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Retrospective Study of Trauma Programming and

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2015

Abstract

Retrospective Study of Trauma Programming and

Risk for Violence in a Psychiatric Hospital

by

Domonique La'Toya Rice

MS, Capella University, 2011

BS, Wright State University, 2007

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

In state psychiatric hospitals in the United States, many patients are admitted with a history of trauma. Although trauma-focused interventions are offered within these psychiatric facilities, there remain issues with the higher-than-average length of treatment and rehospitalization rates for patients with a diagnosis of posttraumatic stress disorder or for those who are suffering with a history of trauma. This study investigated between group differences for measured levels of attendance and type of group intervention (which included the men's trauma recovery empowerment model, dialectical behavior therapy, and art and healing) on the risk for violence as measured by scores on the historical, clinical, and risk-20 (HCR-20 v2) checklist. Participants had documented trauma history as well as mental health disorders including schizophrenia, schizoaffective, bipolar disorder, major depressive disorder, posttraumatic stress disorder, and substance abuse. Cognitive behavioral and social learning theory comprised the theoretical foundations for the study. Archival data from the past 6 years included 16 participants from the M-TREM group, 15 participants from the DBT group, and 15 participants from the Art and healing group. Data were used to complete a nonequivalent control group design and data analysis included an ANOVA, correlation, and regression analysis. The results of this study identified a statistically significant difference in risk for violence based on level of attendance but not by type of group intervention. The findings of this study will assist psychiatric hospital administrators and mental health professionals in the development and implementation of effective trauma programming to lower the risk for violence for patients with trauma.

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Dedication

I would like to dedicate this dissertation to my mom and dad Carmella and Willie Rice. You both have sacrificed so much to provide a way for me to continue my education and excel in my dreams. You both have provided an excellent example of how to become successful through hard work, determination, and dedication. I want to thank you both for being there for Daniel and I through everything and providing continued faith, reassurance, and guidance. I would also like to dedicate this dissertation to my son Daniel. Since the time you were born you have been a blessing to me. You have blessed me with so much too look forward to in life and gave me a new vision of what life should be. My journey through this process has all been because of you. I wanted to ensure you have a positive example in your life for guidance.

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Chapter 1: Introduction to the Study

Introduction

This quantitative research study was designed to address a gap in the literature concerning the use of trauma-track programming attendance. It specifically investigated trauma-track programming attendance including the Men's trauma recovery empowerment model (M-TREM), dialectical behavior therapy (DBT), and art and healing. It assessed whether the number of sessions attended by patients to these groups determined if there was a significant difference in the risk for violence as measured by the historical, clinical, and risk (HCR-20 version 2) assessment. This study promotes positive social change by informing the decisions that interdisciplinary treatment teams make when recommending patients for trauma groups.

This study was designed to inform patients of the benefits of attending the trauma programming offered in state psychiatric hospitals in the United States. Patients admitted into these hospitals face many challenges when it comes to admission and deciding which treatment is the best possible treatment for their symptoms. From my own professional experience, patients are often treated with medication regimens and receive an array of psycho-therapeutic treatments to assist them with developing skills to manage their symptoms of mental illness. Through personal observation, upon admission into state psychiatric facilities, there are multiple assessments that are completed to identify the best possible treatment for the individual. Each patient is assigned to a specific interdisciplinary treatment team that will assist them in receiving the best possible care while being hospitalized.

Even after each patient receives an assessment and is assigned an interdisciplinary treatment team, there still remains an issue with the rate of discharge and the higher rate of rehospitalization for patients that have a diagnosis of posttraumatic stress disorder or that suffer from a history of trauma (McDuff, 2008). After careful review of the literature, I have not found research that discusses the use of trauma track programming in relation to the risk for violence in state psychiatric facilities.

In the coming sections, I will provide background information, identify the problem, state the purpose of my study, discuss the research questions and hypotheses, identify the theoretical foundation of my study, discuss the nature of my study, and identify any assumptions, limitations, and the significance of my study. In the next section, I provide an in-depth view of the background of my study.

