post trauma exposure. By addressing the primary post traumatic thoughts of *the world is a dangerous place* (Cooper et al., 2017) and *I am incompetent to handle events in my world* and the PTSD reactivity is reduced (Foa &Rauch, 2006). Brown et al.(2019) concluded that with EMP as a guideline using prolonged exposure (PE) that PTSD, anxiety, and OCD symptoms could be elicited and reduced in a clinical setting.

The relevance of EMP and exposure therapy is the similarity to the traumatic exposure variables in this study that are the entry point to development of dysfunctional reactivity and also the exit and reduction point of dysfunction through prolonged exposure (PE) using the EMP theory to inform treatment. Zalta et al. (2014) examined the use of PE to reduce negative cognitions from PTSD and noted a marked reduction in reported negative cognitions. The results were promising but suffered from a small sample to size be make the results of this study more generalizable.

The EMP theory provides a lens to view the manner in which trauma exposure whether it be a singular exposure or cumulative exposures can lead to a habituation of reactivity that can lead to decompensation and dysfunction. Exposure to trauma is perceived as proximal to the individual and aversive, hence potentially traumatizing (May

&Wisco, 2016). The EMP theory further provides a lens to understand IT and VT in comparison to DT as traumatic exposure that as a result conditions and habituates the trauma exposed persons' stress response. Burnout and PTSD are a result of singular and cumulative exposure to averse, stressful stimulus. The EMP theory supports the concept of habituation post-stress exposure. The research questions ask whether work-related DT, IT, and VT are predictive of burnout and PTSD as singular exposure and over a period of the month prior to taking this study survey.

Literature Review of Key Variables

In this section of this chapter, I will provide a literature review of the following variables of DT, IT, VT, burnout, and PTSD. Each section includes a description of the strengths and weaknesses of the literature reviewed for each variable.

Direct Trauma

Extraordinarily stressful life events can occur in a person's life and may result in trauma that effects the psychological, cognitive, and physical aspects of an individual. The effects of traumatic events can also have potentially lingering effects lasting many years after the initial event is long over (Mcann & Pearlmann, 1990). Bedoya et al.(2020) conducted a cross sectional study on 286 students a convenience sample including 76.6% women and 23.4% men between the ages 18 and 59. The majority of the sample did not report any traumatic event. However, those that did reported death of a loved one, robbery or assault, parental divorce, psychiatric decompensation, school, and relationship failure as traumatic.

Strengths and Weaknesses of Direct Trauma Research

Bedoya (2020) indicated what is considered traumatic to an individual directly experiencing a traumatic event can vary. The drawback to the study was that it was a non-experimental, non-probabilistic convenience sample. The DSM 5(2013) defined direct trauma as trauma occurring to an individual that is directly disruptive of daily living with intrusive dysphoric recall. Much of the literature lumped trauma together under the term *trauma* and has identified that there are differences in exposure, duration of exposure and frequency. I hoped to demonstrate the importance of defining type of trauma exposure to determine more clearly what the effects of type of exposure to trauma are and what the temporal effects can be, relative to burnout and PTSD.

Indirect Trauma

Larger national and international events like September 11th attacks and the televised Iran, Iraq, and Afghanistan wars there has been an increased awareness and focus on the continued fighting in the middle East. Zimering et al. (2006) conducted structured clinical interviews of 109 critical stress response team workers involved in the World Trade Center bombing. The results indicated that 20 % of those that were directly traumatized reported levels of PTSD. Zimering et al. also indicated that those that participants that endorsed PTSD reported indirect trauma in their experience. Zimering et al. used the term *indirect trauma* interchangeably with VT as part of the concept of indirect exposure.

Witnessing trauma has become much more available through electronic media and we get exposed to witnessing and becoming indirectly traumatized more often due to

television and video content and its ease of availability. This has brought the community and domestic violence, child abuse to an elevated level of awareness and proximity of trauma that until currently has been unprecedented in history, in addition to gaining the collective realization that trauma occurs at home. What has been part of this increasing awareness is that the prevalence of trauma is superfluous in lives and even in places of employment, such as nursing. Walsh and Buchanan (2011) found that the impact and unremitting exposure to acute patient trauma had long term effects that were interpersonal such as dissonance with self-beliefs, and distancing from others during work. McCann and Pearlman (1990) identified however that the impact of witnessing trauma has lingering effects that affected the schemata of the trauma witnesses. Atwoli et al. (2015) determined that males ages 18 to 60 reported higher incidences of IT exposure than women of the same age range.

Strengths and Weaknesses of Indirect Trauma Research

The literature on indirect trauma is muddled due to use of overlapping terms with VT related with graphic content and personal schemata and beliefs about self when coping with trauma exposure witnessed and heard (McCann &Pearlman, 1990) making it difficult to find distinct information and terms defining IT those researchers agree upon. The simplest description IT is seeing or witnessing (Stadnyk, 2011). The weakness in a number of the studies is the broad definition of IT and the overlap terms for IT (McCann & Pearlman, 1990; Zimering, 2006). Atwoli et al. (2015) conducted a 2-year quantitative study on IT in an adult population ranging from age 18 to over 60 years old in South Africa. In this study, 1084 (27.6 %) of respondents reported witnessing trauma. Men

reported witnessing traumatic events more frequently than women (33.4 vs. 22.8 %, p\0.0001). Atwoli et al.'s findings indicated that witnessing trauma is common in the South African population and results in increased risk of mood and anxiety disorders.

Vicarious Trauma

VT can be viewed as a disruption in a person's life and as associated with their being a secondary witness to another person's trauma narrative. VT can have a compromising impact on individual self-identity, values, strongly held beliefs, and personal ideals (Pearlman & Saakvitne, 1995). In the helper professions the risk of exposure to hearing trauma narratives is higher due to the frequency of exposure to traumatized populations. According to McCann and Pearlman (1990) and Pearlman and Saakvitne (1995) the compassion fatigue, VT and burnout share similarities but are known to be the cost of caring as professionals working in human services fields.

Upon review of the existing literature regarding VT, there is an apparent overlap of concepts that continues in the psychological field (Pirelli et al., 2020) in describing the effects of exposure to traumatized persons and their trauma narratives. The overlapping concepts are compassion fatigue, secondary PTSD defined by Brideet al.(2004) and vicarious traumatization as defined by McCann and Pearlman (1990) and secondary traumatic stress (Cieslak et al.,2014).

According to Figley (2004) and Stamm (1995), compassion fatigue is considered a similar and often interchangeable term in the current literature. Currently across the reviewed literature (Bride et al., 2004; McCann &Pearlman, 1990, Sexton, 1999)the close association of compassion fatigue, and secondary traumatic stress, and secondary PTSD,

the definition of VT has become diffuse. Boscarino (2010) suggested that VT, secondary traumatic stress, and compassion fatigue are concepts that are used interchangeably in research due to a lack of conceptual clarity in the definition of negative effects of working with and treating traumatized individuals.

McCann and Pearlman (1990) and Sexton (1999) recognized shared and distinct features between empathic stress, secondary trauma, countertransference, compassion fatigue, and vicarious trauma despite theoretical overlap. These terms are a good foundation for understanding VT as a separate and distinct construct. A comparison of the secondary traumatic stress and VT was conducted by Jenkins and Baird (2002) and they suggested that both constructs arise from trauma work with traumatized individuals and resemble a number of PTSD-like symptoms. However, VT was noted to have subtle changes in thinking versus observable reactivity as is exhibited with secondary traumatic stress. Currently the challenge in the literature is in finding the distinction of VT from Secondary traumatic stress and compassion fatigue. Baird and Kracen (2006) stated that there exists a lack of clarity in the literature surrounding VT and that further research is required to encourage the growth of that clarity in the current research. Defining vicarious trauma for the purposes of this study will assist in clarifying the influences of specific type of trauma exposure.

McCann and Pearlman (1990) define vicarious trauma as an unhealthy change within a therapist's internal ideals, and strongly held beliefs through frequent engaging empathically with a client's narrative of traumatic events. McCann and Pearlman further stated that by disregarding the effect of vicarious trauma could result in negative

transformations of beliefs of self and others and could further manifest in somatic and psychological changes as well.

For example, experiencing feelings of elevated, expected danger when doing what would make up a person's day to day activities such as walking for exercise or shopping when out and in public. Development of elevated fears that parallel traumatic material that may have been exposed to as a result of providing care within the role of the profession and job -related duties.

According to Pearlman and Saakvitne (1995) therapists are particularly vulnerable to VT exposure as the nature of their helper roles expose them to the graphic recounting of abuse, and cruelty including interpersonal violence that fosters the verbalizing and describing of those trauma inducing events. The role of therapists requires working in isolation which increases the risks of vicarious traumatization (Pearlman &Saakvitne, 1995)

Chronicity of exposure to traumatic narratives can result in harm to the professional identity of the person exposed to trauma narratives impacting motivation, job-related self-efficacy and empathy needed to engage in trauma-related work (Baird and Kracen, 2006) Empathic engagement is a necessity in the helper fields when communicating with the recently traumatized.

However, engaging with survivors of trauma and often having to listen to the emotionally charged narrative of a survivor can significantly transform a worker's world view, personal view of self and can also impact the beliefs, memory recall and base needs in a way that is intrusive, and cumulative (McCann &Pearlman, 1990). Exposure to VT

and its impact is different per individual and is contingent upon their personality, resources and resilience (Pearlman & Saakvitne, 1995). VT can adversely impact the ACMHW and their professional capacity to deliver and provide care as required by their specific job role.

Strengths and Weaknesses of Vicarious Trauma Research

The current literature appears to under-emphasize the impact of VT versus DT and IT. There is however evidence supporting that VT does indeed affect the individual that is exposed and can cause both psychological and physiological symptoms (Atwoli et al, 2015). McCann and Pearlman (1990) suggested that disruptions to personal schema and world view occur that can both be obvious or subtle depending on the perceived differences between a client's traumatic material and the therapist's personal views and beliefs. McCann and Pearlman (1990)suggested that vicarious trauma brings to light adverse personal transformations in a therapists' fundamental schema, and personality resulting from indirect exposure to a client's trauma narrative that fosters manifestations of disruptive syndrome of symptomology with intrusive imagery and painful affect.

According to Pearlman and Saakvitne (1995), the effects a person may experience from VT is contingent upon personality and individual resilience. Additionally, VT is known to impact capacity to work and function in a professional capacity. Mcann and Pearlman (1990) noted that a person's world view and how they interact with people and their profession can be disruptive. Therapists can be at risk for VT as much of a therapists' work is isolated from other people. leaves a person with the negative narratives and imagery after helping people. There is some overlap in what is identified

as VT and Secondary traumatic stress, compassion fatigue, and burnout that are often used interchangeably in current research is identifying the lack of clarity in defining VT from the other terms.

Burnout

Burnout, as a concept, has become a household term and is generally is understood as a result of excessive work-related stress. Burnout now has become recognized as a recognized medical diagnosis (WHO, 2019). However, burnout has been studied and better understood as a result of a growing body of studies and literature focusing on burnout as a result of work-related stress (Maslach, 2003). Maslach, Schaufeli and Leiter (2001)also examined burnout and concluded that the construct of burnout is based on a range of feelings that people report to arise from being excessively exposed to negative work-related- stressors (Stamm, 2005), The current three factor model of Burnout has been pushed forward by Maslach (2003) and has provided three distinct, measurable constructs to measure burnout with; emotional exhaustion, depersonalization, and personal accomplishment Burnout shares some similarities with compassion fatigue and vicarious trauma (Newell &McNell, 2010). Professionals that reported work-related burnout were also at higher risk for leaving their respective profession as a result (Hetzell-Riggin, 2020). A correlational study conducted by Beatrice (2020) on 94 mental health professionals concluded that organization climate had an impact on development of burnout. Yang and Hayes (2020) identified that across 44 studies on burnout within the last ten years that the effects of burnout negatively impacted mental health workers' personality characteristics, physical health, and client

outcomes. Beatrice (2020) further stated that most studies on burnout focus generally on organizational factors and stressors as relational and intra-personal perceptions and beliefs but, does not address the effects of exposure to traumatic events and more specifically type of individual trauma exposure and this a deficit in the research that this study intends to fill.

Strengths and Weaknesses of Burnout Research

The burnout literature has shown some similarity to reports of secondary traumatic stress (STS). Baird and Kracen (2006) concluded that much of the literature needs to more clarity in describing constructs like STS, VT, and compassion fatigue that some of the literature couples with studies involving burnout. Current burnout literature has shown that there are similarities to clinical depression symptoms that occur in burnout involving disengagement, and emotional exhaustion (Hetzell-Riggin, 2020) adding to the lack of clarity of understanding the construct of burnout. Dinkell (2020) studied burnout in 99 mental health professionals that work with sexual-abusers. Dinkell's (2020) conclusions identified the importance of resilience and organizational support in protective factors preventing burnout but did not specify the types of trauma exposure that encouraged burnout. Beatrice's (2020) identified that organizational climate and relationships with co-workers influenced reported burnout among mental health professionals but did not mention effects of trauma exposure on the individual or types of trauma exposure in the workplace. Warlick et al, (2020) examined graduate-level clinicians (n = 88) and licensed clinicians (n = 119) to determine if one group is more at risk for burnout. Even though no significant difference between clinicians was found, the

findings indicated that all clinicians are more at risk for personal burnout than any other type of burnout**,** with 48.9% of graduate students reporting personal burnout and 39.5% of clinicians reporting personal burnout versus work- related burnout. Yang and Hayes (2020) examined 44 studies on burnout from the last ten years and stated that the representative burnout literature was largely based on correlational studies and proposed that there was a lack in the current literature indicating casual relationships with the development and effects of work-related burnout.

Posttraumatic Stress Disorder

Historically, exposure to adverse and catastrophic events is well noted and is a fact of human life. Exposure to events, circumstances, and consequences coupled with a personal involvement is known to have adverse and negative effects on an individual. Throughout human history there are writings and stelae and art that depict experiences of violence, war, injury and cataclysm (Green, Wilson, & Lindy, 1985). The impact of critical and life-endangering incidents has been known to be far reaching to the average individual. According to Figley (1995) as a result there grew a societal interest in the mental and emotional responses in person's that may have experienced varied long and short-term effects due to the effects of war, being taken hostage, violence, natural disaster, accidental injury and bodily death.

In recent history the awareness of the effects and study of the critical amount of stress exposure a person could endure in war before they became unable to do their duties due to being "shell shocked' and therefore compromised as a result of war came to light during the Korean and Vietnam wars (Figley, 1995).

Trimble (1985) suggested that efforts to study and understand emotional distress and individual life events identified in survivors of traumatic events has produced several constructs to describe and understand the effects of trauma. The concepts that predated the current term of PTSD were combat neurosis, post-trauma neurosis, compensation-neuroses, shell-shock, and survivor syndrome (Trimble, 1985)

The diagnostic category of PTSD was developed and initially introduced to the psychological and psychiatric field was in the DSM-III(American Psychiatric Association, 1980). The symptoms were defined as commonly experienced by people after experiencing traumatic and catastrophic events impacting the development of diagnosis of trauma survivor. Friedman (2007) stated that an event that was considered outside of the normal realm of usual human experience and that had a traumatic impact such as torture, war, rape, natural disasters, and human created. The definition of PTSD in the DSM III (APA, 1980) was primarily discussing the effects of direct exposure to trauma and did not consider secondary nor indirect effects of trauma exposure (Figley, Harrison &Westwood, 2009)

The DSM IV was released in 1994 and expanded and addressed the limitation of DSMIII (APA, 1980) and included traumatic events that habituated the individual indirectly or secondarily. The DSMIVTR was released in 2000 (American Psychological Association, 2000) and added to the criteria and diagnostic features of PTSD to include indirect or secondary exposure to traumatic events.

Strengths and Weaknesses of PTSD Research

The description of PTSD was enhanced and expanded to include the developmental or prodromal stage of PTSD following traumatic event exposure and that further defined exposure to include direct exposure or experience of an event as the victim of trauma where the individual feels threat of harm to self, as a witness to the traumatic event that threatens the physical integrity of another individual, or vicariously experiencing by hearing or learning about violent death or injury or threat to another person, family member or associate. The DSM-5 (APA, 2013) further advanced the criteria of PTSD to include repeated and extreme indirect exposure to details to aversive elements of events that can occur in the realm of job functions. DT, IT and VT have been vetted as criteria for development of conceptual frameworks that help to clarify the various ways exposure can lead to PTSD. Figley, Harrison and Westwood (2009) identified that exposure to trauma in the existing literature at the time was broadly defined and did not separate direct and indirect exposure to trauma and did not identify vicarious exposure to trauma. Trimble (1985) at the time recognized that the understanding of combat stress influenced current understanding of what is now known as PTSD but also lacked enough information from trauma reports from the civilian-domestic area of human experience.

What is Known and Not Known About Trauma Exposure Type

The existing literature currently reflects an emphasis on interpersonal-trauma incidents such as adverse childhood experiences or sexual assault trauma. It is known that in working with the acutely mentally ill, that professional human service providers are at

greater risk for violence, injury and hearing traumatic narratives from patients (Pearlman and Saakvitne,1995). The current literature shows evidence that women are at greater risk for developing PTSD after trauma exposure (Mclean, 2011). DT has been well defined by the DSM-5 (APA, 2013) however, the existing academic literature has not followed suit in defining IT and VT (McCann & Pearlman, 1990). There is overlap in terms and definitions of IT and VT. The current research has provided mixed findings based on specific interpersonal events that were traumatizing events. What is known is that exposure to trauma is involved in development of burnout and PTSD. What is not known is whether if only one type of exposure to trauma is related to development of burnout and PTSD. I intend to provide a concise and distinct definition and model of trauma exposure type to assist in defining trauma exposure for future research. This study will use this approach to more effectively determine if there exists a relationship with specific exposure type and development of burnout and PTSD in ACMHW's.

Summary and Conclusions

An evaluation of the existing literature provided an enhanced understanding of the effects of work-related trauma exposure and work-related burnout and PTSD in ACMHWs. This study will differ from the current literature as the focus is on the use of concise definitions of trauma exposure type and connecting them with type of traumatic event. There is a dearth of literature using concise definitions of trauma exposure as the literature has shown a broad and unclear understanding of IT and VT where there is much overlap in terms with compassion fatigue acute traumatic stress and STS (McCann & Pearlman (1990). What is currently not known is if there is a relationship between work-

related type of trauma exposure in ACMHW's and reported work-related burnout and PTSD. I will use a quantitative electronic survey design to examine type of exposure to trauma and reported work-related burnout and PTSD inChapter3 that will comprised of an introduction, research design and rationale, methodology, threats to validity and summary.

Chapter 3: Research Method

Introduction

The purpose of this study was to investigate whether there is a correlation between work-related DT, IT, and VT with burnout and PTSD in ACMHW. This chapter consists of several sections, an introduction, research design and rationale, methodology, threats to validity and a summary section.

Research Design and Rationale

I used a quantitative multifactorial correlational design examine effects of trauma exposure on symptoms of burnout and PTSD. The independent variables were exposure to DT, IT, and VT as defined in the Demographic survey. Separate research questions are framed concerning effects of each type of trauma, with a total of six research questions in all. Exposure to trauma was measured both as dichotomous variables and as dichotomous variables. The first set of three research questions are concerned with effects of DT, IT, and VT respectively, measured as quantitative variables. The final set of three research questions are concerned with effects of DT, IT, and VT respectively, measured as quantitative variables. For each research question, the dependent variables will be the Emotional Exhaustion and Depersonalization scales of the Maslach Burnout Inventory (as measures of burnout) and scores on the PCL-5(as a measure of PTSD symptoms).

The research questions are:

RQ1: Among acute care mental health workers is direct trauma exposure at work (when measured as a dichotomous variable) associated with symptoms of burnout and PTSD?

RQ2: Among acute care mental health workers is indirect trauma exposure at work (when measured as a dichotomous variable) associated with symptoms of burnout and PTSD?

RQ3: Among acute care mental health workers is vicarious trauma exposure at work (when measured as a dichotomous variable) associated with symptoms of burnout and PTSD?

RQ4: Among acute care mental health workers is direct trauma exposure at work (when measured as a quantitative variable) associated with symptoms of burnout and PTSD?

RQ5: Among acute care mental health workers is indirect trauma exposure at work (when measured as a quantitative variable) associated with symptoms of burnout and PTSD?

RQ6: Among acute care mental health workers is vicarious trauma exposure at work (when measured as a quantitative variable) associated with symptoms of burnout and PTSD?

An electronic questionnaire was used to measure DT, IT, and VT exposure among ACMHWs to determine if there exists a significant relationship between independent variables of DT, IT, and VT and dependent variables burnout and PTSD. Invitations were

placed in two-private mental health worker Facebook groups this researchers Linkedin account and invitation sent to the Walden participant pool.

I used multiple regression analysis to determine which of the independent variables will have the highest correlation with the response variable. This method was chosen to more effectively examine the independent variables with the highest correlation with the outcome variables. This method allowed me to further examine the IVs in combinations to be able to account for the variability in outcome or DV of interest (burnout and PTSD) and whether or not they occurred independently or co-occurred as outcomes.

According to Andrews et al.(2003), an electronic survey study design was more efficient in the gathering and analysis of the surveyed information as there will not be any individual interviews conducted. The surveys were accessed by computer interface across the state of Texas by way of internet access and the use of electronic survey format.

Multiple regression analysis was used to identify significant predictor variables and their possible role in the development of burnout and PTSD in ACMHWs. Employers of ACMHWs could apply the findings gathered by this study to identify, manage, and mitigate job-related factors that may put ACMHWs at higher risk to development of burnout and PTSD due to exposure to the three types of job-related trauma. The helper professions are at higher risk for interactions with the acutely mentally-ill and professional educators and trainers could use the data generated from this study to develop training to address the development of work-related burnout and PTSD

and the issue of potential for job-related exposure to traumatization as a result of DT, IT, and VT.

Methodology Population

The population in this study was ACMHWs that work with patients that can become acutely mentally ill as part of their professional work environments. ACMHWs encompass therapists, counselors, psychiatrists, mental health technicians, nurses, and doctors.

Sampling and Sampling Procedures

A nonrandom systematic sampling strategy was used when inviting potential participants to take the survey as it is a cost-effective and efficient way to get participants for a study (Andrews et al., 2003). The invitation with the Survey Monkey link to the study informed participants of the availability of the survey coupled with an initial informed consent page (Appendix A) and a post survey debriefing page (Appendix G) with resources for the unlikely case of any negative effects. (a) Survey Monkey electronic data services will be used to compile participant survey data, and (b) psychological clinical services employers, human resource departments at clinics, hospitals, and first responder units. An a priori power analysis was calculated using the G*Power 3.4 calculator. The G*Power 3.1.4 program was used to calculate the sample size indicating that a minimum number of 119 participants was needed for this study. The sample size was based on the goal of 80% statistical power (Faul et al., 2009). Each of the study hypotheses was investigated using a separate analysis for each hypothesis. A multiple regression analysis was used to examine the hypotheses for this study, testing the

independent variables individually, with up to four additional control variables. Each regression analysis involved testing one independent variable in a multiple regression model that may contain up to five predictor variables. The dependent variables were PCL-5 scores or one of 2 MBI scale scores. The three types of exposure to trauma will be used as independent variables. The control variables was exposure to trauma other than what was measured as per the study hypotheses. A two-tailed *t*-test was used for each individual variable's hypothesis.

In view of the number of hypotheses that will be examined, the level of Type1 error was controlled for each research question by setting the family-wise alpha level for each research question at .05. Since there are three null hypotheses under each research question, a Bonferroni correction was applied to the significance (alpha) level for each hypothesis, by setting the alpha level for each regression analysis at .05 divided by 3, or .017. with a significance level (alpha) set at .05. Using a Cohen's criteria for correlations, the effect size for each independent variable is to be quantified by using a semi-partial correlation coefficient of which the value was assumed to be 0.3 or greater indicating a medium sized correlation.

Because the proportion of variance accounted for by the regression model increased by the square of the semi-partial correlation coefficient when the independent variable is added to the regression model, it is assumed that the change in $R^2 = (0.3)^2$ or 0.09. Under the above assumptions and inputs to the sample size calculation, G*Power indicated that a sample size of 119 provided 80% statistical power to reliably detect as statistically significant effects of trauma that are of the magnitude I anticipate.

In the event of a low response to the invitation from Survey Monkey Audience, a data gathering service, psychological clinical employees, Facebook Mental Health Professionals Network and Mental Health Workers Vicarious Trauma Self-Care groups, Linkedin and the Walden Student pool as backup options will be also be used to augment the responses. The professions that will fall within the participation criteria of an ACMHW will be those that as a result of the nature of their job interact with either exclusively or at minimum of 10 hours per week with the acutely mentally ill. People working as support personnel in support of the aforementioned professions will not be surveyed. Those not being surveyed will be secretaries, administrators, business office personnel, and maintenance personnel.

The use of social media such as Facebook and Instagram was used to provide the Survey Monkey questionnaires link. The invitation letter was posted with the criterion for participation in the study. The demographic survey (Appendix B) asked about job classification, length of time in profession, age, and sex to ensure that I only had participants that met criterion to be a participant of this study. An informed consent page (Appendix A)was the first interaction before the participants take the study survey, and a postsurvey debriefing page (Appendix E) and resources information page (Appendix H) will be provided once the survey is completed.

Procedures for Recruitment, Participation and Data Collection

Recruitment

To recruit potential participants Survey Monkey audience data, gather service will be used and as a backup strategy social media sites Facebook Mental Health Professional,

Mental Health Care Workers Vicarious Trauma and Self-Care groups, Linkedin and the Walden participant pool will be used. An invitation will be posted on Facebook Mental Health Professionals Network and Mental Health Workers Vicarious Trauma Self-Care groups, Linkedin and will also be sent to the Walden participant pool. Andrews, Nonnecke and Preece (2003) identified that the use of electronic surveys provided the benefits of convenience, automatic verification, survey and responses captured in databases. In addition, the use of electronic survey is cost effective and time efficient versus mailing surveys manually therefore increasing response rates. The disadvantages of using self-selection is potential sample bias occurring as a result of not using random selection. The advantages of using self-selection sampling will be that the method is a reliable and effective sampling strategy for this study.

Upon accessing the survey, the participants encountered a demographic survey (Appendix B) that asked for elements of age, sex, and whether live in an urban or rural area. The Demographic Questionnaire (Appendix B) asked about prior trauma exposure not related to work and type of trauma (DT), (IT), and (VT) (Stadnyk, 2011). The MBI (Appendix C)asked questions related to burnout and the PCL-5 (Appendix D) asked about symptoms of PTSD. After the survey is completed, the participant accessed the debriefing statement (Appendix E) and A Resource list (Appendix J) was provided in the unlikely case that a participant is triggered or has a negative emotional reaction as a result of taking the survey. In case of such an occurrence; participants that become distressed as a result of adverse recall that may occur as a result of answering the questionnaire participants will be encouraged to contact their local 24-hour crisis hotline upon exiting

the study to address any adverse thoughts and feelings that may have arisen during their study participation.

This study used Survey Monkey Audience data gathering service as the primary method of gathering survey data and will use my personal Facebook page and the Walden participant pool as backup options to gather participants to direct to Survey Monkey link for participants to access the link on the survey site. The letter of invitation was accessed at Facebook groups Mental Health Professionals Network and the Mental Health Workers Vicarious Trauma and self-care, Linkedin, and Walden Pool of study participants and described the purpose of the study, criteria for participating in the study the potential benefits, risks, and discomfort and assurance of confidentiality. Participants were also informed in the invitation of the option to withdraw from the study at any time before or during the participation in the study and also the anticipated time required to complete the electronic survey. The link was provided at the end of the letter of invitation.

Upon accessing the Survey Monkey link the participants were directed to the informed Consent (Appendix A), the Demographic Questionnaire (Appendix B) (Appendix C), the MBI (Appendix D), and the PTSD Checklist PCL-5 (Appendix D), and the Debriefing Statement (Appendix E) all together in linear order.

Participation

In consideration of the choice of a quantitative research design, a convenience sample will be recruited though a data collection service Survey Monkey Audience. Facebook groups Mental Health Professionals Network, and the Mental Health Workers

Vicarious Trauma and self-care, Linkedin, and Walden Pool of study participants were used to seek participants as a backup plan in case I could not meet minimum of 119 participants through the data collection service. participate in the study to various professions that are ACMHWs. Possible participants, through self-selection was able to choose to take part in this research study. After their agreement to participate, participants had an opportunity to complete the surveys. The strategy allowed participating ACMHWs to take part in the study if they choose to participate and meet criterion to participate. Self-selection sampling is a nonprobability sampling technique however it has potential advantages for conducting this study. There is an increased likelihood of securing potential ACMHWs that were willing to be participants in this study. I used Facebook groups Mental Health Professionals Network and the Mental Health Workers Vicarious Trauma and self-care, Linkedin, and Walden Pool of study participants to post an invitation to participate in the study and provide a link to Survey Monkey where the survey can be accessed. Specific guidelines were included, identifying the purpose of the study, expected procedures, and the criteria required for involvement. Criteria for inclusion in this study were: (a) a worker that interacts with acutely mentally ill persons as part of their job a minimum of 10 hours per week or daily;(b) ACMHW's work with patients that can become acutely mentally ill as part of their respective work environments; and(c) currently employed as therapist, counselor, psychiatrist, mental health technician, nurse, physicians' assistants, psychiatric nurse practitioners and physicians. The form of data collection will consist of three self-administered surveys.

Data Collection

I used data gathered from a questionnaire accessed through Survey Monkey containing an MBI, PTSD Checklist, and a demographic questionnaire (Appendix B). The demographic questionnaire was used to confirm eligibility to participate in the study, to provide information on key characteristics of participants, and information on trauma exposure, both related to work as an ACMHW and trauma exposure not related to work as an ACMHW. An internet-based survey administration system that is a secure, password protected site will be used for the administration of the survey. The form of data collection consisted of a demographic survey and three self-administered surveys. This method of administration offers a convenient and cost-effective means of collecting information. Upon completion of the self-administered surveys, the participants received a debriefing statement (Appendix E) thanking the participants for their participation in the study and informing participants on the nature and purpose of the study and what is hoped to be gained in data and understanding of trauma exposure type, burnout and PTSD. Upon completion of the study a summary of the results of the study written in layman's terms will be posted at the Facebook groups Mental Health Professionals Network and the Mental Health Workers Vicarious Trauma and self-care, Linkedin, and Walden Pool of study participants whose group names will be removed from final report, to inform the participants of the findings of the study.

Instrumentation and Operationalization of Constructs

Instruments in this study are the demographic questionnaire, the MBI (Maslach and Jackson, 2017), and the PCL-5 (U.S. Department of Veterans Affairs, 2020).

Demographic Questionnaire

The demographic questionnaire was inspired by the RPN Questionnaire that was Developed to ask Saskatchewan nurses about work relevant trauma, specifically focusing on DT, IV and VT (Stadnyk, 2011) The demographic questionnaire uses a concise method of defining DT, IT, and VT clearly defining the three types of trauma exposure in a manner that supports the study of the independent variables being examined in this study.

The results of the Saskatchewan nurses study validated the results of the RPN questionnaire by showing that exposure to workplace trauma did evidence a greater influence in the development of PTSD symptoms than exposure to non-work-related trauma (Stadnyk, 2011)

The existing body of literature that assesses trauma exposure and trauma type versus surveying for trauma symptoms generally utilize interviews or single item questions instead of fully validated psychometric instruments. The demographic questionnaire will be used like the RPN study used single item measures (Stadnyk. Personal communication, May, 2020). Wanous, Reicher & Hudy (1997) evidenced that use of single item measures were effective when used with non-ambiguous measures like a discrete item demographic survey item such as gender, age or marital status. The Demographic survey also has a definition of trauma and type of exposure DT, IT and VT clarifying type of trauma exposure. The items in this demographic survey are single item measures that include; Have you ever experienced a traumatic event in your life that was not work-related? Have you ever experienced a traumatic event in the health care work

environment? Have you ever had exposure from both sources? Age, gender, years on the job, ethnicity, marital status, shift work, work status, location of family residence. The demographic survey will be taken before answering the MBI for burnout and PTSD checklist for PTSD

Maslach Burnout Inventory

The Demographic survey also has a definition of trauma and type of exposure DT, IT and VT clarifying type of trauma exposure. The items in this demographic survey are single item measures that include; Have you ever experienced a traumatic event in your life that was not work-related? Have you ever experienced a traumatic event in the health care work environment? Have you ever had exposure from both sources? Age, gender, years on the job, ethnicity, marital status, shift work, work status, location of family residence. The demographic survey will be taken before answering the MBI for burnout and PTSD checklist for PTSD

All variations of the MBI use a 7-level rating ranging from “never” to “daily” frequency. The MBI across its, variations use three scales Emotional Exhaustions (EE), depersonalization (DP), and personal achievement (PA). Each scale used measures a dimension of burnout as defined by the world Health Organization. The MBI is a 22-item survey divides Emotional Exhaustion (9 items), depersonalization (5 items), personal accomplishment (8 items) to be scored with the 7-level rating to calculate a burnout score ranging from low, to moderate to high in each dimension of burnout (Wheeler et al, 2011).

The variables are measured in a Likert scale fashion as follows: how often: 0 1 2 3 4 5 6; 0 (Never), 1 (*A few times*),2 (*Once a month*), 3 (*A few times a week*), 4 (*Once a month*), 5 (*A few times a year*), 6 (*Every day*). Emotional Exhaustion at z = Mean + (SD 0.5) Depersonalization at z = Mean + (SD 1.25) Personal Accomplishment at z = Mean + (SD 0.10).

Sample question from the MBI:

1.I feel emotionally drained from my work. How often: 0 1 2 3 4 5 6 0 (*Never*), 1 (*A few times*),2 (*Once a month*), 3 (*A few times a week*), 4 (Once a month), 5 (*A few times a year*), 6 (*Every day*)

PTSD Checklist

The PTSD Checklist (PCL-5) is a 20-item measure of PTSD with versions specifically developed for civilian and military populations (Blevins et al, 2011 developed the PCL-5 that can be taken by the individual before during or after a clinical visit and can also be used in a nonclinical setting and has been shown to be a robust measure of PTSD (U.S. The Department of Veterans' Affairs., 2020). PTSD Checklist (PCL-5) is a self-survey that does not require a clinician to administer therefore making this robust measure very useful for surveying for possible

PTSD ACMHW's. The PCL-5 is answered in a 5-point Likert Scale format. The Blevins et al, 2015). The PCL-5 is a self-report following is a sample question from the PTSD Checklist: In the past month, how much were you been bothered by: "Repeated, disturbing, and unwanted memories of the stressful experience?" Response: 5-point Likert (0 = "Not at all" to 4 = "Extremely. The PCL-5 is a short survey that has been

shown to be a reliable and valid measure in identifying symptoms of PTSD as a result of an easily administered self-survey making it this study. Breisley, Erford and Dean (2018) determined that the PCL5 was adequate psychometrically and that the instrument had an adequate convergent validity (Ibrahim et al, 2018). Ghazali and Chen (2018) tested the PCL-5 and found that the internal consistency of the PCL-5 Cronbach's alpha = .85). determined that the PCL-5 had internal consistency and exhibited a level of sensitivity of 72% and specificity of 92% using the criteria of the DSM V for PTSD. The PTSD Checklist was psychometrically evaluated in 2 studies of college students exposed to trauma. Participants in these studies were study 1 (n = 278) and study 2 (n = 558) and showed similar strength of reliability and validity. The PCL-5 exhibited strong scores on internal consistency (α = .94), test-retest reliability (r =.82), convergent validity (rs = .74to .85) and discriminant (rs = .31 to .60; Blevins et al, 2015).

Operationalization of Variables

The potential predictor variables were selected based on previous research in trauma exposure Type (Lee et al, 2018). The Demographic Questionnaire defines the three predictor variables to be used in this study in this way.

Trauma Event

An event that is experienced by and individual that induces physical, emotional and psychological harm or distress to the individual experiencer. Traumatic events can range from being harmed by direct aggression or assault to the individual or as a result of experiencing injury by accident. Traumatic events can also be witnessed or experienced indirectly as a result of seeing violence or injury to another person. Traumatic events can

also be experienced vicariously by listening to the retelling of another person's traumatic event or experience (Stadnyk, 2011, Wamser-Nanney et al, 2013).

Trauma Exposure

The event could be experienced directly by the individual, indirectly by witnessing the event, vicariously by hearing of the event by the recounting of the event by another individual possibly a victim or witness to the trauma inducing event (Wanklyn, et al, 2016) DT (direct trauma): The person is the direct recipient or victim of a traumatic event resulting in injury and results in an alteration of thinking or distortions in beliefs that develop over time whose effects can be disruptive and painful for individuals IT(Indirect trauma): The person witnesses a trauma happening to someone else that can result in an alteration of thinking or distortions in beliefs that develop over time and whose effects can be disruptive or painful (Stadnyk, 2011).

Direct Trauma (DT)

A Traumatic event experienced personally by an individual defines direct exposure to trauma (DT).Work-related DT exposure will be measured by the Demographic questionnaire (Appendix B) in both a dichotomous and continuous fashion. Item 17a of the Demographic Questionnaire (Appendix B) asks "Have you ever experienced traumatic events in your life?" to be answered in a yes, no, don't know format. If answer is yes to question 17a then question 17b asks, "approximately how many events were not work-related events" to which participants can endorse 1through 5 and 5 or more. 18.Have you experienced a traumatic event in the mental-healthcare work environment or while working with individuals suffering from a mental health disorder?

Question 18 is broken down into three sub questions and 18a (personally experienced) is directed at measuring DT dichotomously. Question 19 asks "During the *last month* that you worked approximately how many traumatic workplace events have you:". Question 19 of the Demographic Questionnaire (Appendix B) is broken down into three sub-questions of which 19a (personally experienced) is directed at measuring DT.

Indirect Trauma (IT)

Indirect Trauma refers to an event witnessed by an individual. Work-related IT exposure will be measured by the Demographic questionnaire (Appendix B) in both a dichotomous and continuous fashion. Item 17a of the Demographic Questionnaire (Appendix B) asks "Have you ever experienced traumatic events in your life?" to be answered in a yes, no, don't know format. If answer is yes to question 17a then question 17b asks, "approximately how many events were not work-related events" to which participants can endorse 1through 5 and 5 or more. 18.Have you experienced a traumatic event in the mental-healthcare work environment or while working with individuals suffering from a mental health disorder? Question 18 is broken down into three sub-questions and 18b (witnessed) is directed at measuring IT dichotomously. Question 19 asks "During the *last month* that you worked approximately how many traumatic workplace events have you:". Question 19 of the Demographic Questionnaire (Appendix B) is broken down into three sub-questions of which 19b (witnessed) is directed at measuring IT.

Vicarious Trauma (VT)

As a result of hearing or recounting of other peoples' traumatic event narratives can have an alteration of thinking or distortions in beliefs that can develop over time and whose effects can be disruptive and painful (Stadnyk, 2011, Pearlman, 1990). Work-related VT exposure will be measured by the Demographic questionnaire (Appendix B) in both a dichotomous and continuous fashion. Item 17a of the Demographic Questionnaire (Appendix B) asks "Have you ever experienced traumatic events in your life?" to be answered in a yes, no, don't know format. If answer is yes to question 17a then question be asks, "approximately how many events were not work-related events" to which participants can endorse 1through 5 and 5 or more. 18.Have you experienced a traumatic event in the mental-healthcare work environment or while working with individuals suffering from a mental health disorder? Question 18 is broken down into three sub questions and 18c (Heard) is directed at measuring VT dichotomously. Question 19 asks "During the *last month* that you worked approximately how many traumatic workplace events have you:". Question 19 of the Demographic Questionnaire (Appendix B) is broken down into three sub-questions of which 19c (Heard) is directed at measuring VT.

Burnout

A syndrome of psychological effects that result when a person is exposed to unremitting interpersonal stressors on the job. There are several dimensions of burnout; overwhelming exhaustion, feelings detachment from the job and increased cynicism, and a sense of ineffectiveness and lack of accomplishment (Maslach & Leiter, 2017).The

MBI scales measure each construct as a continuous variable. The scales are scored lower to higher, higher indicating more of emotional exhaustion (EE), depersonalization (DP). The MBI EE scale consists of 9 items, the DP scale consists of 5 items. The variables are measured in a Likert scale fashion as follows: how often: 0 1 2 3 4 5 6. 0(*Never*), 1 (*A few times*),2 (*Once a month*), *3* (*A few times a week*), 4 (*Once a month*), *5* (*A few times a year*), 6 (*Every day*).