Background

There is a gap in knowledge in the discipline of human services concerning trauma programs' effectiveness. The specific gap addressed by this study concerned whether or not the M-TREM, DBT, and art and healing trauma programs assist patients who both suffer from PTSD and are being treated in psychiatric hospitals in lowering their risk for violence. These programs are offered twice a week on the treatment mall for patients to attend as a part of their overall treatment plan. Each unit's assigned psychologist makes a referral to the trauma track programs that are deemed most appropriate for treatment that meets each patient's need. This study addresses a need for further information to improve treatment planning for patients who suffer from trauma and are at high risk for violence.

Problem Statement

There is a lack of research on the trauma track program usage in state psychiatric hospitals in the United States and how it relates to patient risk for violence historical, clinical, risk-20v2 assessment scores, which in turn influences patient privilege level, discharge, and after care planning. The U.S. Department of Veteran Affairs has highlighted a risk of violence by those that suffer from posttraumatic stress disorder (Elbogen, 2014). However, more research is needed to identify violent behaviors as they change before and after treatment (Elbogen, 2014). This lack of research presents a problem for hospital administrations because of the lack of trauma informed care when it comes to assessing for risk with patients suffering from a history of trauma (Goetz, 2013).

Several studies have included recommendations for additional research in this area. For example, Elbogen (2014) highlighted a need for research to identify if trauma treatment does lower the risk for violence. Walji, Egan, Fonseca, and Huxley (2014) studied violent behaviors within a care setting as it related to the functioning, adherance to treatment plans, and recovery goals. This study used 95 inpatients that were divided into two groups with some having no history of violence and others having a history of violence. The two groups were measured by the change in their global functioning, symptoms, and risk first at baseline and then again at 12 months. The findings of their study showed an increase in global functioning after 12 months, but no significant reduction in risk over time between inpatients with a history of violence and inpatients without a history of violence. This dissertation study followed up on these studies by

focusing on patients' elective attendance to the trauma group on the treatment mall for a five-year period of time. It specifically tested my hypothesis that a patient's elective attendance to a trauma group on the treatment mall influences and explains the risk for violence as measured by assessment scores on the HCR-20v2.

Purpose of Study

The purpose of this quantitative study was to explore M-TREM, DBT, and art and healing attendance to identify if there was a significant difference in the risk for violence, as measured by the HCR-20v2. The study also explored whether or not the M-TREM group was more efficacious in positively impacting patient risk for violence as measured by the HCR-20v2 assessment scores than the other treatment groups offered.

Research Question and Hypotheses

R_1: Is there a significant difference in risk for violence in a state psychiatric hospital relative to specific trauma program attendance (M-TREM, Dialectical Behavior Therapy, and art and healing), as measured by the assessment scores on the HCR-20v2?

Ho_1: There is no significant difference in risk for violence in a state psychiatric hospital relative to specific trauma program attendance (M-TREM, Dialectical Behavior Therapy, and art and healing), as measured by the assessment scores on the HCR-20v2.

H_1: There is a significant negative difference in risk for violence in a state psychiatric hospital relative to specific trauma program attendance (M-TREM, Dialectical Behavior Therapy, and art and healing), as measured by the assessment scores on the HCR-20v2. As trauma program attendance increases, risk for violence decreases.

R_2: Is there a significant relationship between the number of trauma programs attended and risk for violence, as measured by the assessment scores on the HCR-20v2 in a state psychiatric hospital?

Ho_1: There is no significant difference in the relationship between the number of trauma programs attended and the risk for violence, as measured by the assessment scores on the HCR-20v2 in a state psychiatric hospital, relative to specific trauma program attendance (M-TREM, Dialectical Behavior Therapy, and Art and healing

H_1: There is a significant positive difference in the relationship between the number of trauma programs attended and the risk for violence, as measured by the assessment scores on the HCR-20v2 in a state psychiatric hospital, relative to specific trauma program attendance (M-TREM, Dialectical Behavior Therapy, and Art and healing.