PTSD

Posttraumatic stress disorder (PTSD) is a psychiatric disorder that can occur in people who were traumatized by having experienced or witnessed and event that was interpreted as extreme, traumatic or threatening to the individual leaving a recurring, residual reactivity to environmental stressors that appear associated or similar to the initial traumatizing event (APA, 2013). The PTSD symptom presentation is measured by PCL-5 are measured by indicating how much the individual has been bothered by the problem queried by the scales measuring PTSD symptom cluster of which they are: intrusions (Items 1–5), avoidance (Items 6 –7), negative alterations in cognitions and mood (NACM; Items 8 –14), and alterations in arousal and reactivity (AR; Items 15–20). The scales are all scored on a 5-level score from 1(*Not at all*), 2 (*A little bit*), 3 (*Moderately*), 4 (*Quite a bit*) 5 (*Extremely*). The PTSD Checklist measures and defines PTSD as a re-experiencing of, avoidance symptoms and hyperarousal symptoms. These symptoms are measured as sub-threshold to moderate and extremely severe presentation of symptoms and ranges in scores from cumulative score of minimum 20, (sub-threshold)

to 80 (moderate) cutoff indicator of PTSD with a maximum reportable score of 100. (U.S. The Department of Veterans' Affairs., 2020). PTSD Checklist (PCL-5).

Data Analysis Plan

I used SPSSv27 for the necessary calculations and statistical analysis of the gathered data. Aggregation of data will be provided by Survey Monkey including collection of data and summary analysis via SPSS. A correlational model was used to determine if there exists a relationship between DT, IT, and VT and reported burnout and PTSD. A multiple regression analysis will be used to test the hypotheses. Prior to regression analysis the data set will be examined to determine if all assumptions are met, as explained below.

Data was inspected and cleaned as follows. For the independent variables regarding trauma exposure, it will be assumed that "don't know" responses indicate that the respondent did not substantially experience trauma of the type asked about. Hence these responses will be recoded as "No" responses (i.e., that the type of trauma exposure did not occur. For all variables, the maximum and minimum values will be examined to make sure that no extreme data values exceed physically possible or theoretically plausible limits. Any data value that is more than 3.0 standard deviations from the mean of the variable will be considered an outlier (Stevens, 1999), and was subsequently excluded from the main statistical analyses for the study research questions. All cases with missing values or outliers will be excluded from the main analyses. For multiple linear regression, several statistical assumptions must be made about the data: (a) there is a linear relationship between each predictor variable and the dependent variable, (b) the

residual errors from the regression are approximately normally distributed with no strong outliers; (c) the variance of the residuals is roughly constant for all values of the predictor variables (lack of heteroscedasticity); (d) the predictor variables are not strongly correlated (lack of multicollinearity); and (e) there are not strong outliers (influential data points) that could distort the estimated slope of the relationship between the independent variable and the dependent variable. I will test these assumptions by (a) examining scatter plots for the relationship between each predictor variable and the dependent variable; (b) examining histograms, skewness and kurtosis statistics, and Q-Q plots for the residuals; (c) examining scatter plots of the residuals versus the predicted values from each regression analysis; (d) examining the VIF (variance inflation factor) statistics from the regression analyses; and (e) examining Cook's distance and standardized residuals as diagnostic indicators from each regression analysis. Cases in which Cook's distance exceeds 1.0 or the standardized residuals exceed 3.0 in absolute value will be regarded as outliers and deleted from the analyses. If scatter plots are not linear, or the assumptions regarding a normal distribution is violated, then an appropriate data transformation (such as taking logarithms) will be applied.

Demographic variables (other than those that assess trauma exposure) will not be used as covariates in the regression analyses. Characteristics of the study sample will be presented using descriptive statistics for the demographic variables, as well the independent and dependent variables of the study. For each of the categorical variables, summary statistics will be reported in terms of percentages and frequency counts for each level of the variable. For the continuous variables (including PCL-5 scores, scores on the

MBI scales, and scores for frequency of trauma exposure) means and standard deviations will be reported.

In view of the number of hypotheses that will be examined, the level of type 1 error will be controlled for each research question by setting the family-wise alpha level for each research question at .05. Since there are three null hypotheses under each research question, a Bonferroni correction will be applied to the significance (alpha) level for each hypothesis, by setting the alpha level for each regression analysis at .05 divided by 3, or .017. with a significance level (alpha) set at .05. Multiple linear regression will be used to investigate the research questions for the study and to test the hypothesis for each research question, as follows.

Research Questions and Hypotheses

RQ1: Among acute care mental health workers is direct trauma exposure at work (when measured as a dichotomous variable) associated with symptoms of burnout and PTSD?

$H1_o$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 18a) is not a predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17)

$H1_A$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 18a) is a predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after

statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire17a).

$H2_o$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 18a) is not a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17a)

$H1_A$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 18a) is a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17a).

$H3_o$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 18a) is not a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17a)

$H3_A$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 18a) is a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17a).

RQ2: Among acute care mental health workers is indirect trauma exposure at work (when measured as a dichotomous variable) associated with symptoms of burnout and PTSD?

$H4_o$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 18b) is not a predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after statistically controlling for exposure to non-work-related trauma exposure and work-related direct trauma exposure (as reported on the Demographic Questionnaire, items 17a and 18a).

$H4_A$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 18b) is a predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale) after statistically controlling for exposure to non-work-related trauma exposure and work-related direct trauma (as reported on the Demographic Questionnaire, items 17a and 18a).

$H5_o$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 18b) is not a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure and work-related direct trauma exposure (as reported on the Demographic Questionnaire, items 17a and 18a).

$H5_A$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 18b) is a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically

controlling for exposure to non-work-related trauma exposure and work-related direct trauma (as reported on the Demographic Questionnaire, items 17a and 18a).

*H*6: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 18b) is not a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure and work-related direct trauma exposure (as reported on the Demographic Questionnaire, items 17a and 18a).

$H6_A$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 18b) is a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure and work-related direct trauma (as reported on the Demographic Questionnaire, items 17a and 18a).

RQ3: Among acute care mental health workers is vicarious trauma exposure at work (when measured as a dichotomous variable) associated with symptoms of burnout and PTSD?

$H7_o$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 18c) is not a predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, items 17a, 18a and 18b).

$H7_A$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 18c) is a predictor of

Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after statistically controlling for exposure to non-work-related trauma exposure and work-related direct and indirect trauma (as reported on the Demographic Questionnaire, items 17a, 18a and 18b).

$H8_o$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 18c) is not a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, items 17a, 18a and 18b).

$H8_A$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 18c) is a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure and work-related direct and indirect trauma (as reported on the Demographic Questionnaire, items 17a, 18a and 18b).

$H9_o$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 18c) is not a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure and work-related direct and indirect trauma (as reported on the Demographic Questionnaire, items 17a, 18a and 18b).

$H9_A$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 18c) is a predictor of

predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure and work-related direct and indirect trauma (as reported on the Demographic Questionnaire, items 17a, 18a and 18b)

RQ4**:** Among acute care mental health workers is direct trauma exposure at work (when measured as a quantitative variable) associated with symptoms of burnout and PTSD?

$H10_o$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 19a) is not a predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b)

$H10_A$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 19a) is a predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b).

$H11_o$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 19a) is not a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b)

$H11_A$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 19a) is a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b).

$H12_o$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 19a) is not a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b)

$H12_A$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 19a) is a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b).

RQ5: Among acute care mental health workers is indirect trauma exposure at work (when measured as a quantitative variable) associated with symptoms of burnout and PTSD?

$H13_o$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 19b) is not a predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after

statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b)

*H*13$_A$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 19b) is a predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b).

*H*14$_o$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 19b) is not a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b)

*H*14$_A$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 19b) is a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b).

*H*15$_o$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 19a) is not a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b)

$H15_A$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 19b) is a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b).

RQ6**:** Among acute care mental health workers is vicarious trauma exposure at work (when measured as a quantitative variable) associated with symptoms of burnout and PTSD?

$H16_o$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 19c) is not a predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b)

$H16_A$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 19c) isa predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b).

$H17_o$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 19c) is not a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically

controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b)

$H17_A$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 19c) is a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b).

$H18_o$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 19c) is not a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b)

$H18_A$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 18c) is a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17a).

To test the study hypotheses, multiple regression analyses will be performed to examine the influence of trauma exposure among AMHCW's on PTSD symptoms and on burnout. Multiple regression analysis can be used to test whether there is a linear relationship between an independent variable and a dependent variable, while controlling statistically for other variables that may also potentially influence the dependent variable.

This is accomplished by including the independent variable along with the control variables (also known as covariates) as predictor variables in the multiple regression model. In the results of the multiple regression analysis, if the independent variable is statistically significant, then this indicates that the independent variable is a statistically significant predictor of the dependent variable after controlling statistically for the influence of the covariates.

For RQ1 the independent variable is direct trauma (measured as a dichotomous variable) and the dependent variables are Emotional Exhaustion and Depersonalization scales of the Maslach Burnout Inventory and PTSD as measured by the PCL-5. RQ1 will be examined by testing hypotheses 1 through 3. For RQ2 the independent variable will be indirect trauma (measured as a dichotomous variable) examined by testing hypotheses 4 through 6. The dependent variables will be the MBI Emotional Exhaustion scale; the MBI Depersonalization scale and PTSD as measured by the PCL-5. For RQ3 the independent variable is vicarious trauma (measured as a dichotomous variable) examined by testing hypotheses 7 through 9. The dependent variables will be the MBI Emotional Exhaustion scale; the MBI Depersonalization scale and PTSD as measured by the PCL-5. For RQ4 the independent variable is direct trauma (measured as a quantitative variable) and the dependent variables are Emotional Exhaustion and Depersonalization scales of the Maslach Burnout Inventory and PTSD as measured by the PCL-5. RQ4 will be examined by testing hypotheses 10 through 12. For RQ5 the independent variable is indirect trauma (measured as a quantitative variable) and the dependent variables are Emotional Exhaustion and Depersonalization scales of the Maslach Burnout Inventory

and PTSD as measured by the PCL-5. RQ5 will be examined by testing hypotheses 13 through 15. For RQ6 the independent variable is vicarious trauma (measured as a quantitative variable) and the dependent variables are Emotional Exhaustion and Depersonalization scales of the Maslach Burnout Inventory and PTSD as measured by the PCL-5. RQ6 will be examined by testing hypotheses 16 through 18.

The main difference between RQ1, RQ2 and RQ3 as compared to RQ4, RQ5 and RQ6 is that RQ1-RQ3 will be investigated based on dichotomous measures of trauma exposure. RQ4, RQ5, and RQ6 will be investigated based on quantitative measures of trauma exposure using continuous measurement scales. Apart from the distinction between the dichotomous and quantitative measure of trauma exposure, the hypotheses that will be tested for these research questions are based on exactly parallel sets of independent and dependent variables. Therefore, the regression analyses will be structurally very similar for RQ1 compared to RQ2 and for RQ3 compared to RQ4.

In hypotheses 1 through 3 and 10 through 12the independent variable is exposure to work-related direct trauma and the control variable is exposure to non-work-related trauma exposure. Therefore, the regression model will include work-related direct trauma and non-work-related trauma exposure as predictor variables. The regression analyses will indicate whether exposure to direct trauma in the workplace is a significant predictor of burnout or PTSD symptoms, after statistically controlling for the influence of exposure to trauma in contexts other than as an acute mental health care worker.

In hypotheses 4 through 6 and 13 through 15 the independent variable is exposure to work-related indirect trauma. In framing these hypotheses, I presumed that work-

related direct trauma would most directly influence the onset of burnout and PTSD symptoms. Therefore, when examining the influence of indirect trauma, it is important to control statistically for exposure to direct trauma in the workplace and also for influence of exposure to trauma in contexts other than as an acute mental health care worker. Hence, for the regression analyses for these hypotheses, the predictor variables in the regression analyses will be work-related indirect trauma, work-related direct trauma, and non- work-related trauma.

In hypotheses 7 through 9 and 16 through 18 the independent variable is exposure to work-related vicarious trauma. When examining the influence of vicarious trauma, it is important to control statistically for exposure to direct and indirect trauma in the workplace and also for influence of exposure to trauma in contexts other than as an acute mental health care worker. Hence, for the regression analyses for these hypotheses, the predictor variables in the regression analyses will be work-related vicarious trauma, work-related indirect trauma, work-related direct trauma, and non- work-related trauma.

For each regression analysis, I will report the *R-squared* statistic, as a measure of the proportion of variance in the dependent variable explained by the independent variables, along with the *F* statistic and *p*-value for the overall fit of the regression model. For each independent variable, I will report the unstandardized and standardized regression coefficients, which will indicate the contribution of each independent variable while controlling for the influence of the others, along with the *p*-value for the significance of each independent variable. P-values less than 0.05 will be regarded as statistically significant.

Threats to Validity

Threats to external validity in this study will be lack of randomization in the sample selection, which limit the potential for this researcher to make generalizations about the population being surveyed for this study. A longitudinal research design was not used so measuring the impact of DT, IT and VT over a period of time was compromised but questions will be asked by the RPN Questionnaire (Stadnyk, 2011) to identify some trauma exposure effects as reported by the survey participants over a period of days, weeks or months. Threats to internal validity include the recognition that burnout and PTSD in the ACMHW's may also be influenced by other factors such as personal trauma history and frequency of trauma exposure. The participant's individual life stressors could potentially alter survey responses. The use of a survey design may also threaten internal validity as the participants will be limited to given responses without being able to ask for clarification. The use the MBI and the PCL-5 both reliable measures of the two result variables will improve the internal validity of the survey in addition to improving the chances of having valid conclusions based on the results of the survey. However, a survey design was the best tool to use for this study.

Ethical Procedures

This researcher will attain Walden University Institutional Review Board IRB approval (Appendix I) before gathering data. I followed the human subject guidelines for this study. APA ethical guidelines for treatment of human study subjects following the guiding principles of overall beneficence, respect of people and justice. (APA, 2010). The data gathering was conducted online and the surveys were conducted anonymously. The

participants were encouraged to take the study survey in a private area to further encourage privacy. The participants were required to provide only non-personally identifying information such as age, marital status, years at current job and type of profession. An informed consent were completed before taking the survey. Participants were informed that participation in the study will be anonymous and voluntary, and participation could be withdrawn at any time, without penalty or retaliation. Although the process of participating in this study involved minimal risk to the participant and was not anticipated to be beyond anything encountered in daily life. The participants were given a resource list in case of any emotional or mental disturbance as a result of taking the survey and there was a statement encouraging any participant to call their local emergency 24-hour line in case of crisis. This study was conducted in an ethical and humane manner and therefore encouraged very little to no-risk to study participants and hence there were no concerns beyond what had been accounted for in the stated procedures and methods that were used in this study.

In the unlikely event that a participant had become emotionally or physiologically triggered, this researcher is a licensed professional counselor and was available to answer any questions regarding contacting any support resources (Appendix J) needed by any participant as a result of taking the survey. In the event of a participants' withdrawal from being part of the study the goal for recruiting numbers was a minimum number of participants of 119 as indicated by the G* power calculator therefore the goal number of participants was one hundred-eighty to account for any withdrawals from any potential respondents (Weiss, 2011).

Data gathered from the survey was anonymous and was not a potential risk of violation of privacy by any study participants. The data gathered will be kept by this researcher once received from the Survey Monkey. The only people that had access to the survey data were this researcher and their committee. This data will be stored at my home in my personal computer with a personally created password. The data is password protected and saved on a removable hard drive. The hard drive is being kept in a secure lock box and will be kept for 5 years and then destroyed by erasing the electronic data storage device and then the external drive will be crushed and thrown away in an opaque, non-descript plastic bag. There were no identifiable conflicts of interest with conducting this study anonymously through a secure server with a computer survey format.

Summary

The purpose of this correlational study was to examine if there exists a relationship between independent variables (work-related DT, IT and VT) in ACCMHW's and dependent variables (burnout and PTSD). The population of interest for this study were ACMHW's who as part of their professional duties have contact with the acutely mentally ill and are at an elevated risk for trauma exposure. An invitation was accessed on Facebook groups Mental Health Professionals Network and the Mental Health Workers Vicarious Trauma and Self-Care, Linkedin and Walden Pool of study participants pool to participate in the current study with information outlining specific ethical guidelines such as the purpose of the study, procedures and expected duration including the criteria required for involvement. The final research report removed any identifiable site data to prevent and remove any possible deduction of participant identity

no matter how remote the possibility as an added measure of security added to the privacy and anonymity precautions being undertaken for this study. Data collection was be through a cross-sectional survey design via a password protected internet-based system through Survey Monkey. All participants encountered an informed consent, demographic questionnaire, the MBI (Maslach and Jackson, 1993), PTSD Checklist and a debriefing statement that provided a statement encouraging participants experiencing adverse emotional reactions to contact their local 24 hour emergency hotline.

The quantitative approach was used to analyze the frequencies of demographic characteristics of the participants that responded to the survey. A power analysis for multiple regression was conducted as well as reliability measures. There was a multiple regression conducted for the defined criterion variables. Chapter 4 will include the following: introduction, data collection, results, summary.

Chapter 4: Results

The purpose of this quantitative, correlational study was to examine if there exists a relationship between independent variables (work-related direct trauma, indirect trauma, and vicarious trauma exposure) and the dependent variables (work-related depersonalization and emotional exhaustion within burnout and PTSD) in ACMHWs (acute care mental health workers). Chapter 4 includes an introduction, data collection, results and summary.

To test the study hypotheses, multiple regression analyses were performed to examine the influence of trauma exposure among AMHCW's on PTSD symptoms and on burnout. Multiple regression analysis was used to test whether there was a linear relationship between an independent variable and a dependent variable, while controlling statistically for other variables that may also potentially influence the dependent variable. This was accomplished by including the independent variable along with the control variables (also known as covariates) as predictor variables in the multiple regression model.

There were several obstacles to being able to gather the minimum number of 119 participants to achieve statistical power. There were also unforeseen complications with the data gathering service not being able to present the survey to their pool of participants as the number of questions of my survey were beyond their 50-question limit. Time was also a limitation in gathering a substantial enough data to be able to generate meaningful data. In the results of the multiple regression analysis, if the independent variable is

statistically significant this would indicate that the independent variable is a statistically significant predictor of the dependent variable after controlling statistically for the influence of the covariates, in consideration of the limited data set the conclusions would not be considered a reliable source from which to study and infer about possible relationships between variables.

Research Questions and Hypotheses

RQ1: Among acute care mental health workers is direct trauma exposure at work (when measured as a dichotomous variable) associated with symptoms of burnout and PTSD?

$H1_o$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 18a) is not a predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17)

$H1_A$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 18a) is a predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire17a).

$H2_o$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 18a) is not a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically

controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17a)

*H*1$_A$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 18a) is a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17a).

*H*3$_o$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 18a) is not a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17a)

*H*3$_A$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 18a) is a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17a).

RQ2: Among acute care mental health workers is indirect trauma exposure at work (when measured as a dichotomous variable) associated with symptoms of burnout and PTSD?

*H*4$_o$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 18b) is not a predictor of

Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after statistically controlling for exposure to non-work-related trauma exposure and work-related direct trauma exposure (as reported on the Demographic Questionnaire, items 17a and 18a).

*H*4$_A$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 18b) is a predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale) after statistically controlling for exposure to non-work-related trauma exposure and work-related direct trauma (as reported on the Demographic Questionnaire, items 17a and 18a).

*H*5$_o$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 18b) is not a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure and work-related direct trauma exposure (as reported on the Demographic Questionnaire, items 17a and 18a).

*H*5$_A$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 18b) is a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure and work-related direct trauma (as reported on the Demographic Questionnaire, items 17a and 18a).

*H*6$_o$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 18b) is not a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure

to non-work-related trauma exposure and work-related direct trauma exposure (as reported on the Demographic Questionnaire, items 17a and 18a).

*H*6$_A$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 18b) is a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure and work-related direct trauma (as reported on the Demographic Questionnaire, items 17a and 18a).