$R_{3:}$ Is there a significant difference between the M-TREM treatment group and its impact on risk for violence, as measured by the HCR-20v2 assessment scores, when compared to the other treatment groups consisting of Dialectical Behavior Therapy, and Art and healing?

Ho_1: There is no significant difference between the M-TREM treatment group and its impact on risk for violence as measured by the HCR-20v2 assessment scores when compared to the other treatment groups consisting of Dialectical Behavior Therapy, and Art and healing.

H_1: There is a significant positive difference between the M-TREM treatment group and its impact on risk for violence as measured by the HCR-20v2 assessment

scores when compared to the other treatment groups consisting of Dialectical Behavior Therapy, and Art and healing.

Theoretical Framework

The theoretical frameworks for this study were cognitive behavior theory (CBT) and social learning theory (SLT). Cognitive theory was developed by Aaron Beck in the late 1960s, and was used to study the behaviors of patients in shaping how a patient feels, what they believe, and how they behave in the future (Beck & Beck, 1995; Martin, 2007). Social learning theory combines cognitive and behavioral frameworks and was developed by Albert Bandura in the 1970s (Bandura, 1971). This theory helps to explain human behavior in terms of the reciprocal interaction of the patient's cognitive, behavioral, and environmental influences (Bandura, 1971). Together, these theories indicate that the use of cognitive and behavioral strategies can assist the patient in changing their negative thoughts and behaviors (Martin, 2007).

Cognitive behavioral theory is used to help change a person's irrational thoughts and behaviors by providing the person with education and reinforcing positive behaviors and thoughts that will assist them in making changes for the better (Grohol, 2004). An application of cognitive behavioral theory to trauma generally focuses on the victim's memory functioning, information processing, shattered or challenged core beliefs, avoidance strategies, and self-criticism (Howell, 2012). As applied to this study, this theory predicts that the independent variable of attending a trauma group on the treatment mall will influence and explain the dependent variable of the risk for violence, as measured by the assessment scores from the HCR-20v2 checklist over a five-year period,

because CBT focuses on educating patients to assist them in making positive choices and displaying positive behaviors. A more detailed review of these theories as it relates to this study will be found in Chapter 2.

Nature of the Study

The chosen research design for this study was the nonequivalent control group design. This design was chosen because of the availability of archival data collected by the state psychiatric hospital in the Midwest United States used in this study, hereafter referred to as ABC State Psychiatric Hospital (ABCSPH, pseudonym). These data included attendance information for at least 12 sessions of trauma groups, which were compared to the patient's risk for violence, as measured by the assessment scores on the HCR-20v2. SPSS software was utilized to complete a one-way ANOVA analysis to analyze the data.

Using a nonequivalent control group design has several advantages and disadvantages. It does not include randomly assigning a sample population (Campbell, 1963), but allows a researcher to compare control and experimental groups that are not essentially equivalent (Trochim, 2006). At the time of the study, each trauma-based group in ABCSPH allowed a maximum of 10 patients to attend each session over a five-year period. Based on the study and the use of archival data, the control group was created using data from patients who had attended regular trauma programming that was provided on the treatment mall. These patients have experienced a form of trauma, and had a mental illness and a history of substance abuse, and were male. The experimental group for this study consisted of the patients who were a part of the M-TREM program

and consisted of male patients that had experienced some form of trauma, had a mental illness, and suffered from substance abuse. The experimental group did not have any other trauma track programming. The control group consisted of patients that were a part of the DBT and Art and healing groups, and comprised male patients that had experienced some form of trauma, suffered from substance abuse, and had a mental illness.

Definitions

Throughout this study there are terms used to discuss different aspects of the research. These terms are outlined in this section to provide a clear and concise understanding of these terms.

ABC State Psychiatric Hospital (ABCSPH): A pseudonym that will be used throughout the study to refer to the research site in order to keep the site confidential.

Art and Healing: A term for treatment using music, visual art, movement, and creative writing to improve health *(Foundations of Art and Healing, 2010).*

Attendance: A record of how often a person goes to classes (Merriam-Webster dictionary, 2014.). For the purpose of this study, attendance will be defined as attendance to at least 12 sessions of a trauma program group.

Bipolar disorder: A psychiatric diagnosis with three associated subtypes: Bipolar I, Bipolar II, and Cyclothymic disorder (American Psychiatric Association, 2013). Its common symptom consists of mood swings that cause mania and depressive episodes.

Manic or mania episodes involve periods of euphoria, inflated self-esteem, poor judgment, rapid speech, racing thoughts, aggressive behavior, agitation or irritation,

increased physical activity, risky behavior, spending spree, increased drive to perform or achieve goals, increased sex drive, decreased need for sleep, easily distracted, careless or dangerous use of drugs or alcohol, delusions or a break from reality that causes psychosis, and poor performance at work or school.

Depressive episodes consists of periods of sadness, hopelessness, suicidal thoughts or behaviors, anxiety, guilt, sleep problems, low appetite or increased appetite, fatigue, loss of interest in activities previously enjoyed, problems concentrating, irritability, chronic pain, frequent absences from school or work, or poor performance at school or work.

Dialectical Behavior Therapy (DBT): A modified version of cognitive behavioral therapy developed by Linehan (1999).

Historical, Clinical, and Risk Checklist (HCR-20v2): A risk for violence checklist that is completed to assess a patient's risk for violence. The acronym HCR-20v2 was derived by the developers of the HCR-20 (Douglas, 2013).

Major depression: A mood disorder that causes continued feelings of sadness and hopelessness. Patients diagnosed with major depression disorder will be discussed throughout the study and refers to patients that experience symptoms such as: periods of sadness, hopelessness, frequent suicidal thoughts or behaviors, anxiety, guilt, sleep problems, anger outburst, lack of energy, slowed thinking and body movements, low appetite or increased appetite, fatigue, loss of interest in activities previously enjoyed, problems concentrating, irritability, chronic pain, frequent absences from school or work,

or poor performance at school or work, as outlined in the DSM-5 (American Psychiatric Association, 2013).

Men's Trauma Recovery and Empowerment Model (M-TREM): A term used to refer to a specific male trauma program, as distinguished from the female TREM program (Community Connections, 2008).

Mental illness: A general term defined in this study as referring collectively to "all diagnosable mental disorders or health conditions that are characterized by alterations in thinking, mood, or behavior associated with distress and or impaired functioning"(U.S. Department of Mental Health and Human Services, 1999, p. 39).

Posttraumatic stress disorder (PTSD): A mental health disorder that is brought on by a traumatic event that is experienced or witnessed. This diagnosis refers to patients who experience symptoms of intrusive memories, avoidance, negative changes in thinking and mood, changes in emotional reactions, and intensity in the symptoms experienced, as outlined in the DSM-5 (American Psychiatric Association, 2013).

Schizoaffective disorder: A chronic brain disorder that can be disabling. Used throughout this study to refer to those who experience both schizophrenic symptoms and mood disorder symptoms. These symptoms consist of: delusions, hallucinations, major depressed mood episodes, periods of manic mood or sudden increase in energy, issues with cleanliness and hygiene, and paranoid thoughts or ideas, as outlined in the DSM-5 (American Psychiatric Association, 2013).

Schizophrenia: A chronic brain disorder that can be disabling. Used throughout the study to refer to patients who have been diagnosed with a severe mental illness that

experience symptoms of hallucinations, delusions, thought disorder, movement disorder, experience a lack of pleasure in everyday life, have a flat affect, and experience cognitive issues that relate to memory, issues functioning, and trouble focusing or paying attention as discussed in the Diagnostic and Statistical Manual of Mental Disorders 5th edition (DSM-5) (American Psychiatric Association, 2013).