RQ3: Among acute care mental health workers is vicarious trauma exposure at work (when measured as a dichotomous variable) associated with symptoms of burnout and PTSD?

*H*7$_o$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 18c) is not a predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, items 17a, 18a and 18b).

*H*7$_A$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 18c) is a predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after statistically controlling for exposure to non-work-related trauma exposure and work-related direct and indirect trauma (as reported on the Demographic Questionnaire, items 17a, 18a and 18b).

$H8_o$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 18c) is not a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, items 17a, 18a and 18b).

$H8_A$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 18c) is a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure and work-related direct and indirect trauma (as reported on the Demographic Questionnaire, items 17a, 18a and 18b).

$H9_o$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 18c) is not a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure and work-related direct and indirect trauma (as reported on the Demographic Questionnaire, items 17a, 18a and 18b).

$H9_A$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 18c) is a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure and work-related direct and indirect trauma (as reported on the Demographic Questionnaire, items 17a, 18a and 18b)

RQ4: Among acute care mental health workers is direct trauma exposure at work (when measured as a quantitative variable) associated with symptoms of burnout and PTSD?

$H10_o$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 19a) is not a predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b)

$H10_A$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 19a) is a predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b).

$H11_o$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 19a) is not a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b)

$H11_A$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 19a) is a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically

controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b).

$H12_o$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 19a) is not a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b)

$H12_A$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 19a) is a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b).

RQ5: Among acute care mental health workers is indirect trauma exposure at work (when measured as a quantitative variable) associated with symptoms of burnout and PTSD?

$H13_o$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 19b) is not a predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b)

$H13_A$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 19b) is a predictor of

Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b).

$H14_o$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 19b) is not a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b)

$H14_A$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 19b) is a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b).

$H15_o$: Among acute care mental health workers, work-related direct trauma exposure (as reported on the Demographic Questionnaire, item 19a) is not a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b)

$H15_A$: Among acute care mental health workers, work-related indirect trauma exposure (as reported on the Demographic Questionnaire, item 19b) is a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure

to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b).

RQ6: Among acute care mental health workers is vicarious trauma exposure at work (when measured as a quantitative variable) associated with symptoms of burnout and PTSD?

$H16_o$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 19c) is not a predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b)

$H16_A$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 19c) isa predictor of Emotional Exhaustion (as measured by the MBI Emotional Exhaustion scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b).

$H17_o$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 19c) is not a predictor of Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b)

$H17_A$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 19c) is a predictor of

Depersonalization (as measured by the MBI Depersonalization scale), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b).

$H18_o$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 19c) is not a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17b)

$H18_A$: Among acute care mental health workers, work-related vicarious trauma exposure (as reported on the Demographic Questionnaire, item 18c) is a predictor of predictor of PTSD (as measured by the PCL-5), after statistically controlling for exposure to non-work-related trauma exposure (as reported on the Demographic Questionnaire, item 17a).

Data Collection

The data collection and recruitment lasted for 34 days. The response rate was 38% (N=8) of a total of 21 that accessed the survey through the Survey Monkey link. I used one single Survey Monkey link that was advertised on four internet groups; two Facebook groups, Mental Health Professionals Network and the Mental Health Workers Vicarious Trauma and self-care and on LinkedIn and Walden Participant Pool to recruit the participants after receiving approval from Walden University's IRB (#08-18-21-0278606). The differences noted between the data analysis plan after data collection and the initial data analysis plan were that I was not able to use the data gathering service

Survey Monkey due to question limits and I did not anticipate having to seek another data gathering service. Centiment was contacted as a backup data gathering service, However, time was limited and the survey would have needed several adjustments to make it admissible to Centiment and would have been a modified survey. The projected number to meet statistical power (N=119) was not met (N=8). Out of 21 participants, several left surveys incomplete, the nonrandom survey sample would not be limited to Texas only as was initially planned as the survey was based on trauma exposure and did not hinge upon state licensure differences for the professions that were targeted for the survey. It was also decided that directly surveying participants would be a better option than going through psychological clinical services employers, human resource departments at clinics, hospitals and first responder units as this could have had the inadvertent impact of negatively skewing participant responses because of the nature of confidentiality and employers knowing the nature of the survey could have impacted the work relationship of the worker and their employer. The respondents surveyed did closely reflect the population of interest I intended to survey as several of the respondents were mental health techs LPCs, LCSWs Nurses. The sampling was a nonprobability sample and could be vulnerable to sampling bias. Therapists, counselors, and an M.D. The majority of the responses were obtained the Survey Monkey link through two Facebook groups for mental health workers, LinkedIn and the Walden participant pool. People logged on to the single Survey Monkey the web link, and a total of 21 people attempted to complete the surveys. The online questionnaire was successfully completed by eight ACMHWs from across the United States, from August 28, 2021 to September 30, 2021. The target

sample size of 119 was not achieved. This survey remained open for data collection as there were problems with the initial data collection service used Survey Monkey Audience. Survey Monkey Audience has a 50-question limit to present the study survey to their participants. My study was beyond the Survey Monkey Audience question limit with 56 questions. The survey was initially a 64-question survey but was modified to fewer questions without altering or cutting out necessary questions on the demographic survey. The MBI/HSS/MP and the PCL-5 could not be adjusted due to their respective license agreement and evidence-based formats that would otherwise be rendered invalid. An alternate data gathering service, Centiment was approached. Centiment required that the survey be modified into a simpler binary format to meet the needs of their potential respondents. I was not able to reconfigure the survey within the limited time frame to consider running a second survey to gather more potential respondents.

Descriptive Characteristics

All of the data were reviewed to ensure each participant was qualified and the questionnaires were complete. I found that 21 people attempted to complete this survey; however, one was disqualified because they did not meet the qualifications; therefore, they were not included in the study. Eleven participants did not complete the questionnaires entirely and were not included in the data. The respondent age fell between 30 and 65 years of age and therefore did not represent the younger 18 to 29-year-old range that work with the fields of nursing, social work and the mental health tech and nurse's aide professions. The sample surveyed (N=8) did however indicate diversity however the small number of respondents (N=8) range of education level long-

term work experience and profession type that could be generalizable to a large population. In total there were 8 respondents included in the results of this study. However, only eight were eligible after data cleaning to be used for this study. The youngest participant was 30 years old and the oldest was 65. The mean age was 37.86. There participants were 75% female and 25 % male. The participants were 75% Caucasian, 12.5% Latino and 12.5% African American. 50% of the participants were married, 25% were single, 12.5% were co-habitating and 12.5% were divorced. Of the participants 75% of which were educated at the graduate level, 12.5% at the doctoral level and 12.5% were at the high school level of education. 87.5% of the participants were employed full-time, 12.5% were working PRN and 0% reported part-time employment status. Refer to frequencies and percentages nominal demographic Table 1.

Table 1
Frequencies and Percentages of Nominal Demographic Data (N=8)

Variable	Average	Percent	Frequency
Age	37.86		
Gender			
Male		25.0%	2
Female		75.0%	6
Marital status			
Married		50.0%	4
Divorced		12.5%	1
Cohabitating		12.5%	1
Single		25.0%	2
Employment status			
Full time		87.5%	7
Part time		0%	0
PRN		12.5%	1
Education			
High school		12.5%	1
Bachelor		0%	0
MA/MS		75.0%	6
MD		12.5%	1
Race			
Caucasian		75.0%	6
Latino		12.5%	1
African American		12.5%	1
Work facility			
Mental hospital		37.5%	3
Medical hospital		25.0%	2
Counseling center		25.0%	2
Mental health authority		12.5%	1
Locale			
Rural		62.5%	5
Urban		37.5%	3

Table 2

Demographic Characteristics of Trauma Exposure in ACMHWs (N=8)

Variable	Percent	Frequency
Non-work-related exposure to trauma		
	25.0%	2
Work related exposure		
Experienced	37.5%	3
Witnessed	25.0%	2
Heard	12.5%	1
Exposure within the last month		
Experienced	25.0%	2
Witnessed	25.0%	2
Heard	62.5%	6

I used SPSSv27 for the necessary calculations and statistical analysis of the gathered data. Aggregation of data was provided by Survey Monkey including collection of data and summary analysis via SPSSv27. A correlational model was used to determine if there was a relationship between DT, IT and VT and work-related burnout and PTSD. A multiple regression analysis was used to test the hypotheses. Prior to regression analysis the data set was examined to determine if all assumptions are met, as explained below.

Data were inspected and cleaned as follows. For the independent variables regarding trauma exposure, it was assumed that “don’t know” responses indicate that the respondent did not substantially experience trauma of the type asked about. Therefore,

these responses were recoded as "No" responses (i.e., that the type of trauma exposure did not occur. For all variables, the maximum and minimum values were examined to make sure that no extreme data values exceed physically possible or theoretically plausible limits. Any data value that is more than 3.0 standard deviations from the mean of the variable was considered an outlier (Stevens, 1999), and was subsequently excluded from the main statistical analyses for the study research questions. All cases with missing values or outliers were excluded from the main analyses. For multiple linear regression, several statistical assumptions must be made about the data: (a) there is a linear relationship between each predictor variable and the dependent variable, (b) the residual errors from the regression are approximately normally distributed with no strong outliers; (c) the variance of the residuals is roughly constant for all values of the predictor variables (lack of heteroscedasticity); (d) the predictor variables are not strongly correlated (lack of multicollinearity); and (e) there are not strong outliers (influential data points) that could distort the estimated slope of the relationship between the independent variable and the dependent variable. These assumptions were tested by (a) examining scatter plots for the relationship between each predictor variable and the dependent variable; (b) examining histograms, skewness and kurtosis statistics, and Q-Q plots for the residuals; (c) examining scatter plots of the residuals versus the predicted values from each regression analysis; (d) examining the VIF (variance inflation factor) statistics from the regression analyses; and (e) examining Cook's distance and standardized residuals as diagnostic indicators from each regression analysis. Cases in which Cook's distance exceeds 1.0 or the standardized residuals exceed 3.0 in absolute value will be regarded as

outliers and deleted from the analyses. If scatter plots are not linear, or the assumptions regarding a normal distribution is violated, then an appropriate data transformation (such as taking logarithms) were applied.

Demographic variables (other than those that assess trauma exposure) will not be used as covariates in the regression analyses. Characteristics of the study sample will be presented using descriptive statistics for the demographic variables, as well the independent and dependent variables of the study. For each of the categorical variables, summary statistics will be reported in terms of percentages and frequency counts for each level of the variable. For the continuous variables (including PCL-5 scores, scores on the MBI scales, and scores for frequency of trauma exposure) means and standard deviations will be reported.

In view of the number of hypotheses that were examined, the level of type 1 error was controlled for each research question by setting the family-wise alpha level for each research question at .05. Since there are three null hypotheses under each research question, a Bonferroni correction was applied to the significance (alpha) level for each hypothesis, by setting the alpha level for each regression analysis at .05 divided by 3, or .017. with a significance level (alpha) set at .05. Multiple linear regression was used to investigate the research questions for the study and to test the hypothesis for each research question, as follows.

Analyses and Correlations

I used the MBI and the PCL-5 because they are well documented valid and reliable instruments across a broad population. A demographic survey was developed to

specifically identify types of trauma exposure and the demographic survey was taken before answering the MBI for burnout and PTSD checklist for PTSD. The Demographic survey also has a definition of trauma and type of exposure DT, IT and VT clarifying type of trauma exposure.

Outcome Variable Correlations

There was a positive correlation between the two variables MBI/EE and PCL/PTSD with a Cronbach's Alpha= .912. Two lesser correlations occurred between variables MBI/DP and MBI/EE = .257. The lower Cronbach's Alpha could result from poor relatedness between questions or too few questions.

Table 3

Intercorrelations for MBIEE, MBIDP, and PCL/PTSD Scores with Cronbach Alpha Scores

Variable	1	2	3
1.MBI/EE	(1.000)	.257	.912
2. MBI/DP	.257	(1.000)	.209
3. PCL/PTSD	.912	.209	(1.000)

Note. *N* = 8 *Numbers in parentheses in the diagonal are Cronbach Alpha Scores.*

Results

Evaluation of Research Question 1

The first research question for this study was: Among acute care mental health workers is direct trauma exposure at work (when measured as a dichotomous variable) associated with symptoms of burnout and PTSD?

The first three associated null hypotheses stated that work-related direct trauma exposure (DT) would not predict MBI/EE when controlling for non-work-related trauma exposure. All three null hypotheses were tested by performing multiple regression analyses for the predictor variable direct trauma while controlling for non-work related to determine if there exists a statistically significant relationship with emotional exhaustion and depersonalization and PTSD.

Table 4 displays the results of multiple regression analysis to test the first null hypothesis, regarding effects of work-related direct trauma exposure on emotional exhaustion, when controlling for non-work-related trauma. The null hypothesis was not rejected because when controlling for non-work-related trauma exposure, direct trauma exposure was not a significant predictor of MBI/EE ($p=.357$). (Refer to table 4). The semi-partial correlation coefficient for direct trauma exposure in the regression model was -.581. The square of this number is 0.337, which indicates that direct trauma exposure accounted for 33.7% of the variance in emotional exhaustion, after controlling for the influence of non-work-related trauma exposure.

Hypothesis 1

Table 4

Results of Multiple Regression Analysis for Work-related Direct Trauma Exposure as a Dichotomous Predictor of MBI/EE in ACMHWs

	Unstandardized coefficients		Standardized coefficients				
	B	Std. Error	Beta	Semi-partial correlation	P-value		
Predictor Variable					*t*		VIF
Non-work-related trauma	6.125	10.57	.224	.211	.579	.587	1.125
Work-related direct trauma exposure	-16.875	10.57	-.616	-.581	-1.597	.171	1.125
Constant	38.89	5.285			7.344	≤.001	

Note: F (2,5) =1.276 P=.357 R Square=.338 Adjusted R Square=.073 N=8

Table 4 displays the results of multiple regression analysis to test the first null hypothesis regarding effects of work-related direct trauma exposure on emotional exhaustion, when controlling for non-work-related trauma the null hypothesis was not rejected because when controlling for non-work-related trauma exposure, direct trauma exposure was not a significant predictor of MBI/EE (p=.357; Refer to Table4). The semi-partial correlation coefficient for direct trauma exposure in the regression model was -0.581. The square of the semi-partial correlation coefficient for this model is .337, which indicates that direct trauma exposure accounted for 33.7% of the variance in emotional

exhaustion, after controlling for the influence of non-work-related trauma exposure. Thus, the null hypothesis was not rejected indicating that when controlling for non-work-related trauma exposure, direct trauma exposure was not a predictor of MBI/EE.

Hypothesis 2:

Table 5

Results of Multiple Regression Analysis for Work-related Direct trauma as a Dichotomous Predictor of MBI/DP in ACMHWs

	Unstandardized coefficients		Standardized coefficients				
Predictor variable	B	Std. Error	Beta	Semi-partial correlation	*t*	P-value	VIF
Non-work-related trauma	5.25	4.537	.470	.443	1.157	.300	1.125
Work-related direct trauma exposure	-4.75	4.537	-.425	-.401	1.047	.343	1.125
Constant	10.625	2.269			4.683	≤.005	

Note: F (2,5) =.915 P=.458 R Square =.108 Adjusted R Square =.025 N=8

Table 5 displays the results of multiple regression analysis to test the first null hypothesis, regarding effects of work-related direct trauma exposure on depersonalization, when controlling for non-work-related trauma. The null hypothesis was not rejected when controlling for non-work-related trauma exposure, direct trauma exposure was not a significant predictor of MBI/DP (p=.458). (Refer to table 5). The semi-partial correlation coefficient for direct trauma exposure in the regression model was -0.401. The square for the semi-partial coefficient is .1608, which indicates that

direct trauma exposure accounted for 16.08% of the variance in depersonalization, after controlling for the influence of non-work-related trauma exposure.

Model 2 as displayed in Table 5, the correlation coefficient to test the second null hypothesis, work-related direct trauma exposure when controlling for non-work-related trauma was not related to MBI/DP. F (2, 5) =.915 p = .458, R Square=.108, Adjusted R Square= .025. Model 2 consisted of one independent variables (work-related direct trauma exposure) and one control variable (non-work-related trauma). The square of the semi-partial correlation associated with this regression model shows that this model accounted for 16.08% of the variation in PCL/PTSD, which means that 83.92% of the variation cannot be explained by the independent variables alone (Refer to table 5). Thus, the null hypothesis was not rejected indicating that when controlling for non-work-related trauma exposure, direct trauma exposure was not a predictor of MBI/DP.

Hypothesis 3:

Table 6

Results of Multiple Regression Analysis for Work-related Direct trauma as a Dichotomous Predictor of PCL/PTSD in ACMHWs

	Unstandardized coefficients		Standardized coefficients				
Predictor variable	B	Std. Error	Beta	Semi-partial correlation	*t*	P-value	VIF
Non-work-related trauma	-19.815	10.921	-.639	-.603	-1.814	.144	1.125
Work-related direct trauma	-7.098	10.921	-.229	-.216	-.650	.551	1.125
Constant	53.014	5.423			9.775	≤.001	

Note: F (2,4) =2.532 P=.195 R Square=.512 Adjusted R Square=.338 N=8

Table 6 displays the results of multiple regression analysis to test the first null hypothesis, regarding effects of work-related direct trauma exposure on PCL/PTSD, when controlling for non-work-related trauma The null hypothesis was not rejected when controlling for non-work-related trauma exposure, direct trauma exposure was not a significant predictor of PCL/PTSD (p=.559). (Refer to table H6). The semi-partial correlation coefficient for direct trauma exposure in the regression model was -.216. The square of the semi-partial correlation is .0466, which indicates that direct trauma exposure accounted for 4.6% of the variance in PCL/PTSD, after controlling for the influence of non-work-related trauma exposure. Thus, the null hypothesis was not rejected indicating that when controlling for non-work-related trauma exposure, direct trauma exposure was not a predictor of PCL/PTSD. Hypothesis 1 through 3 used a 2-model linear regression analysis to individually evaluate the prediction of emotional exhaustion, depersonalization and PTSD using work-related DT as predictor a variable while controlling for non-work-related trauma exposure. There was linearity as assessed by partial regression plots and a plot of standardized residuals versus unstandardized residuals. There was homoscedasticity, as assessed by visual inspection of a plot of standardized residuals versus unstandardized residuals. There was no evidence of multicollinearity as assessed by tolerance values greater than 0.1. There were no standardized deleted residuals greater than $\pm$3 standard deviations. Cooks distance above one. The assumption of normality could not be assessed using as Q-Q plot as the sample size was too small.

Evaluation of Research Question 2:

The second research question for this study was: among acute care mental health workers is indirect trauma exposure at work (when measured as a dichotomous variable) associated with symptoms of burnout and PTSD.

Hypothesis 4:

Table 7

Results of Multiple Regression Analysis of Work-related Indirect trauma as a Dichotomous Predictor Variable of MBI/EE in ACMHWs

	Unstandardized coefficients		Standardized coefficients				
Predictor variable	B	Std. Error	Beta	Semi-partial correlation	*t*	P-value	VIF
Non-work-related trauma	8.100	11.548	.296	.270	.701	.522	1.200
Work-related direct trauma	-14.900	11.548	-.544	-.497	-1.290	.266	1.200
Work-related indirect trauma	-7.900	11.548	-.288	-.263	-6.84	.531	1.200
Constant	39.800	5.774			6.893	≤.002	

Note: F (3,4) =.916 P=.509 R Square=.407 Adjusted R Square=.037 N=8

Table 7 displays the results of multiple regression analysis to test the fourth null hypothesis regarding effects of work-related indirect trauma exposure on emotional exhaustion, when controlling for non-work-related trauma and direct trauma. The null hypothesis was not rejected when controlling for non-work-related trauma exposure and

direct trauma exposure and therefore indirect trauma exposure was not a significant predictor of with MBI/EE (p=.509). (Refer to table 7). The semi-partial correlation coefficient for indirect trauma exposure in the regression model was –0.263. The square for the semi-partial correlation is 0.069 which indicates that indirect trauma exposure accounted for 6.9% of the variance in emotional exhaustion, after controlling for the influence of non-work-related trauma exposure and direct trauma exposure.