Substance Abuse: A pattern of drug use in which the person consumes amounts that are harmful to themselves and others. This study uses the DSM-5 definition of substance abuse as a pattern of substance use leading to clinically significant impairment or distress by recurrent substance use that results in failure to fulfill work or school obligations, substance use that causes physically hazardous situations, substance use related legal issues, or substance use continued despite the use exacerbating issues (American Psychiatric Association, 2013).

Trauma: A term referring to an unpleasant event such as an accident or rape that has caused an individual to have emotions, reactions, or symptoms of flashbacks, headaches, or difficulty moving past the event (American Psychiatric Association, 2013).

XYZ Policy: A pseudonym that used to confidentially refer to policy developed by the research site.

Assumptions

The assumptions of this quantitative study are that every patient admitted into a state psychiatric facility suffers from a form of posttraumatic stress disorder or trauma. This assumption is based on the patient's experience of becoming initially hospitalized (McDuff, 2008), and experiencing the trauma of being locked in a psychiatric facility.

Another assumption that is made within this study is that each patient assigned to the trauma programming has been diagnosed with trauma and that he participates in the group. This assumption is made due to not having the ability to identify if the patient has verbally participated in the group or not. The completion of the HCR-20v2 is an assumption that the rater/ assessor understands, is competent, and it is within their scope of practice to complete an HCR-20v2. This assumption is made as the rater/assessor assigned to complete the HCR-20v2 is licensed within the state as a psychologist or licensed social worker and has received training in properly assessing a patient using the HCR-20v2.

Scope and Delimitations

The scope of this study identified if there was a significant difference in the risk for violence over a five-year period with patients that have received trauma programming. The use of the nonequivalent control group design allowed me to utilize archival data from the trauma groups that have already occurred. These groups were already completed and the patients were already assigned. Due to this, I did not have the ability to randomly assign the patients to their respective trauma groups which creates a possible bias to the outcome of the study. The nonequivalent control group design allowed for the groups to be different prior to the study. The delimitations of this study included the use of only male patients that have attended M-TREM, DBT or Art and healing trauma program. The male patients have at least three HCR-20v2 scores assessing them for their risk for violence.

Limitations

Limitations of this study are the population and sample size of 75. Due to the availability of archival data and the number of males that have attended the trauma programs the sample size is limited and may not be generalized to other settings. The nonequivalent control group design may be vulnerable to internal validity when it comes to the selection process. The prior differences between the groups may pose a threat as well with affecting the outcome of the study (Trochim, 2006). Using the One-way ANOVA analysis may pose a bias in the study with regard to the effect size. This is addressed by increasing the sample size to decrease the sampling bias that could occur in the study. The higher the power is in the study, the better the effect size will be as opposed to lower powered studies (Borenstein et al., 2011).

Significance

This study will contribute to the mental health profession because it will help inform administrators about the benefits and weaknesses of using the trauma track programs and its impact on patient risk assessment outcomes for patients with trauma based symptoms in general and the M-TREM group specifically. Patients may benefit from the trauma track program if they are identified as having a history of mental illness, substance abuse, and trauma. By properly identifying and addressing the appropriate treatment for patients, this could decrease the rate of relapse for mental health patients with trauma related symptoms and help to close the revolving door that occurs in the state psychiatric hospitals for these patients (Goetz, 2013). In addition, patients will benefit from the information regarding the type of treatment they may receive based on a

comprehensive assessment that will assist the treatment team with recommending the appropriate groups that will assist patients in lowering their risk for violence. This will bring about social change in the way that treatment is provided in the state psychiatric hospitals. It will bring awareness to the appropriate plans for successfully treating patients and will assist in providing them with a long-term plan for a successful recovery instead of a short-term plan of action.

Summary

With many of the issues that psychiatric hospitals face when it comes to risk for violence and providing trauma focused treatment it is important for administrators to obtain further information as to what can influence reducing the risk for violence. This study identified if there was a significant difference in the risk for violence relative to the specific trauma program attendance. This information can be useful in planning treatment for patients that have a history of violence and trauma. The use of archival data allowed me to use retrospective data of patients that have already received trauma program treatment and have been assessed for risk for violence as measured by the HCR-20v2. This study assisted in providing supportive information as it relates to the outcomes of the trauma groups in relation to the risk for violence. I will now discuss these topics in-depth in Chapter 2.

Chapter 2: Literature Review

Introduction

There are many patients admitted into state psychiatric hospital facilities that suffer from previous history and current trauma and posttraumatic stress disorder (PTSD) from their stay in a state psychiatric hospital (McDuff, Cohen, Stevenson, and McWilliams, 2008). Even with programs offered within the state psychiatric hospitals, there remain issues with the rate of discharge and higher rate of rehospitalizations for patients that have a diagnosis of PTSD or suffer from a history of trauma (McDuff et al., 2008). This study addressed a research gap concerning trauma track program usage in state psychiatric hospitals and how it relates to patient risk for violence, which in turn influences patient privilege level, discharge, and aftercare planning. This lack of research presented a problem for hospital administrations because of the lack of trauma-informed care when it comes to assessing for risk of violence with patients suffering from a history of trauma. The lack of trauma-informed care created a gap in services that are provided to patients to assist them with managing their mental health illness and providing them with valuable coping skills.

This study was designed to address a gap in the literature regarding trauma track programs and their impact on risk for violence outcomes for hospitalized patients with PTSD or trauma-related backgrounds. The study specifically explored how attendance or lack of attendance, to a trauma group on the treatment mall was related to a patient's risk for violence in an archival data set. In addition, this study explored whether the Male Trauma Recovery Empowerment Model (M-TREM) group was more efficacious in

positively impacting patient risk for violence than the other treatment groups offered at the study site.

The patient's elected attendance at a trauma group, or lack of attendance at a trauma group on the treatment mall, can influence and explain the risk for violence over a five-year period. The treatment mall is an environment that simulates the community that the patients return to once they are not hospitalized. Treatment malls are offered in some psychiatric hospitals and is a separate distinctive space where patients go to gain necessary skills that they will utilize in the community upon discharge. In treatment malls, the Historical, Clinical, and Risk-20 version 2 (HCR-20v2) is used to measure the violence risk predictor of patients in many different occupational settings for the delivery of services in health care, social service, criminal justice, and other occupational settings. This study applied cognitive behavioral therapy to assess connections between patient attendance to the trauma groups and privilege levels and risk for violence, using scores on the HCR-20v2.

Literature Search Strategy

I used the following library databases to review the literature: *EBSCO HOST: SocIndex with Full-Text, PsychInfo, ProQuest Dissertations and Theses Full Text, Dissertation and Theses at Walden University,* and *Google Scholar*. The key search terms for this study were from a preliminary search of the following: *HCR-20v2, cognitive behavioral therapy, psychiatric, M-TREM, dialectical behavior therapy (DBT), art and healing, schizophrenia, schizoaffective disorder, bipolar disorder, major depression disorder, treatment malls, treatment teams, inpatient, psychiatric hospital,*

inpatient privilege level system, mental health, group treatment, trauma, mental illness, psychiatric hospitalization, interdisciplinary team, posttraumatic stress disorder, violence, art, therapy, PTSD, substance abuse, *dissociation*, and *intensive*. The examined literature primarily dates from 2010-present, and comprises scholarly journal articles, peer-reviewed articles, various state government websites, and organizational websites. I have extensively reviewed the literature on the use of M-TREM, DBT, and art and healing groups in relation to the use of HCR-20v2, but did not identify any prior research that evaluated if the monitored behaviors improved over time with attendance to the trauma group treatment as measured by the HCR-20v2.