Hypothesis 5:

Table 8

Results of Multiple Regression Analysis of Indirect trauma as a Dichotomous Predictor Variable of MBI/DP in ACMHWs

	Unstandardized coefficients		Standardized coefficients				
Predictor variable	B	Std. Error	Beta	Semi-partial correlation	*t*	P-value	VIF
Non-work-related trauma	4.200	4.800	.376	.343	.875	.431	1.200
Work-related direct trauma	-5.800	4.800	-.519	-.474	-1.208	.293	1.200
Work-related indirect trauma	4.200	4.800	.376	.343	.875	.431	1.200
Constant	10.100	2.4			4.208	≤.014	

Note: F (3,4) =.837 P=.540 R Square=.386 Adjusted R Square=.075 N=8

Table 8 displays the results of multiple regression analysis to test the first null hypothesis regarding effects of work-related indirect trauma exposure on depersonalization, when controlling for non-work-related trauma and direct trauma exposure. The null hypothesis was not rejected when controlling for non-work-related trauma exposure, direct trauma exposure was not a significant predictor of MBI/DP (p= .540). (Refer to table 8). The

semi-partial correlation coefficient for direct trauma exposure in the regression model was 0.343. The adjusted R square for this model is .117 which indicates that indirect trauma exposure accounted for 11.7% of the variance in MBI/DP, after controlling for the influence of non-work-related trauma exposure and direct trauma exposure.

Hypothesis 6:

Table 9

Results of Multiple Regression Analysis of Work-related indirect trauma as a Dichotomous Predictor Variable of PCL/PTSD in ACMHWs

	Unstandardized coefficients		Standardized coefficients				
Predictor variables	B	Std. Error	Beta	Semi-partial correlation	*t*	P-value	VIF
Non-work-related trauma	4.200	4.800	.376	.568	.875	.431	1.200
Work-related direct trauma	-5.800	4.800	-.519	-.193	-1.208	.293	1.200
Work-related indirect trauma	4.200	4.800	.376	.063	.875	.431	1.200
Constant	10.100	2.4			4.208	≤.014	

Note: F (3,3) =1.286 P=.420 R Square = .563 Adjusted R Square=.125 N=8

Table 1 displays the results of multiple regression analysis to test the first null hypothesis regarding effects of work-related indirect trauma exposure on PTSD, when controlling for non-work-related trauma and direct trauma exposure. The null hypothesis was not rejected when controlling for non-work-related trauma exposure, therefore direct trauma exposure was not a significant predictor of PCL/PTSD (p=.420). (Refer to table 9). The semi-partial correlation coefficient for direct trauma exposure in the regression model was.063. The square of the semi-partial correlation is.0039 which indicates that

direct trauma exposure accounted for 0.4% of the variance in PCL/PTSD, after controlling for the influence of non-work-related trauma exposure and direct trauma exposure.

Hypothesis 4, 5 and 6 used a 3-model linear regression analysis to individually evaluate the prediction of emotional exhaustion, depersonalization and PTSD using work-related DT. IT as predictor variables while controlling for non-work-related trauma exposure. There was linearity as assessed by partial regression plots and a plot of standardized residuals versus unstandardized residuals. There was homoscedasticity, as assessed by visual inspection of a plot of standardized residuals versus unstandardized residuals. There was no evidence of multicollinearity as assessed by tolerance values greater than 0.1. There were no standardized deleted residuals greater than +_3 standard deviations. Cooks distance above one. The assumption of normality could not be assessed using as Q-Q plot as the sample size was too small**.**

Evaluation of Research Question 3:

The third research question for this study was: Among acute care mental health workers is vicarious trauma exposure at work (when measured as a dichotomous variable) associated with symptoms of burnout and PTSD?

Hypothesis 7:

Table 10

Result of Multiple Regression Analysis of Vicarious Trauma as a Dichotomous Predictor Variable of MBI/EE in ACMHWs

	Unstandardized coefficients	Standardized coefficients

Predictor variables	B	Std. Error	Beta	Semi-partial correlation	*t*	P-value	VIF
Non-work-related trauma	15.850	12.219	.579	.461	.579	.285	1.575
Work-related direct trauma	-22.650	12.219	-.827	-.659	-.827	.161	1.575
Work-related indirect trauma	-15.650	12.219	-.571	-.455	-.571	.290	1.575
Work-related vicarious trauma	15.500	11.924	.633	.600	.633	.284	1.575
Constant	32.05	7.999			4.007	≤.028	

Note: F (4,3) =1.228 P=.451 R Square=.621 Adjusted R Square=.115 N=8

Table 10 displays the results of multiple regression analysis to test the first null hypothesis regarding effects of work-related vicarious trauma exposure on emotional exhaustion, when controlling for non-work-related trauma, direct trauma exposure and indirect trauma exposure. The null hypothesis was not rejected when controlling for non-work-related trauma exposure direct trauma exposure and indirect trauma exposure therefore vicarious trauma exposure was not a significant predictor of MBI/EE (p=.451). (Refer to table 10). The semi-partial correlation coefficient for direct trauma exposure in the regression model was -.600. The square of the semi-partial correlation for this model is.36 which indicates that vicarious trauma exposure accounted for 36.0% of the variance in emotional exhaustion, after controlling for the influence of non-work-related trauma exposure, direct trauma exposure and indirect trauma exposure.

Hypothesis 8:

Table 11

Results of Multiple Regression Analysis of Vicarious Trauma as a Dichotomous Predictor Variable of MBI/DP in ACMHWs

	Unstandardized coefficients	Standardized coefficients

Predictor variable	B	Std. Error	Beta	Semi-partial correlation	*t*	P-value	VIF
Non-work-related trauma	3.450	6.287	.309	.246	.549	.621	1.575
Work-related trauma	-5.050	6.287	-.451	-.360	.803	.481	1.575
Work-related indirect trauma	4.950	6.287	.443	.353	.787	.489	1.575
Work-related vicarious trauma	-1.500	6.136	-.150	-.110	-2.44	.823	1.875
Constant	10.850	4.116			2.636	≤.078	

Note: F (4,3) =.495 P=.746 R Square=.398 Adjusted R Square=.406 N=8

Table 11 displays the results of multiple regression analysis to test the first null hypothesis regarding effects of work-related vicarious trauma exposure on depersonalization, when controlling for non-work-related trauma, direct trauma and indirect trauma. The null hypothesis was not rejected when controlling for non-work-related trauma exposure, direct trauma exposure and indirect trauma exposure therefore vicarious trauma exposure was not a significant predictor of MBI/DP (p=.746). (Refer to table 11). The semi-partial correlation coefficient for vicarious trauma exposure in the regression model was -0.110. The square of the semi-partial correlation is.0121which indicates that vicarious trauma exposure accounted for 1.21% of the variance in depersonalization, after controlling for the influence of non-work-related trauma exposure, direct trauma exposure and indirect trauma exposure.

Hypothesis 9:

Table 12

Results of Multiple Regression Analysis of Vicarious Trauma as a Dichotomous Predictor Variable of PCL/PTSD in ACMHWs

	Unstandardized coefficients		Standardized coefficients				
Predictor variables	B	Std. Error	Beta	Semi-partial correlation	*t*	P-value	VIF
Non-work-related trauma	-10.032	12.301	-.324	-.258	-.816	.500	1.575
Work-related direct trauma	-15.813	12.301	-.510	-.406	-1.286	.327	1.575
Work-related indirect trauma	-11.386	12.301	-.367	-.293	-.926	.452	1.575
Work-related vicarious trauma	18.499	12.004	.667	.487	1.541	.263	1.875
Constant	44.032	8.030			5.483	≤.032	

Note: F (4,2) =2.000 P=.360 R Square=.800 Adjusted R Square=.400 N=8

Table 12 displays the results of multiple regression analysis to test the first null hypothesis regarding effects of work-related vicarious trauma exposure on PTSD, when controlling for non-work-related trauma, direct trauma exposure and indirect trauma exposure. The null hypothesis was not rejected when controlling for non-work-related trauma exposure, direct trauma exposure and indirect trauma exposure therefore vicarious trauma exposure was not a significant predictor of PCL/PTSD (p=.360). (Refer to table 12). The semi-partial correlation coefficient for direct trauma exposure in the regression model was 0.487. The square of the semi-partial correlation is 0.237, which indicates that vicarious trauma exposure accounted for 23.7% of the variance in PTSD, after controlling for the influence of non-work-related trauma exposure, direct trauma exposure and indirect trauma exposure.

Hypothesis 7, 8 and 9 used a 4-model linear regression analysis to individually evaluate the prediction of emotional exhaustion, depersonalization and PTSD using work-related DT. IT and VT as predictor variables while controlling for non-work-related trauma exposure. There was linearity as assessed by partial regression plots and a plot of standardized residuals versus unstandardized residuals. There was homoscedasticity, as assessed by visual inspection of a plot of standardized residuals versus unstandardized residuals. There was no evidence of multicollinearity as assessed by tolerance values greater than 0.1. There were no standardized deleted residuals greater than +_3 standard deviations. Cooks distance above one. The assumption of normality could not be assessed using as Q-Q plot as the sample size was too small.

Evaluation of Research Question 4:

The fourth research question for this study was: Among acute care mental health workers is direct trauma exposure at work (when measured as a quantitative variable) associated with symptoms of burnout and PTSD?

Hypothesis 10:

Table 13

Results of Multiple Regression Analysis of Work-related Direct Trauma as a Quantitative Predictor Variable of MBI/EE in ACMHWs

	Unstandardized coefficients		Standardized coefficients				
Predictor variables	B	Std. Error	Beta	Semi-partial correlation	*t*	P-value	VIF
Work-related direct trauma	-6.220	7.067	-.365	-.077	-.880	.419	1.000
Non-work-related trauma	-4.37	2.356	.077	-.365	-.185	.860	1.003

Constant	39.823	9.124		4.365	≤.007	

Note: F (2,5) =.414 P=.681 R Square=.142 Adjusted R Square=.201 N=8

Table 13 displays the results of multiple regression analysis to test the first null hypothesis regarding effects of work-related direct trauma exposure on emotional exhaustion, when controlling for non-work-related trauma. The null hypothesis was not rejected because when controlling for non-work-related trauma exposure, direct trauma exposure was not significantly correlated with MBI/EE (p=.681). (Refer to table 13). The semi-partial correlation coefficient for direct trauma exposure in the regression model was -0.077. The square of the semi-partial correlation is 0.0059, which indicates that direct trauma exposure measured quantitatively accounted for 0.6% of the variance in emotional exhaustion, after controlling for the influence of non-work-related trauma exposure.

Hypothesis 11:

Table 14

Results of Multiple Regression Analysis of Work-related Direct Trauma as a Quantitative Predictor Variable of MBI/DP in ACMHWs

	Unstandardized coefficients		Standardized coefficients				
Predictor Variables	B	Std. Error	Beta	Semi-partial correlation	*t*	P-value	VIF
Work-related direct trauma	-1.461	2.755	-.210	-.405	-.530	.619	1.003
Non-work-related trauma	.942	.918	-.406	-.210	-1.025	.352	1.003
Constant	14.240	3.556			4.004	.010	

Note: F (2,5) =.698 P=.540 R Square=.218 Adjusted R Square=.095 N=8

Table 14 displays the results of multiple regression analysis to test the first null hypothesis regarding effects of work-related direct trauma exposure on depersonalization, when controlling for non-work-related trauma. The null hypothesis was not rejected when controlling for non-work-related trauma exposure therefore direct trauma exposure was not a significant predictor of MBI/DP (p=.540). (Refer to table 14). The semi-partial correlation coefficient for direct trauma exposure in the regression model was -0.405. The square of the semi-partial correlation is 0.1640, which indicates that work-related direct trauma exposure when measured quantitatively accounted for.16.4% of the variance in depersonalization, after controlling for the influence of non-work-related direct trauma exposure.

Hypothesis 12:

Table 15

Results of Multiple Regression Analysis of Work-related Direct Trauma as a Quantitative Predictor Variable of PCL/PTSD in ACMHWs

	Unstandardized coefficients		Standardized coefficients				
Predictor variables	B	Std. Error	Beta	Semi-partial correlation	*t*	P-value	VIF
Work- related direct trauma	-3.370	8.663	-.185	-.285	-.390	.716	1.006
Non-work-related trauma	1.874	3.417	.260	.220	.549	.612	1.006
Constant	41.036	14.449			2.840	≤. 047	

Note: F (2,4) =.244 P=.794 R Square=.109 Adjusted R Square=.337 N=8

Table 15 displays the results of multiple regression analysis to test the null hypothesis regarding effects of work-related direct trauma exposure on PTSD, when controlling for non-work-related trauma The null hypothesis was not rejected when

controlling for non-work-related trauma exposure therefore direct trauma exposure was not a significant predictor of PCL/PTSD (p=.794). (Refer to table 15). The semi-partial correlation coefficient for work-related direct trauma exposure within the last month in the regression model was -0.285. The square of the semi-partial correlation coefficient is .0812 which indicates that work-related direct trauma exposure within the last month accounted for 8.12% of the variance in PTSD, after controlling for the influence of non-work-related trauma exposure.

Hypothesis 10, 11 and 12 used a 2-model linear regression analysis to individually evaluate the prediction of emotional exhaustion, depersonalization and PTSD using work-related DT within the last month as predictor variables while controlling for non-work-related trauma exposure. There was linearity as assessed by partial regression plots and a plot of standardized residuals versus unstandardized residuals. There was homoscedasticity, as assessed by visual inspection of a plot of standardized residuals versus unstandardized residuals. There was no evidence of multicollinearity as assessed by tolerance values greater than 0.1. There were no standardized deleted residuals greater than +_3 standard deviations. Cooks distance above one. The assumption of normality could not be assessed using as Q-Q plot as the sample size was too small.

Evaluation of Research Question 5:

The fifth research question for this study was: Among acute care mental health workers is indirect trauma exposure at work (when measured as a quantitative variable) associated with symptoms of burnout and PTSD?

Hypothesis 13:

Table 16

Results of Multiple Regression Analysis of Work-related Indirect Trauma as a Quantitative Predictor Variable of MBI/EE in ACMHWs

	Unstandardized coefficients		Standardized coefficients				
Predictor variables	B	Std. Error	Beta	Semi-partial correlation	*t*	P-value	VIF
Work-related indirect trauma	-14.345	6.411	-.842	-.467	-2.238	.075	1.430
Non-work-related trauma	-3.171	2.137	-.558	-.704	-1.484	.198	1.430
Constant	51.143	9.050			5.681	≤.002	

Note: F (2,5) =2.551 P=.172 R Square=.505 Adjusted R Square=.307 N=8

Table 16 displays the results of multiple regression analysis to test the first null hypothesis regarding effects of work-related indirect trauma exposure on emotional exhaustion, when controlling for non-work-related trauma exposure and direct trauma exposure. The null hypothesis was not rejected when controlling for non-work-related trauma exposure and direct trauma exposure therefore indirect trauma exposure was not a significant predictor of MBI/EE (p=.172). (Refer to table 16). The semi-partial correlation coefficient for indirect trauma exposure in the regression model was -.467. The square of this number is.218, which indicates that indirect trauma exposure accounted for 21.8% of the variance in emotional exhaustion, after controlling for the influence of non-work-related trauma exposure and direct trauma exposure.

Hypothesis 14:

Table 17

Results of Multiple Regression Analysis of Work-related Indirect Trauma Exposure as a quantitative Predictor Variable of MBI/DP in ACMHWs

	Unstandardized coefficients		Standardized coefficients				
Predictor variables	B	Std. Error	Beta	Semi-partial correlation	*t*	P-value	VIF
Work-related indirect trauma	-1.262	3.333	-.181	-.432	-.379	.721	1.430
Non-work-related trauma	-1.198	1.111	-.517	-.152	-1.079	.330	1.430
Constant	14.968	4.705			3.181	≤.025	

Note: F (2,5) =.614 P=.577 R Square=.197 Adjusted R Square=-.124 N=8

Table 17 displays the results of multiple regression analysis to test the first null hypothesis regarding effects of work-related indirect trauma exposure on depersonalization, when controlling for non-work-related trauma. The null hypothesis was not rejected when controlling for non-work-related trauma exposure and direct trauma exposure therefore indirect trauma exposure was not a significant predictor of MBI/DP (p=.577). (Refer to table 17). The semi-partial correlation coefficient for indirect trauma exposure in the regression model was -0.432. The square of the correlation coefficient is 0.186, which indicates that direct trauma exposure accounted for 18.6% of the variance in depersonalization, after controlling for the influence of non-work-related trauma exposure and direct trauma exposure.

Hypothesis 15:

Table 18

Results of Multiple Regression Analysis of Work-related Indirect Trauma Exposure as a Quantitative Variable of PCL/PTSD in ACMHWs

	Unstandardized coefficients		Standardized coefficients				
Predictor variables	B	Std. Error	Beta	Semi-partial correlation	*t*	P-value	VIF
Work-related indirect trauma	-18.770	12.2.09	-.559	-.586	-1.537	.199	3.083
Non-work-related trauma	-4.130	4.832	-.572	-.326	-.855	.441	3.083
Constant	69.080	22..344			3.092	≤.037	

Note: F (2,4)=1.440 P=..338 R Square=..419 Adjusted R Square=.128 N=8

Table 18 displays the results of multiple regression analysis to test the first null hypothesis regarding effects of work-related indirect trauma exposure on PCL/PTSD, when controlling for non-work-related trauma and direct trauma exposure. The null hypothesis was not rejected when controlling for non-work-related trauma exposure and direct trauma exposure therefore indirect trauma exposure was not a significant predictor of MBI/EE (p=.338). (Refer to table 18). The semi-partial correlation coefficient for direct trauma exposure in the regression model was -.586. The square of the correlational coefficientis.3433, which indicates that direct trauma exposure accounted for 34.33% of the variance in PCL/PTSD, after controlling for the influence of non-work-related trauma exposure and direct trauma exposure.

Hypothesis 13, 14 and 15 used a 2-model linear regression analysis to individually evaluate the prediction of emotional exhaustion, depersonalization and PTSD using work-related IT within the last month as predictor variables while

controlling for non-work-related trauma exposure. There was linearity as assessed by partial regression plots and a plot of standardized residuals versus unstandardized residuals. There was homoscedasticity, as assessed by visual inspection of a plot of standardized residuals versus unstandardized residuals. There was no evidence of multicollinearity as assessed by tolerance values greater than 0.1. There were no standardized deleted residuals greater than $\pm$3 standard deviations. Cooks distance above one. The assumption of normality could not be assessed using as Q-Q plot as the sample size was too small.

Evaluation of Research Question 6:

The sixth research question for this study was: Among acute care mental health workers is vicarious trauma exposure at work (when measured as a quantitative variable) associated with symptoms of burnout and PTSD?

Hypothesis 16:

Table 19

Results of Multiple Regression Analysis of Vicarious Trauma as a Quantitative Predictor Variable of MBI/EE in ACMHWs

	Unstandardized coefficients		Standardized coefficients				
Predictor variables	B	Std. Error	Beta	Semi-partial correlation	*t*	P-value	VIF
Work-related vicarious trauma	-1.676	.641	-.891	-.757	-2.616	.047	1.387
Non-work-related trauma	-3.222	1.935	-.567	-.482	-1.665	.157	1.387
Constant	52.270	8.279			6.313	≤.001	

Note: F (2,5) =3.477 P=.113 R Square=.582 Adjusted R Square=.414 N=8

Table 19 displays the results of multiple regression analysis to test the first null hypothesis regarding effects of work-related vicarious trauma exposure on emotional exhaustion, when controlling for non-work-related trauma, direct trauma exposure and indirect trauma exposure. The null hypothesis was not rejected when controlling for non-work-related trauma exposure, direct trauma exposure and indirect trauma exposure therefore vicarious trauma exposure was not a significant predictor of MBI/EE (p=.113). (Refer to table 19). The semi-partial correlation coefficient for vicarious trauma exposure in the regression model was -.757. The square for the correlational coefficientis.5730, which indicates that direct trauma exposure accounted for 57.3% of the variance in emotional exhaustion, after controlling for the influence of non-work-related trauma exposure, direct trauma exposure and indirect trauma exposure.