Theoretical Foundation

I chose cognitive theory (CT) and social learning theory (SLT) as the theoretical foundations for this study and the basis for explaining why attendance to a specific trauma program is important in the delivery of services to patients. Cognitive theory was developed by Aaron Beck in the 1960s, and is used to study the behaviors of patients in shaping how the patient feels, what the patient believes, and how the patient behaves in the future (Beck & Beck, 1995; Martin, 2007). This theory argues that the use of cognitive and behavioral strategies can assist a patient in changing their negative thoughts and behaviors (Martin, 2007). Cognitive theory has specifically been used to help change a person's irrational thoughts and behaviors by providing the person with education and reinforcing positive behaviors and thoughts that will assist them in making changes for the better (Grohol, 2004).

Social learning theory was developed by Albert Bandura in the 1970s, and combines cognitive and behavioral frameworks. This theory explains human behavior in terms of the reciprocal interaction of the patients cognitive, behavioral, and environmental influences (Bandura, 1971); its major components consist of attention, retention, reproduction, and motivation. The attention component of social learning theory integrates an increase or decrease in the amount of attention paid towards learning. The retention component integrates discussion of what was remembered from paying attention to what is taught. Reproduction is the component that allows patients the ability to begin copying what was learned. The final component is motivation; this component explains the patients reason to continue using what was learned with the help of incentives, past behavioral rewards, and witnessing others positive behaviors (Bandura, 1971).

Cognitive behavioral therapy has been used in a previous study to identify if group attendance makes an impact on patient treatment. Bradley, Baker and Lewin (2007) documented a decrease in the use of acute mental health services when attendance was more frequent to four monthly baselines. This study was completed using service evaluations with the use of clinician-administered ratings that used four retrospective monthly baseline observations in comparison to 12 of the three monthly post recruitment observations, with 39 participants. This study was limited by the small group number of participants, the lack of intervention control conditions, a reliance on clinician ratings of symptomatology and substance use, the absence of individual assessments and follow up

procedures. It was highlighted in the study that even with the identified limitations the study still reflected the natural nature of the sample (Bradley, Baker and Lewin, 2007).

The use of CBT for treatment facilitates patients establishing a repetitive behavior pattern such as attending a group that will positively influence their treatment. For example, CBT has been shown to decrease the rate of recidivism of violence with attendance to the treatment groups (Lawson, 2010). Attending the various trauma groups offered at a state psychiatric hospital is a predictor to improving the patient's risk for violence scores for the HCR-20's clinical and risk scores. Cognitive behavioral therapy and trauma focus on the victim's memory functioning, information processing, shattered or challenged core beliefs, avoidance strategies, and self-criticism (Howell, 2012). Hogan and Enis, (2010) completed a statistical meta-analysis from the last 15 years included male participants aged 18 and older completed using an r-correlation coefficient. The study measured age, scores on the brief psychiatric rating scale (BPRS), scores on the HCR-20 clinical scale, scores on the Hare psychopathy checklist (PCL), psychopathy checklist-revised (PCL-R), and the psychopathy checklist screening version (PCL:SV). This study found the use of the HCR-20 v2 to be useful with the strongest effect size with a mean of $r = 0.35$ and the HCR-20 total score mean $r = 0.33$, based on Cohen's criteria.

Hogan and Enis (2010) also found the use of Hare PCL scales to be useful in informing assessments of risk for inpatient violence. One limitation of the study was that the literature review was sparse due to the "file drawer effect" of the authors only having access to certain studies (Hogan & Enis, 2010, p. 142). The lack of replication of the study limited the studies that researched specific forensic psychiatric samples, and the

variability of the effect sizes as shown by the size of the ninety-five percent credibility intervals. Hogan and Enis, (2010) discussed the need for future studies to explore factors that predict forensic psychiatric inpatient violence. Hogan and Enis', (2010) study relates to my study in that it contributed to assessing attendance to trauma programming and HCR-20v2 scores of forensic male patients in an inpatient psychiatric facility.