Hypothesis 17:

Table 20

Results of Multiple Regression Analysis of Work-related Vicarious Trauma as a Quantitative Variable of MBI/DP in ACMHWs

	Unstandardized coefficients		Standardized coefficients				
Predictor variables	B	Std. Error	Beta	Semi-partial correlation	*t*	P-value	VIF
Work-related vicarious trauma	-.452	.307	-.589	-.500	-1.472	.201	1.387
Non-work-related trauma	-1.689	.927	-.728	-.618	-1.822	.128	1.387
Constant	17.666	3.967			4.453	≤.007	

Note: F (2,5) =1.840 P=.252 R Square=.424 Adjusted R Square=.193 N=8

Table 20 displays the results of multiple regression analysis to test the first null hypothesis regarding effects of work-related vicarious trauma exposure on

depersonalization, when controlling for non-work-related trauma. The null hypothesis was not rejected when controlling for non-work-related trauma exposure direct trauma exposure and indirect trauma exposure therefore direct trauma exposure was not a significant predictor of MBI/DP (p=.252). (Refer to table 20). The semi-partial correlation coefficient for vicarious trauma exposure in the regression model was -0.500. The square for the correlational coefficientis.25 which indicates that vicarious trauma exposure accounted for 25.0% of the variance in depersonalization, after controlling for the influence of non-work-related trauma exposure, direct trauma exposure and indirect trauma exposure.

Hypothesis 18:

Table 21

Results of Multiple Regression Analysis of Work-related Vicarious Trauma as a Quantitative Variable of PCL/PTSD in ACMHWs

	Unstandardized coefficients		Standardized coefficients				
Predictor variables	B	Std. Error	Beta	Semi-partial correlation	*t*	P-value	VIF
Work-related vicarious trauma	-2.322	1.177	-.559	-.675	-1.973	-1.20	2.896
Non-work-related trauma	-4.737	4.205	-.656	-.386	-1.127	.323	2.896
Constant	72.823	19.709			3.695	≤.021	

Note: F (2,4) =2.266 P=.220 R Square=.531 Adjusted R Square=.297 N=8

Table 21 displays the results of multiple regression analysis to test the first null hypothesis regarding effects of work-related vicarious trauma exposure on PCL/PTSD, when controlling for non-work-related trauma. The null hypothesis was not rejected when controlling for non-work-related trauma exposure, direct trauma exposure and indirect trauma exposure therefore vicarious trauma exposure was not significant predictor of

MBI/EE (p=.220). (Refer to table 21). The semi-partial correlation coefficient for vicarious trauma exposure in the regression model was -.675. The square of the correlational coefficient is.4556 which indicates that vicarious trauma exposure accounted for 45.56% of the variance in PCL/PTSD, after controlling for the influence of non-work-related trauma exposure, direct trauma exposure and indirect trauma exposure.

Hypothesis 16, 17 and 18 used a 2-model linear regression analysis to individually evaluate the prediction of emotional exhaustion, depersonalization and PTSD using work-related VT within the last month as predictor variables while controlling for non-work-related trauma exposure. There was linearity as assessed by partial regression plots and a plot of standardized residuals versus unstandardized residuals. There was homoscedasticity, as assessed by visual inspection of a plot of standardized residuals versus unstandardized residuals. There was no evidence of multicollinearity as assessed by tolerance values greater than 0.1. There were no standardized deleted residuals greater than $\pm$3 standard deviations. Cooks distance above one. The assumption of normality could not be assessed using as Q-Q plot as the sample size was too small.

Summary

I found that there were no significant statistical differences in DT and IT and work-related burnout. I also found that there were no significant statistical differences between DT and IT and VT scores and burnout and PTSD. Further, I found VT within the last month to be a statistically significant predictor of emotional exhaustion but not PTSD in participants. A strong correlation was found between MBI/EE and PCL/PTSD

outcome variables. Chapter 5 will include an introduction, interpretation of the findings, limitations of the study, recommendations, implications, and conclusion

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this study was to determine if there exists a relationship between work related DT, IT, and VT and burnout and PTSD in ACMHWs. I used a quantitative correlational approach to investigate whether there exists a relationship between work-related direct exposure, indirect exposure and vicarious exposure to trauma and the subsequent reporting of work-related burnout and PTSD in ACMHW's within the length of their employment and within one month of taking this study survey. Chapter 5 contains the interpretation of the findings, limitations of the study, recommendations for future studies, implications, and summary.

Interpretation of the Findings

The study research questions were developed to examine if there exists a relationship between work-related DT, IT, and VT on ACMHWs and work-related burnout dimensions of burnout and work-related PTSD. Exposure to the different types of traumas was assessed using two sets of questions. In the first set of questions, trauma exposure was assessed over the entire period of employment; dichotomous variables were used to indicate whether or not participants had been exposed to each type of trauma. In the second set of questions, the types of work-related trauma exposure were examined within a timeframe of "within the last month" at work, and trauma exposure was indicated in terms of frequency of experience on a quantitative, continuous scale. These

questions yielded quantitative variables that indicated the level of exposure to direct, indirect, and vicarious trauma.

The predictor variables and outcome variables were also examined while controlling for nonwork-related trauma. The findings of previous scholars (Maslach, 1982; Van Minnen, 2000) found that repetitive vicarious exposure led to development of burnout and PTSD. Maslach (1982) found that there was a significant relationship between VT and EE a dimension of burnout but not with PTSD. Vicarious trauma is the type of trauma exposure that is most frequently experienced as VT occurs when traumatic events are recounted verbally. Ease of exposure could also imply potentially increased frequency or repetition of VT exposure that would fall within the realm of EMP theory (Foa& Kozak, 1986) that indicates repetition of adverse content or stressful events ultimately lead to a habituation of reactivity that resemble descriptions of PTSD symptoms

RQ1-RQ6

For RQ1 –RQ3 the independent variables were direct trauma, indirect trauma and vicarious trauma exposure (measured as a dichotomous variable) and the dependent variables are Emotional Exhaustion and Depersonalization scales of the Maslach Burnout Inventory and PTSD as measured by the PCL-5. For RQ4 –RQ6 the independent variables were direct trauma, indirect trauma and vicarious trauma exposure (measured as a quantitative variable) and the dependent variables are Emotional Exhaustion and Depersonalization scales of the Maslach Burnout Inventory and PTSD as measured by the PCL-5

RQ1

The semi-partial correlation for H1 indicated 33.75% of the variance of MBI/EE was accounted for by DT when measured as a dichotomous variable. The semi-partial correlation for H2 indicated 16.08% of the variance in MBI/DP was accounted for when measuring DT as a dichotomous variable. The semi-partial correlation for H3 indicated 33.8% of the variance in PCL/PTSD when measuring DT as a dichotomous variable.

RQ2

The semi-partial correlation for H4 indicated 52.6% of the variance of MBI/EE was accounted for by IT when measured as a dichotomous variable. The semi-partial correlation for H5 indicated 11.76% of the variance in MBI/DP was accounted for when measuring IT as a dichotomous variable. The semi-partial correlation for H6 indicated 12.5% of the variance in PCL/PTSD when measuring IT as a dichotomous variable.

RQ3

The semi-partial correlation for H7 indicated 11.5% of the variance of MBI/EE was accounted for by VT when measured as a dichotomous variable. The semi-partial correlation for H8 indicated 40.6% of the variance in MBI/DP was accounted for when measuring VT as a dichotomous variable. The semi-partial correlation for H9 indicated 40.0% of the variance in PCL/PTSD when measuring VT as a dichotomous variable.

RQ4

The semi-partial correlation for H10 indicated 20.0% of the variance of MBI/EE was accounted for by DT when measured as a quantitative variable. The semi-partial correlation for H11 indicated 9.5% of the variance in MBI/DP was accounted for when measuring DT as a quantitative variable. The semi-partial correlation for H12 indicated 31.5% of the variance in PCL/PTSD when measuring DT as a quantitative variable.

RQ5

The semi-partial correlation for H13 indicated 30.7% of the variance of MBI/EE was accounted for by IT when measured as a quantitative variable. The semi-partial correlation for H14 indicated 9.5% of the variance in MBI/DP was accounted for when measuring IT as a quantitative variable. The semi-partial correlation for H15 indicated 65.2% of the variance in PCL/PTSD when measuring IT as a quantitative variable.

RQ6

The semi-partial correlation for H16 indicated 57.3% of the variance of MBI/EE was accounted for by VT when measured as a quantitative variable. The semi-partial correlation for H17 indicated 0.25% of the variance in MBI/DP was accounted for when measuring VT as a quantitative variable. The semi-partial correlation for H18 indicated 45.56 % of the variance in PCL/PTSD when measuring VT as a quantitative variable.

Contrasting IV's as Dichotomous Versus Quantitative Variables

When measured as a dichotomous variable DT accounted for 33.75% of variance in MBI/EE. When measured quantitatively DT accounted for 20.0% of the variance in MBI/EE. When measured as a dichotomous variable DT accounted for 16.8% of variance in MBI/DP. When measured quantitatively DT accounted for 9.5% of variance in MBI/DP. When measured dichotomously DT accounted for 33.8% of the variance in PCL/PTSD. When measured quantitatively DT accounted for 31.5% of the variance in PCL/PTSD.

When measured as a dichotomous variable IT accounted for 52.6% of variance in MBI/EE. When measured quantitatively IT accounted for 30.7% of the variance in MBI/EE. When measured as a dichotomous variable IT accounted for 11.76% of variance

in MBI/DP. When measured quantitatively IT accounted for 9.5% of variance in MBI/DP. When measured dichotomously IT accounted for 12.5% of the variance in PCL/PTSD. When measured quantitatively IT accounted for 65.2% of the variance in PCL/PTSD.

When measured as a dichotomous variable VT accounted for 11.5% of variance in MBI/EE. When measured quantitatively VT accounted for 57.3% of the variance in MBI/EE. When measured as a dichotomous variable VT accounted for 40.6% of variance in MBI/DP. When measured quantitatively VT accounted for 0.25% of variance in MBI/DP. When measured dichotomously VT accounted for 40.0% of the variance in PCL/PTSD. When measured quantitatively VT accounted for 45.56% of the variance in PCL/PTSD.

This model for this study used the contrast of non-work-related trauma to control for outside influence from non-work-related trauma and also the component of time, exposure within the last month at work. This echoed the approach of the Overstreet et al. (2017) who found a contrast of reporting trauma exposure in a lifetime versus working in a job where one is at risk on a daily basis for exposure to various trauma types. The study variables measured dichotomously and quantitatively did not render significant findings and therefore did not support what May and Wisco (2016) concluded with their literature review, that both direct and indirect trauma exposure leads to PTSD. Moreover, they noted that indirect trauma resulted in lower levels of reported PTSD versus direct exposure.

By examining the differences between measuring the IVs dichotomously and quantitatively, it appears that when the trauma exposure variables were measured quantitatively, they accounted for a larger variance in the MBI emotional exhaustion scale and in PTSD symptoms as measured by the PCL. This pattern of results may reflect the fact that the quantitative measures of trauma exposure were assessed over the preceding month, whereas the dichotomous measures of trauma exposure were based on asking about participants' experiences over the entire period of their employment. The fact that burnout and PTSD symptoms appeared to be more strongly related to the quantitative measures of trauma exposure may reflect a stronger psychological impact of more recently experienced traumatic incidents.

Another area of consistency across the various analyses was that trauma exposure accounted for a much smaller percentage of variance on the MBI depersonalization scale compare to the other two dependent variables in this study. This pattern in the results was consistent across all three types of trauma exposure (direct, indirect, and vicarious), regardless of whether trauma exposure was assessed as a dichotomous or quantitative variable.

Emotional Processing Theory

EMP theory (Foa & Kozak, 1986) was used to inform and guide this study. Trauma exposure risks are higher in a mental health care setting and the probability of repeated exposure is higher with ACMHCWs due to the nature of the job and the probability of repeated exposures is higher due to working with the mentally ill and traumatized population in the role of care giver. The three types of traumas when

reported during the survey, involve a repetition and recall of feelings and events considered traumatic and therefore by default at some level a habituated response when recalling the traumatic event.

The findings of this study were not consistent with the work of previous scholars in that no statistically significant relationships were found between the independent variables (exposure to direct, indirect, and vicarious trauma) and the dependent variables (burnout and PTSD). The findings in this study did not support prior findings indicating exposure to varied job-related trauma can lead to burnout and PTSD (Figley, 1995; Maslach, 2003).

The lack of statistically significant findings of this study are likewise inconsistent with those of several previous researchers. According to Pearson's (2012) findings, unavoidable trauma exposure leads to the development of STS and PTSD. Vasquez (2017) found that mental health workers who were exposed to traumatized individuals as part of their job were more likely to develop burnout and PTSD. Stadnyk had found when surveying psychiatric nurses in Saskatchewan who experienced traumatic events in the workplace where nurses that were exposed to trauma were more likely to report a diagnosis of PTSD than nurses who did not experience traumatic events in the workplace (Stadnyk, 2011). The finding did not support prior findings indicating exposure to varied trauma can lead to PTSD (Figley, 1995).

However, the absence of statistically significant results in this study cannot be generalized to the larger population of mental health workers because of the small number of participants (N=8). With a larger sample size, statistically significant effects of

trauma exposure may be found in ACMHWs. Hence any inferences based on this study's findings must be considered cautiously in view of the small sample.

Due to limitations in the data set (*N*=8) and limited age range of the respondents, impacted what could have been reliably confirmed or disconfirmed. What the current literature espouses regarding work-related trauma exposure and reported burnout and PTSD.

This study was designed to examine exposure to work-related trauma while controlling for non-work-related trauma and defining the parameters of type of work-related trauma exposure to account for the varying types of exposure over the course of working in the mental health environment and within the last month in the current mental health work environment. I found a positive correlation between the two of the outcome variables MBI/EE and PCL/PTSD with a Cronbach's Alpha= .912. This could indicate a rise in emotional exhaustion occurs when PTSD is existent. Two lesser correlations occurred between variables MBI/DP and MBI/EE = .257. The lower Cronbach's Alpha could have been a result of poor survey item relation between questions or too few questions to determine if there were a positive correlation or an inverse correlation (Refer to Table 3).

Limitations of the Findings

Several limitations were identified after conducting this study. The first was the small sample size. Due to the limited number of participants (*N*=8) the trustworthiness of the findings is circumspect and cannot be generalized to the larger population of ACMHW's. Multiple social media sites were used in addition to the Walden Participant

Pool to recruit participants. The majority of the participants were obtained from Facebook. A total of 21 participants followed the link from the Facebook groups, Linkedin and Walden participant pool to participate in the study(*N*=8) at a 38 % response rate of which after data cleaning, qualified to be used as data for analysis.

The average age of respondents was 37.8 years of age and ranged from 30 to 65 years of age. There weren't any 18- to 29-year-olds to represent that age range in the mental health worker field. Professions like psychiatrists and MDs the age of entry may range from approximately age 30 and on upwards and therefore would be consistent with the study population. The narrow age range would limit the reliability of the data gathered if inferences were made and generalized to a larger population. Maturity could have been an influential factor in the way the participants answered the survey questions. This limited my ability to analyze ACMHW's to a narrower range of age than I expected but despite this limitation in respondents, the participants I had were diverse in race, years working in field, and type of professional training and education. However, with a larger sample, we might expect to obtain participants who are under the age of 30.

The surveys in this study were all self-report questionnaires; therefore, the participants' responses were out of my control. Even though the first 12 hypothesis regression models did not reach a level of significance their respective *p* values were indicative of a very low predictive value and therefore considered to have a low level of validity. However, the last six hypotheses showed a uniform trend of predictability that reached the ranges of 30% to 58.2% at the highest, indicating that only 41.8% variability was not accounted for by the independent variables.

With a large data set future research could possibly identify a relationship worth pursuing in examining varying types of work-related trauma exposure being examined in this study. Survey responses might have been impacted by temporal proximity to a prior trauma or traumatic events. Method of coping with traumatic memories and content could have influenced how the participant would respond to survey questions. The responses may have also influenced by beliefs of self-efficacy and mental illness and not wanting to identify as a victim. Over reporting and underreporting may have influenced responses due to self-bias and wanting to present in a positive light and not wanting to identify as a victim. Due to the limitations of limited response rate and narrowed working age range, the results of this study cannot be considered trustworthy and therefore cannot be generalized to the entire population of ACMHW's across the United States. Having a limited time to survey directly impacted how many respondents were surveyed.

Recommendations

Suggestion for future studies would be to use a mixed method approach to be able to capture some of the qualitative details that a quantitative approach would not allow but also could provide a more nuanced look at the effects of type of trauma exposure on burnout and PTSD. After examining the data, I concluded that despite the small number (N=8) participants in this study, the levels of variance throughout the data set may indicate a trend worth pursuing by replicating this study with a larger number of participants. A recommendation would be to replicate the research approach used in this study with a larger sample size that provides adequate statistical power.

I used the simplest definition of type of work-related trauma exposure to identify individually the influence DT, IT, and VT could have on work-related burnout and PTSD. DT is personally experienced, IT is simply seeing or witnessing trauma and VT is hearing traumatic content (Stadnyk, 2011). The weakness in a number of prior studies is the diffuse and overlapping definition of IT and the overlap in terms with VT (McCann & Pearlman, 1990; Zimering, 2006). The positive social change implications of this study were in providing a model of simple and clear definitions of trauma exposure to more effectively determine the influence of each individual trauma exposure type.

Other recommendations for further studies would be to look at younger workers in the mental health field including ages 18 to 30 up to the elder years approaching retirement to have a broader data set to determine if age and experience are involved in vulnerability to and development of burnout and PTSD. It is recommended to further research on how and why of type of trauma effects and how they correlate to age, gender, education and what type of profession within the mental health work field.

Implications

I found that the various types of traumas did not appear to be significant predictors of dimensions of burnout, emotional exhaustion and depersonalization and PTSD. However, the lack of statistical significance is not evidence of absence of a relationship between variables due to the small sample size.

Among the three dependent variables in this study, the MBI depersonalization scale was least associated with trauma exposure, as reflected by the percentage of variance in the dependent variable accounted for by the independent variable. This could

indicate that ACMHW's retain their ability to care about patients without experiencing depersonalization.

However, the level of variance encountered in the entire data set did provide evidence to support that there could be a significant influence between DT, IT and VT with MBI/EE and PCL/PTSD. This may have been accounted for by the small data set and the variance in the data sets were particularly pronounced with VT and EE and PTS when measured as a quantitative predictor variable which did not disconfirm the existing literature but did indicate to this researcher that the model used for this study distinctly defining types of traumas could provide very useful evidence about the influence of types of traumas on the development of burnout and PTSD. This may have been due to a small number of participants (N=8). This study did show moderate to high levels of influence on variability in dependent variables across all hypotheses when measuring DT, IT and VT quantitatively and dichotomously. The DT, IT, and VT were examined while controlling for non-work-related trauma exposure ever in their life, so the potential cumulative effects were controlled for as part of their examination as dichotomous predictor variables of burnout and PTSD. This assertion must be considered in light of the p values not being significant and not trustworthy with which to generalize to the larger population of ACMHWs but still indicates a relationship worth pursuing. The design of this study could potentially identify if DT, IT, and VT are predictors of burnout and PTSD in ACMHWs. VT when examined quantitatively showed the highest levels of variance and therefore influence on reported MBI/EE and PTSD from the three types of trauma exposure being examined. This may be accounted for by frequency of exposure

and also temporal recency to an event as the variables when measured quantitatively were also asked about work-related trauma exposure within the last month, The existing literature does support the assertion that trauma exposure does result in development of burnout and PTSD (Vasquez, 2017). The potential impact for positive social change can improve methods of identifying and training for prevention of burnout and PTSD and also for development of more timely methods of interventions to mitigate the onset and effects of burnout and PTSD. The early identification of eventual development of PTSD could also play a part in mitigating the long-term effects of burnout and PTSD by be preemptive and proactive in training of individuals to be more resilient to trauma exposure.

Summary

Even though this study did not succeed at generating evidence of a significant relationship with work-related DT, IT, and VT and emotional exhaustion, depersonalization, and PTSD. The model developed for this study could still possibly provide a viable method to examine if a relationship exists between the specifically defined variables of work-related DT, IV, and VT (Stadnyk, 2011) and emotional exhaustion, depersonalization and PTSD in ACMHWs. The age range of participants was middle age to elder ranges and maturity and experience could have influenced the results of this study. Trauma exposure can happen to anyone regardless of age when working in a profession with the acutely mentally ill and the professionals in that helper field are at higher risk for exposure. Even though what is considered traumatic can vary from individual to individual (Bedoya, 2020) effects of traumatic events can also have

lingering long-term effects lasting many years after the initial event is long over (Mcann & Pearlmann, 1990) that can lead to burnout and PTSD and can seriously impact health, self-efficacy and ability to work.

References

Aguglia, A., Belvederi-Murri, M., Conigliaro, C., Cipriani, N., Vaggi, M., Di Salvo, G., Maina, G., Cavone, V., Aguglia, E., Serafini, G., & Amore, M. (2020). Workplace violence and burnout among mental health workers. *Psychiatric Services*, *71*(3), 284–288. https://doi-org.ezp.waldenulibrary.org/10.1176/appi.ps.20190016

American Psychiatric Association. (1980), *Diagnostic and statistical manual of mental disorders* (3rd ed., text rev.). Washington, DC: Author.

American Psychiatric Association. (2000), *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: Author.

American Psychiatric Association. (2013), *Diagnostic and statistical manual of mental disorders* (5th ed., text rev.). Washington, DC: Author.

Baird, S., & Jenkins, S. R. (2003). Vicarious traumatization, secondary traumatic stress, and burnout in sexual assault and domestic violence agency staff. Violence and Victims, 18(1), 71-86. doi:10.1891/vivi.2003.18.1.71

Baird, K., &Kracen, A. C. (2006). Vicarious traumatization and secondary traumatic stress: A research synthesis. Counseling Psychology Quarterly, 19(2), 181-188. doi:10.1080/09515070600811899 Baron, R. M. & Kenny, D. A. (1986). The mod

Beatrice, C. A. (2021). A correlational study of organizational culture and burnout in mental health professionals [ProQuest Information & Learning]. In Dissertation Abstracts International: Section B: The Sciences and Engineering (Vol. 82, Issue

1–B).

Bedoya, E. Y., Ruíz, S., Córdoba, A., Rendón, G. D., Ruíz, G. I., & Gómez, G. D. students. Revista de Psicopatología y PsicologíaClínica, 25(1), 69–79. https://doi.org/10.5944/rppc.25786

Blevins, C. A., Weathers, F. W., Davis, M. T., Witte, T. K., & Domino, J. L. (2015). The posttraumatic stress disorder checklist for DSM□5 (PCL□5): Development and initial psychometric evaluation. Journal of Traumatic Stress, 28(6), 489–498.https://doi.org/10.1002/jts.22059

Boscarino, J. A., Adams, R. E., & Figley, C. R. (2010). Secondary trauma issues for psychiatrists. Psychiatric Times, 27(11), 24-26. Retrieved from http://search.proquest.com.ezp.waldenulibrary.org/docview/818552665

Boscarino, J. A., Figley, C. R., & Adams, R. E. (2004). Compassion fatigue following the September 11 terrorist attacks: A study of secondary trauma among New York City social workers. International Journal of Emergency Mental Health, 6(2), 57-66. Retrieved from http://ncbi.nlm.nih.gov/pmc/articles/PMC2713725/

Bradley, M. T., & Brand, A. (2013). Alpha values as a function of sample size, effect size, and power: Accuracy over inference. Psychological Reports, 112(3), 835–844.https://doi.org/10.2466/03.49.PR0.112.3.835-844

Brewin C, Holmes E. (2003). Psychological theories of posttraumatic stress disorder. Clinical Psychology Review. 2003;23:339–376[PubMed]

Briere, J., Agee, E., & Dietrich, A. (2016). Cumulative trauma and current posttraumatic stress disorder status in general population and inmate samples. Psychological

Trauma: Theory, Research, Practice, and Policy, 8(4), 439–446. https://doi.org/10.1037/tra0000107

Briere, J., Godbout, N., & Dias, C. (2015). Cumulative trauma, hyperarousal, and suicidality in the general population: A path analysis. Journal of Trauma &Dissociation, 16(2), 153–169. https://doi.org/10.1080/15299732.2014.970265

Brunson, T. (2018). *Postmilitary life satisfaction and social support, educational attainment, and length of service* (Order No. 10826552). Available from Dissertations & Theses @ Walden University; ProQuest Dissertations & Theses Global(2054111148)Retrievedfromhttps://ezp.waldenulibrary.org/login?qurl=https%3A%2F%2Fwww.proquest.com%2Fdocview%2F2054111148%3Faccountid%3D14872

Cieslak, R., Shoji, K., Douglas, A., Melville, E., Luszczynska, A., &Benight, C. C. (2014). A meta-analysis of the relationship between job burnout and secondary traumatic stress among workers with indirect exposure to trauma. Psychological Services, 11(1), 75–86. https://doi.org/10.1037/a0033798

Collins, S., & Long, A. (2003). Working with the psychological effects of trauma: Consequences for mental health-care workers: A literature review. Journal of Psychiatric and Mental Health Nursing, 10(4), 417–424. https://doi.org/10.1046/j.1365-2850.2003

Conybeare, D., Behar, E., Solomon, A., Newman, M. G., & Borkovec, T. D. (2012). The PTSD Checklist—Civilian Version: Reliability, validity, and factor structure in a nonclinical sample. Journal of Clinical Psychology, 68(6), 699–713.

https://doi.org/10.1002/jclp.21845

Cooper, A. A., Zoellner, L. A., Roy-Byrne, P., Mavissakalian, M. R., & Feeny, N. C. (2017). Do changes in trauma-related beliefs predict PTSD symptom improvement in prolonged exposure and sertraline? Journal of Consulting and Clinical Psychology, 85(9), 873–882.https://doi.org/10.1037/ccp0000220

Cox, K., & Steiner, S. (2013). Preserving commitment to social work service through the prevention of vicarious trauma. *Journal of Social Work Values & Ethics, 10*(1), 52-60. Retrieved from https://pdfs.semanticscholar.org/189f/c7c45e17b3d2fd0dd591cdbfe3e36dd6ce38.pdf

Dalgleish T. (2004). Cognitive approaches to posttraumatic stress disorder: The evolution of multi-representational theorizing. *Psychological Bulletin.* 130, 228–260.

Devilly, G. J., Wright, R., &Varker, T. (2009). Vicarious trauma, secondary traumatic stress or simply burnout? Effect of trauma therapy on mental health professionals. *Australian and New Zealand Journal of Psychiatry, 43*(4), 373-385. doi:10.1080/00048670902721079

Depaoli, S., Agtarap, S., Choi, A. Y., Coburn, K. M., & Yu, J. (2018). Advances in quantitative research within the psychological sciences. Translational Issues in Psychological Science, 4(4), 335–339.

Dinkel, L. M. (2021). Exploring preventative factors for burnout amongst mental health professionals working with sexual abusers [ProQuest Information & Learning]. In Dissertation Abstracts International: Section B: The Sciences and

Engineering (Vol. 82, Issue 2–B).https://doi.org/10.1037/tps0000183

Doherty, A. S., Mallett, J., Leiter, M. P., & McFadden, P. (2020). Measuring burnout in social work: Factorial validity of the Maslach Burnout Inventory—Human Services Survey. European Journal of Psychological Assessment.https://.org/10.1027/1015-5759/a000568 (Supplemental)

Drobes, D. J., & Lang, P. J. (1995). Bio informational theory and behavior therapy. In W. T. O'Donoghue& L. Krasner (Eds.), Theories of behavior therapy: Exploring behavior change. (pp. 229–257). Washington, DC: American Psychological Association. https://doi.org/10.1037/10169-009

Ewer, P. L., Teesson, M., Sannibale, C., Roche, A., & Mills, K. L. (2015). The prevalence and correlates of secondary traumatic stress among alcohol and other drug workers in Australia. *Drug & Alcohol Review, 34*(3), 252-258. doi:10.1111/dar.1220

Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, *41*, 1149-1160. Download PDF

Figley, C. R. (1995a). Compassion fatigue: Coping with secondary traumatic stress disorder in those who treat the traumatized. (1-20). New York: Routledge.

Figley, C. R. (1995b). Systemic traumatization: Secondary traumatic stress disorder in family therapists. In R. H. Mikesell, D. Lusterman, S. H. McDaniel, R. H. Mikesell, D. Lusterman, S. H. McDaniel (Eds.), Integrating family therapy: 104 Handbook of family psychology and systems theory (pp. 571-581). Washington,

DC, US: American Psychological Association. doi:10.1037/10172-033

Figley, C. R., & Kleber, R. J. (1995). Beyond the "victim". In Beyond trauma (pp. 75-98). Springer US. doi:10.1007/978-1-4757-9421-2_5

Figley, C. R. (2002). Compassion fatigue: Psychotherapists' chronic lack of self-care. *Journal of Clinical Psychology, 58,* 1433-1441. doi:10 1002/jclp.10090

Figley, C. R. (2004). Gifts from within – PTSD resources for survivors and caregivers. Retrieved on April 18, 2012 from: http://www.giftfromwithin.org/html/What-is - Compassion-Fatigue-Dr-Charles-Figley.html.

Foa, E. B., & Kozak, M. J. (1986). Emotional processing of fear: Exposure to corrective information. *Psychological Bulletin, 99*(1), 20–35. https://doi.org/10.1037/0033-2909.99.1.20

Foa, E. B., & McLean, C. P. (2016). The efficacy of exposure therapy for anxiety-related disorders and its underlying mechanisms: The case of OCD and PTSD. Annual Review of Clinical Psychology, 12, 1–28.https://doi.org/10.1146/annurev-clinpsy-021815-093533

Ghazali, S. R., & Chen, Y. Y. (2018). Reliability, concurrent validity, and cutoff score of PTSD Checklist (PCL-5) for the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition among Malaysian adolescents. Traumatology, 24(4), 280–287. https://doi.org/10.1037/trm0000156

Gómez García, R., Alonso Sangregorio, M., & Lucía Llamazares Sánchez, M. (2018). Factorial validity of the Maslach burnout inventory-human services survey (mbi-hss) in a sample of spanish social workers. Journal of Social Service Research.

https://doi-org.ezp.waldenulibrary.org/10.1080/01488376.2018.1480549

Grinker RR, Spiegel JP. The syndrome of "operational fatigue" (war neuroses) in returnees. In: Men under Stress. Philadelphia, PA: Blakiston; 1945:208-224. doi:10.1037/10784-009.

Harpur, Timothy J., Hare, Robert D., Hakstian, A. Ralph Two-factor conceptualization of psychopathy: Construct validity and assessment implications. Psychological Assessment: A Journal of Consulting and Clinical Psychology, Vol 1(1), Mar 1989, 6-17

Hensel, J. M., Ruiz, C., Finney, C., & Dewa, C. S. (2015). Meta-analysis of risk factors for secondary traumatic stress in therapeutic work with trauma victims. Journal of Traumatic Stress, 28(2), 83-91. doi:10.1002/jts.21998

Hetzel-Riggin, M. D., Swords, B. A., Tuang, H. L., Deck, J. M., & Spurgeon, N. S. (2020). Work engagement and resiliency impact the relationship between nursing stress and burnout. Psychological Reports, 123(5), 1835–1853. https://doi.org/10.1177/0033294119876076

Honinger, C. The Predictive Nature of Vicarious Trauma in School Teachers.Walden University, ProQuest Dissertations Publishing, 2018. 10817210.

Ibrahim H, Ertl V, Catani C, Ismail AA, Neuner F. The validity of posttraumatic stress disorder checklist for DSM-5 (PCL-5) as screening instrument with Kurdish and Arab displaced populations living in the Kurdistan region of Iraq. BMC Psychiatry. 2018;18(1):1–8. doi: 10.1186/s12888-018-1839-z.

Inhelder, B, Chipman, H., and Zwingmann, C (1976), Piaget and His School: A Reader

In Developmental Psychology. Springer-Verlag Berlin, Heidelberg. Retrieved from: https://doi.org/10.1007/978-3-642-46323-5

The impact of caring and killing on physiological and psychometric measures of stress in animal shelter employees: A pilot study. (2020). International Journal of Environmental Research and Public Health, 17(24), 9196. doi:http://doi.org/10.3390/ijerph17249196

Jenkins, S. R., & Baird, S. (2002). Secondary traumatic stress and vicarious trauma: A validation study. Journal of Traumatic Stress,15(5), 423-432. Retrieved from http://sfxhosted.exlibrisgroup.com/waldenu?url_ver=Z39.88-2004

Joinson, C. (1992). Coping with compassion fatigue. Nursing, 22(4), 116-122. Retrieved from http://sfxhosted.exlibrisgroup.com/waldenu?url_ver=Z39.88-2004

Juárez García, A., Merino Soto, C., Fernández Arata, M., Flores Jiménez, C. A., Caraballo, M., & Camacho Cristiá, C. (2020). Validación transcultural y Funcionamientodiferencial del Maslach Burnout Inventory—General Survey endocentes de trespaíseslatino-americanos = Cross-cultural validation and differential functioning of the MBI-GS in teachers from three Latin-American countries. AvancesEnPsicologíaLatinoamericana, 38(1), 135–156. https://doi.org/10.12804/revistas.urosario.edu.co/apl/a.662

Kaeding, A., Sougleris, C., Reid, C., van Vreeswijk, M. F., Hayes, C., Dorrian, J., &Simpson, S. (2017). Professional burnout, early maladaptive schemas, and physical health in clinical and counselling psychology trainees. Journal of Clinical Psychology, 73(12), 1782–1796. https://doi.org/10.1002/jclp.22485

Krupnick, J. L., Green, B. L., Stockton, P., Goodman, L., Corcoran, C., & Petty, R. (2004). Mental health effects of adolescent trauma exposure in a female college sample: Exploring differential outcomes based on experiences of unique trauma types and dimensions. Psychiatry: Interpersonal and Biological Processes, 67(3), 264–279. https://doi.org/10.1521/psyc.67.3.264.4

Lee, S. Y., & Park, C. L. (2018). Trauma exposure, posttraumatic stress, and preventive health behaviours: A systematic review. Health Psychology Review, 12(1), 75–109 https://doi.org/10.1080/17437199.2017.1373030

Leiter, M. P., & Maslach, C. (2016). Latent burnout profiles: A new approach to understanding the burnout experience. *Burnout Research*, 3, 89-100.https://www.mindgarden.com/documents/MBI-Cutoff-Caveat.pdf

Loeb, T. B., Joseph, N. T., Wyatt, G. E., Zhang, M., Chin, D., Thames, A., & Aswad, Y. (2018). Predictors of somatic symptom severity: The role of cumulative history of trauma and adversity in a diverse community sample. Psychological Trauma: Theory, Research, Practice, and Policy, 10(5), 491–498.https://doi-org.ezp.waldenulibrary.org/10.1037/tra0000334

Maslach, C., & Leiter, M. P. (2017). Understanding burnout: New models. In C. L. Cooper & J. C. Quick (Eds.), The handbook of stress and health: A guide to research and practice. (pp. 36–56). Wiley-Blackwell. https://doi.org/10.1002/9781118993811.ch3

Maslach, C., Leiter, M. P., & Jackson, S. E. (2012). Making a significant difference with burnout interventions: Researcher and practitioner collaboration. Journal of

Organizational Behavior, 33(2), 296–300. https://doi.org/10.1002/job.784

May, C. L., &Wisco, B. E. (2016). Defining trauma: How level of exposure and proximity affect risk for posttraumatic stress disorder. Psychological Trauma: Theory, Research, Practice, and Policy, 8(2), 233–240. https://doi.org/10.1037/tra0000077

McCann, I. L., & Pearlman, L. A. (1990). Vicarious traumatization: A framework for understanding the psychological effects of working with victims. Journal of Traumatic Stress, 3(1), 131-149. Retrieved from http://sfxhosted.exlibrisgroup.com/waldenu?url_ver=Z39.88-2004

McLeod, S. A. (2019, July 10). What does effect size tell you? Simply psychology: https://www.simplypsychology.org/effect-size.html

Michalopoulos, L., & Aparicio, E. (2012). Vicarious trauma in social workers: The role of trauma history, social support, and years of experience. Journal of Aggression, Maltreatment & Trauma, 21(6), 646-664. doi:10.1080/10926771.2012.689422

Milligan-Saville, J., Choi, I., Deady, M., Scott, P., Tan, L., Calvo, R. A., … Harvey, S. B. (2018). The impact of trauma exposure on the development of PTSD and psychological distress in a volunteer fire service. Psychiatry Research, 270, 1110–1115. https://doi.org/10.1016/j.psychres.2018.06.05

Monroe, S. M., and G. M. Slavich. 2016. “Psychological Stressors: Overview.” In Stress: Concepts, Cognition, Emotion, and Behavior., edited by George Fink, 1:109–15. Handbook of Stress; Vol 1. San Diego, CA: Elsevier Academic Press. https://searchebscohostcom.ezp.waldenulibrary.org/login.aspx?direct=true&db=p

syh&AN=2016-26280-013&site=ehost-live&scope=site

Newell, J. M., & MacNeil, G. A. (2010). Professional burnout, vicarious trauma, secondary traumatic stress, and compassion fatigue: A review of theoretical terms, risk factors, and preventive methods for clinicians and researchers. Best Practices in Mental Health, 6(2), 57-68. Retrieved fromhttp://sfxhosted.exlibrisgroup.com/waldenu?url_ver=Z39.88-2004

O'Rourke, T.W. (2000). Techniques for screening and cleaning data for analysis. American Journal of Health Studies, 16(4), 205-207. Retrieved from https://ezp.waldenulibrary.org/login?qurl=https%3A%2F%2Fwww.proquest.com%2Fscholarly-journals%2Ftechniques-screening-cleaning-data-analysis%2Fdocview%2F210481924%2Fse-2%3Faccountid%3D14872

Osborne, Jason. (2010). Data Cleaning Basics: Best Practices in Dealing with Extreme Scores. Newborn and Infant Nursing Reviews. 10. 37-43. 10.1053/j.nainr.2009.12.009.

Overstreet, C., Berenz, E. C., Kendler, K. S., Dick, D. M., &Amstadter, A. B. (2017). Predictors and mental health outcomes of potentially traumatic event exposure. Psychiatry Research, 247, 296–304.https://doi.org/10.1016/j.psychres.2016.10.047

Pearlman, L. A., &Saakvitne, K. W. (1995). Treating therapists with vicarious traumatization and secondary traumatic stress disorders. In Figley, C. R. (1995). Compassion fatigue: Coping with secondary trauma stress disorder in those who treat the traumatized. New York: Routledge

Piaget, J. (1952). Introduction: The biological problem of intelligence. In The origins of intelligence in children. (pp. 1–20). W. W. Norton & Co. https://doi.org/10.1037/11494-001

Pitman, R. K., Rasmusson, A. M., Koenen, K. C., Shin, L. M., Orr, S. P., Gilbertson, M. W. Liberzon, I. (2012). Biological studies of post-traumatic stress disorder. Nature Reviews Neuroscience, 13(11), 769–787. https://doiorg/10.1038/nrn3339

Rotstein, S., Hudaib, A.-R., Facey, A., & Kulkarni, J. (2019). Psychiatrist burnout: A meta-analysis of Maslach Burnout Inventory means. Australasian Psychiatry, 27(3), 249–254. https://doi.org/10.1177/1039856219833800

Sabin-Farrell, R., & Turpin, G. (2003). Vicarious traumatization: Implications for the mental health of health workers? Clinical Psychology Review, 23(3), 449–480. https://doi.org/10.1016/S0272-7358(03)00030-8

Schutte, N., Toppinen, S., Kalimo, R., & Schaufeli, W. (2000). The factorial validity of the Maslach Burnout Inventory—General Survey (MBI—GS) across occupational groups and nations. Journal of Occupational and Organizational Psychology, 73(1), 53–66. https://doi-org.ezp.waldenulibrary.org/10.1348/096317900166877

Selye, H. (1953). The General-Adaptation-Syndrome in its Relationships to Neurology, Psychology, and Psychopathology. In A. Weider (Ed.), Contributions toward medicalpsychology: Theory and psychodiagnostic methods Vol 1. (pp. 234–274). New York, NY: Ronald Press Company. https://doi.org/10.1037/11419-01

Sendler, D. J., Rutkowska, A., & Makara-Studzinska, M. (2016). How the exposure to trauma has hindered physicians' capacity to heal: Prevalence of PTSD among healthcare workers. The European Journal of Psychiatry, 30(4), 321–334. Retrieved fromhttps://search-ebscohost-com.ezp.waldenulibrary.org/login.aspx?direct=true&db=psyh&AN=2017-05809-006&site=ehost-live&scope=site

Stadnyk, B. L. (2011). Psychiatric nurses in Saskatchewan: The effects of exposure to trauma and workplace aggression on posttraumatic stress disorder and cognitions (Doctoral dissertation). Retrieved from http://fmipa.umri.ac.id/wp-content/uploads/2016/04/Psychiatric-nurses-in-Saskatchewan-The-effects-of-exposure-to-trauma-and-workplace-aggression-on-posttraumatic-stress-disorder-and-cognitions.pdf

Stamm, B. H. (1995). Secondary traumatic stress: Self-care issues for clinicians, researchers, and educators. Lutherville, MD: Sidran Press.

Temitope, K. M., & Williams, M. W. (2015). Secondary traumatic stress, burnout and the role of resilience in New Zealand counselors.*New Zealand Journal of Counseling;35*(1), 1-21. Retrieved from http://search.ebscohost.com.easydb.angelo.edu/login.aspx?direct=true&db=edo&AN=112428008&site=eds-live

Tsai, Jack, Natalie Jones, Anne Klee, and Debbie Deegan. 2019. "Job Burnout among Mental Health Staff at a Veterans Affairs Psychosocial Rehabilitation Center." Community Mental Health Journal, October. doi:10.1007/s10597-019-

00487-5.

Turgoose, D., Glover, N., Barker, C., & Maddox, L. (2017). Empathy, compassion fatigue, and burnout in police officers working with rape victims. Traumatology, 23(2), 205–213. https://doi.org/10.1037/trm0000118

Using PTSD Checklist for DSM-IV.Va.gov: Veterans Affairshttps://www.ptsd.va.gov/professional/assessment/adult-sr/ptsd-checklist.asp

Vazquez, R. (2017). Counselor ethnic-racial identity and trauma exposure on wellness and burnout (Order No. 10599143). Available from ProQuest Dissertations &Theses Global. (1928961080). Retrieved from https://ezp.waldenulibrary.org/login?qurl=https%3A%2F%2Fwww.proquest.com%2Fdissertations-theses%2Fcounselor-ethnic-racial-identity-trauma-exposure%2Fdocview%2F1928961080%2Fse-2%3Faccountid%3D14872

Veronese, G., Pepe, A., Massaiu, I., De Mol, A.-S., & Robbins, I. (2017). Posttraumatic growth is related to subjective well-being of aid workers exposed to cumulative trauma in Palestine. Transcultural Psychiatry, 54(3), 332–356. https://doi.org/10.1177/1363461517706288

Wamser-Nanney, R., Howell, K. H., Schwartz, L. E., &Hasselle, A. J. (2018). The moderating role of trauma type on the relationship between event centrality of the traumatic experience and mental health outcomes. Psychological Trauma:Theory, Research, Practice, and Policy, 10(5), 499–507.https://doi.org/10.1037/tra0000344

Wanklyn, S. G., Pukay-Martin, N. D., Belus, J. M., St. Cyr, K., Girard, T. A., & Monson, C. M. (2016). Trauma types as differential predictors of posttraumatic stress disorder (PTSD), major depressive disorder (MDD), and their comorbidity. Canadian Journal of Behavioural Science / Revue Canadienne DesSciences Du Comportement, 48(4), 296 305. https://doi.org/10.1037/cbs0000056

Wanous, J. P., Reichers, A. E., &Hudy, M. J. (1997). Overall job satisfaction: How good are single-item measures? Journal of Applied Psychology, 82(2), 247–252.https://doi.org/10.1037/0021-9010.82.2.247

Warlick, C. A., Van Gorp, A., Farmer, N. M., Patterson, T., & Armstrong, A. (2020). Comparing burnout between graduate-level and professional clinicians. Training and Education in Professional Psychology. https://doi.org/10.1037/tep0000328

Weiss, B.A. (2011). Fisher's r-to-Z transformation calculator to compare two independent samples [Computer software]. Available from https://blogs.gwu.edu/weissba/teaching/calculators/fishers-z-transformation/. https://doi.org/10.1007/s11606-012-2015-7

West, C. P., Dyrbye, L. N., Satele, D. V., Sloan, J. A., &Shanafelt, T. D. (2012). Concurrent validity of single-item measures of emotional exhaustion and depersonalization in burnout assessment. *Journal of general internal medicine*, *27*(11), 1445–1452. https://doi.org/10.1007/s11606-012-2015-7

Wheeler, D. L., Vassar, M., Worley, J. A., & Barnes, L. L. B. (2011). A reliability generalization meta-analysis of coefficient alpha for the Maslach burnout

inventory. *Educational and Psychological Measurement*, *71*(1), 231–244. https://doi.org/10.1177/0013164410391579

Winstanley, S., & Hales, L. (2015). A Preliminary Study of Burnout in Residential Social Workers Experiencing Workplace Aggression: Might It Be Cyclical? Images Chart Authors: A Preliminary Study of Burnout in Residential Social Workers Experiencing Workplace Aggression: Might It Be Cyclical? *British Journal of Social Work*, *45*(1), 24. http://dx.doi.org/10.1093/bjsw/bcu036

World Health Organization. (2019). *International statistical classification of diseases and related health problems (11th revision)*. Retrieved fromhttps://icd.who.int/browse11/l-m/en

Yang, Y., & Hayes, J. A. (2020). Causes and consequences of burnout among mental health professionals: A practice-oriented review of recent empirical literature. Psychotherapy, 57(3), 426–436. https://doi.org/10.1037/pst000031

Appendix A: Consent Form

You are invited to take part in a research study about Exposure to trauma and reported burnout and PTSD in acute care mental health care workers The researcher is inviting medical doctors, psychiatrists, psychologists, therapists, counselors, nurses, mental health care technicians, certified nurse's aide, emergency medical personnel that interact as part of with the acutely mentally ill experiencing mental health crisis to be in the study. The form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part. This study is being conducted by a researcher named Armando Dominguez who is a doctoral student at Walden University.

Background Information:

The purpose of this study is to determine if there exists a relationship between type of trauma exposure and burnout and PTSD in acute care mental health care workers.

Procedures:

If you agree to be in this study, you will be asked to access the survey link through Facebook, Linkedin and the Walden Participant Pool. You will then be asked to fill out an anonymous demographic questionnaire to identify age, sex, profession and years of employment and types of work-related trauma exposure that will take about three minutes to complete. After the demographic questionnaire you will be asked to start answering the Demographic questionnaire, the Maslach Burnout Inventory for Human Services Medical Personnel Version (MBI/HSS/MP) and the PCL-5 (PTSD checklist) that will take about

35 minutes to complete. Upon completion you will also be asked to read a debriefing statement with available resource information if needed after taking the survey. Reading the debriefing statement takes about 3 minutes to read. This study will need a minimum of 119 participants. The study survey will only need to be accessed one time and there will not be any repeat measures or follow-up contact with researchers required.

Voluntary Nature of the Study:

Research should only be conducted with those that freely volunteer. This study is voluntary. You are free to accept or turn down the invitation. For those that respond from the Walden Participant Pool, no one at Walden University will treat you differently if you decide not to be in the study. If you decide to be in the study now, you can still change your mind later. You may stop at any time.

Risks and Benefits of Being in the Study:

Being in this type of study involves some risk of the minor discomforts that can be encountered in daily life, such as stress or becoming upset. Being in this study would pose minimal risk to your safety or wellbeing. This study offers no direct benefits to the study participant. The benefits of your participation in this study however will assist in gaining information and knowledge through the study with the aim of benefitting society by understanding the effects of type of trauma exposure and the development of burnout and PTSD in the mental health professions and possibly greater society at large.

Payment:

Participation in the is study is voluntary and there will be not payment offered for your participation in this study.

Privacy:

Reports coming out of this study will not share the identities of individual participants. Participants in this study are encouraged to take the survey in a private area to ensure

further privacy in participation. Details that might identify participants, such as the location of the study, also will not be shared. All demographic data gathered will be anonymous. No personally identifying data will be gathered. Even the researcher will not know who you are. (The researcher will not gather any personally identifying information for any purpose outside of this research project. Data will be kept secure by encryption, SSO, SSAE-16 SOC II compliant data centers and HIPPA, GDPR compliance as per Survey Monkey's service procedures for surveys. Data will be kept for a period of at least 5 years, as required by the university.

Contacts and Questions:

You may ask any questions you have now. Or if you have questions later, you may contact the researcher via phone and email.

If you want to talk privately about your rights as a participant, you can call the Research Participant Advocate at my university at 612-312-1210. Walden University's approval number for this study is **IRB will enter approval number here** and it expires on **IRB will enter expiration date.**

Please print or save this consent form for your records.

Obtaining Your Consent

If you feel you understand the study well enough to make a decision about it, please indicate your consent by clicking [agree] to complete the questionnaire.

Appendix B: Demographic Questionnaire

1. Do you work with individuals suffering from acute mental disorders? Yes ☐ No ☐

2. What is your occupation? (Check all that apply)

Therapist ☐ Counselor ☐ Psychiatrist ☐ Mental Health Technician ☐ Nurse ☐

Nursing Assistant ☐ Nurse ☐ Medical Doctor☐ Physician's Assistant ☐ Social Worker ☐Other (specify) ☐ _____

3. Type of job qualifications earned: M.D. ☐ Ph.D. ☐ LPC☐ LCSW☐ RN ☐ LVN ☐ LPN ☐ Mental Health Tech Certification ☐ CNA ☐

4. Length of time employed in your profession Years_____ Months_____

5. Job classification: _____ Length of time in this position_____

6. What type of facility are you employed in? _____

7. Number of months worked as an acute care mental health worker _____

8. Are you employed: Full time ☐ Part time ☐ As needed basis only ☐

9. Number of hours worked per week_____

10. Average number of hours worked per week in direct contact with individuals who have acute

care mental health disorders _____

11. Do you work shift work? Yes ☐ No☐

12. Your Age: _____

13. Gender: Male ☐ Female ☐ Non-binary/ Transgender/ Other ☐

14. Ethnicity (check all that apply):

Caucasian ☐ Latino☐ Native American ☐ Asian ☐ African American ☐

Pacific Islander ☐ Other ☐

15. Marital Status:

Single ☐ Married ☐ Widowed ☐ Divorced ☐ Common-law ☐

16. Which of the following best describes the area you live in? Urban ☐ Rural ☐

Please read the following before proceeding and answering further questions.

Definition of Traumatic Events:

A traumatic event is an experience that causes physical, emotional, psychological distress, or harm. This event may be personally experienced, witnessed, or heard about Traumatic events that are experienced directly include, but are not limited to, military combat, violent personal assault (sexual assault, physical attack, robbery, mugging), being kidnapped, being taken hostage, terrorist attack, torture, incarceration as a prisoner of war or in a concentration camp, natural or manmade disasters, severe automobile accidents, or being diagnosed with a life-threatening illness. Witnessed events include, but are not limited to, observing the serious injury or unnatural death of another person due to violent assault, accident, war, or disaster or unexpectedly witnessing a dead body or body parts. Events experienced by others that are learned about include, but are not limited to, violent personal assault, serious accident, or serious injury experienced by a family member or a close friend; learning about the sudden, unexpected death of a family member or a close friend; or learning that one's child has a life-threatening disease.

17(a) Have you ever experienced a traumatic event in your life that was not work related?

Yes ☐ No ☐ Don't know ☐

17(b) If yes to 17(a) above, approximately how many traumatic events that were not work-related have you experienced in your life so far?

1 ____ 2 _____ 3 ____ 4 _____5 ____ More than 5 ____

18. Have you experienced a traumatic event in the mental-healthcare work environment or while working with individuals suffering from a mental health disorder?

(a) personally experienced?

Yes ____ No ____Don't know____

(b) witnessed?

Yes ____ No____ Don't know____

(c) heard about?

Yes ____ No ____Don't know ____

If your answers to questions 18(a), 18(b) or 18(c) indicated you have experienced a traumatic workplace event, then complete the following three questions.

19. During the *last month* that you worked approximately how many traumatic workplace events have you:

a) personally experienced? ____
b) witnessed? ____
c) heard about? _____

20. How worried are you about exposure to a traumatic event in your current workplace?

1 = not worried at all; 5 =very worried

1 ____2 ____3 ____4____5_____

Appendix C: MBI/HS-M

Maslach Burnout Inventory is copyrighted material and therefore will not appear in this appendix once the licensed administrations are paid for purposes of conducting this study. The use of the MBI was authorized by paying for the number of administrations to the MindSpring Organization that owns the copyrights to the MBI.

Appendix D: PCL-5

PTSD CHECKLIST- SINGLE EVENT VERSION The event you experienced was _____ on _____. (Event) (Date) INSTRUCTIONS: Below is a list of problems and complaints that people sometimes have in response to stressful life experiences.

Please read each one carefully, then select one of the numbers to the right to indicate how much you have been bothered by that problem in the past month.

Not at all A little bit Moderately Quite a bit Extremely 1 2 3 4 5

_____

1. Repeated, disturbing memories, thoughts, or images of the stressful experience? 12 3 4 5

2. Repeated, disturbing dreams of the stressful experience? 1 2 3 4 5

3, Suddenly acting or feeling as if the stressful experience were happening again (as if you were reliving it)? 1 2 3 4 5

4. Feeling very upset when something reminded you of the stressful experience? 1 2 3 4 5

5. Having physical reactions (e.g., heart pounding, trouble breathing, sweating) when something reminded you of the stressful experience? 1 2 3 4 5

6. Avoiding thinking about or talking about the stressful experience or avoiding having feelings related to it? 1 2 3 4 5

7.Avoiding activities or situations because they reminded you of the stressful experience? 12 3 4 5

8.Trouble remembering important parts of the stressful experience? 1 2 3 4 5

9. Loss of interest in activities that you used to enjoy 1 2 3 4 5

10.Feeling distant or cut off from other people? 1 2 3 4 5

11. Feeling emotionally numb or being unable to have loving feelings for those close

to you? 1 2 3 4 5

12.Feeling as if your future will somehow be cut short? 1 2 3 4 5

13.Trouble falling or staying asleep? 1 2 3 4 5
14. Feeling irritable or having angry outbursts? 1 2 3 4 5
15.Taking too many risks or doing things that could cause you harm? 1 2 3 4 5
16.Having difficulty concentrating? 1 2 3 4 5
17. Being “super-alert” or watchful or on guard? 1 2 3 4 5
18.Having difficulty concentrating? 1 2 3 4 5

19. Having difficulty concentrating? 1 2 3 4 5

20.Trouble falling or staying asleep? 1 2 3 4 5

PTSD Checklist is a public Domain Survey (U.S. The Department of Veterans’ Affairs., 2020).

Appendix E: Debriefing Statement

Thank you for your participation in this research on work-related trauma exposure type reported burnout out and PTSD in ACMHWs'. A demographic survey identifying work-related trauma exposure type and a the MBI burnout survey and PCL-5 a widely used PTSD survey were used. The purpose of the study was to determine if Trauma exposure type is a predictive variable of reported wok-related burnout and PTSD in ACMHWs'. Your participation was important in helping this researcher learn whether work-related trauma exposure type was related to reported work-related burnout and PTSD in ACMHWs'. Findings in this study should help develop a greater understanding of work-related trauma exposure effects to improve organizational culture and support for those workers that encounter work-related trauma exposure that report burnout and PTSD and also potentially can lessen employee turnover.

The survey is anonymous and you will not be asked to identify yourself. Your completion of the survey will constitute your consent to participate. Your information will be completely confidential and only the researcher and his supervisors, Dr. Yoly Zentella, Dr. Maxwell Rainforth, Dr. Peggy Gallaher URR, Department Head Dr. Sickel and the IRB will have access to the data gathered and used in this study.

Results of the research may be published (e.g., in journal articles) and possibly presented at conferences and professional education settings. This project will be approved by the Walden University IRB. If participants' have any questions or concerns about their rights as participants, they may contact the Chair of the Research Ethics

Board at Walden University online https://www.waldenu.edu/ .In addition, if you have any questions that I can answer regarding the study research please do not hesitate to contact me at the following:

Researcher contact information

Armando Dominguez

Email: (removed)

Sincerely,

Armando Dominguez

Doctoral Student (Health Psychology)

Department of Psychology

Walden University

Thank you for considering participating in this research. Your insight and information are extremely valuable I hope you will find the results interesting and of value to your profession!

Resources List

Suicide Prevention Life Line

http://www.suicidepreventionlifeline.org/at **1-800-273-TALK (8255)**

Veteran's Crisis Line

https://www.veteranscrisisline.net/ 1-800-273-8255 and Press 1

Good Therapy

https://www.goodtherapy.org/in-crisis.html

Appendix F: IRB Approval

Consent Form

You are invited to take part in a research study about exposure to trauma, burnout and PTSD in acute care mental health care workers. For this study this researcher is inviting medical doctors, psychiatrists, psychologists, therapists, counselors, nurses, mental health care technicians, certified nurse's aide, emergency medical personnel that as part of their work, interact with acutely mentally ill patients. This form, part of "informed consent" describes the study and can help you decide to participate or not. This study is being conducted by myself Armando Dominguez a doctoral student at Walden University.

Background Information:

The purpose of this study is to determine if there exists a relationship between type of trauma exposure, burnout and PTSD in acute care mental health care workers.

Procedures:

You will be asked to fill out an anonymous survey that will take about 35minutes to complete. You will be asked some demographic questions, age, occupation, ethnicity, gender. You will also respond to questions and statements like the following; Are you feeling distant or cut off from other people? I feel depressed. Upon completion you will also be asked to read a debriefing statement with available resource information if needed after taking the survey. Reading the debriefing statement takes about 3 minutes to read. This study will need a minimum of 119 participants. The study survey will only need to

be accessed and taken one time and there will not be any additional contact with researchers.

Voluntary Nature of the Study:

Research should only be conducted with those that freely volunteer. This study is voluntary. You are free to accept or turn down the invitation. No one will treat you differently if you decide not to be in the study. If you decide to be in the study now, you can still change your mind later. You may stop at any time.

Risks and Benefits of Being in the Study:

Being in this type of study involves some risk of the minor discomforts that can be encountered in daily life, such as stress or becoming upset. Being in this study would pose minimal risk to your safety or wellbeing. This study offers no direct benefits to the study participant. The benefits of your participation in this study however will assist in gaining information and knowledge that can benefit society by understanding the effects of type of trauma exposure and the development of burnout and PTSD in the mental health professions and possibly greater society at large.

Payment:

Participation in the is study is voluntary and there will be not payment offered for your participation

Privacy:

Results of this study will not use personal identifying information of the individual participants. Participants in this study are encouraged to take the survey in a private area

to ensure further confidentiality details that might identify participants, such as the location of the study, will not be shared. All demographic data gathered will be non-personal identifying data. This researcher will not know who you are. The researcher will gather non- personally identifying information for the sole purpose of this research project. Gathered data by Survey Monkey's data gathering service Survey Monkey Audience will be kept secure by encryption, SSO, SSAE-16 SOC II compliant data centers and HIPPA, GDPR compliance as per Survey Monkey's service procedures for surveys. Data will be kept for a period of at least 5 years, as required by Walden University.

Contacts and Questions:

You may ask any questions you have now. Or if you have questions later, you may contact the researcher via phone and email.

Email: (removed)

If you want to talk privately about your rights as a participant, you can call the Research Participant Advocate at my university at 612-312-1210. Walden University's approval number for this study is **08-18-21-0278606** and it expires on **August 17, 2022.**

Please print or save this consent form for your records.

Obtaining Your Consent

If you feel you understand the study well enough to decide about it, please indicate your consent by clicking [agree] to complete the questionnaire.

Appendix G: Certification for Research

CITI PROGRAM

Completion Date 05-Jun-2021
Expiration Date N/A
Record ID 41698545

This is to certify that:

armando dominguez

Has completed the following CITI Program course:

Not valid for renewal of certification through CITE.

Student's
(Curriculum Group)
Doctoral Student Researchers
(Course Learner Group)
1 - Basic Course
(Stage)

Under requirements set by:

Walden University

CITI

Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify?w05abc24f95c64763491c5fef1d736f4a-41698545