There are several studies that support the use of trauma program treatment. For example, Cinamon, Muller, and Rosenkranz's (2014) study of poly-victimization and trauma severity were researched as predictors of treatment response as measured by the trauma symptom checklist-40 and the symptom checklist-90-R at admission, discharge, and at six months. One hundred sixty-one male and female clients aged 18 years and older of an inpatient trauma treatment program were the sample population used for this study. It was found from this study that the treatment programs offered in an inpatient setting was applicable to many different patients that also had a greater number and higher severity on the trauma symptom checklist-40 and the symptom checklist-90-R, of victimizations. Trauma severity analyses discovered different types of abusive experiences generally did not predict treatment responses. Cinamon et al.'s (2014) study supported that use of trauma treatment in inpatient facilities, including the use of assessing trauma programming such as M-TREM, DBT, and art and healing programs in my study. Although there have been studies that supported the use of HCR-20 such as Hogan and Enis (2010, I have not found any studies that identified the risks or benefits of patient attendance to the trauma programs offered in relation to the increase or decrease of the HCR-20 risk assessment scores.

Both cognitive and social learning theories were applied in this study. These theories predicted that the independent variable of electing to attend a trauma group on the treatment mall would influence and explain the variables of men's trauma recovery empowerment model (M-TREM), dialectical behavior therapy (DBT), and art and healing trauma treatment groups offered on the treatment mall over a five-year period as measured by the HCR-20 version 2. Cognitive behavioral therapy focuses on educating patients to assist them in making positive choices and displaying positive behaviors; this theory will explain the effectiveness of the independent variable. The use of CBT relates to the expected findings of the research study that support attendance to a specific trauma group will decrease risk for violence scores on the HCR-20 over time. A more detailed explanation of this theory in relationship to the current study will be provided in Chapter 2.

This study helped fill the gap in research regarding trauma track programs and their impact on risk for violence for hospitalized patients. The study explored how attendance to a trauma group on the treatment mall is related to the patient's risk for violence as measured by the HCR-20 version 2 assessment scores. In addition, this study explored if whether the men's trauma recovery empowerment model (M-TREM) group is more efficacious in positively impacting patient risk for violence ratings than the other treatment groups offered. Review of the literature will provide in-depth information regarding psychiatric hospital trauma, treatment teams, the use of the HCR-20, privilege levels, treatment malls, progression through treatment, M-TREM, DBT, and art and healing programs.

Literature Review

An extensive review of the literature suggested there is little research that focused on the use of the HCR-20v2 and the effectiveness of the trauma group programs. There are many variables that are a part of the treatment process that are factored into the attendance of the groups and the use of the HCR-20v2 risk for violence assessment. The literature review will highlight gaps that relate to the current study. Review of the literature will discuss psychiatric hospital trauma, treatment teams, HCR-20 version 2, privilege level systems, treatment malls, progressing through treatment, and the particular trauma groups offered in the psychiatric hospital in the Midwest of the United States.

Psychiatric Hospital Trauma

Becoming admitted into a psychiatric hospital can be a traumatic experience in itself. Post-traumatic stress disorder may increase vulnerability to traumatic and iatrogenic experiences (Cohen, 1994; Cusack, Frueh, Hiers, Suffoletta-Maierle, & Bennett, 2003; Frueh et al., 2005). Patients are stripped of their right to leave at their will. Patients may also experience traumatic events while being hospitalized by witnessing another patient suffering from symptoms or them being placed in restraints and forced to take medication by court order (Srivastava, 2013). While hospitalized in the state psychiatric facility in the midwest, patients are told when to go to bed, when to wake up, when to take medications, when to take showers, wash their clothing, and attend groups. The patients have to be accounted for, and they are on locked units with a patio that allows them to go outside, but they are surrounded by brick walls and can only look up at the sky.

The admission into a psychiatric hospital is supposed to be a time that the patient can receive treatment in a supportive and calm sanctuary type environment. "However, iatrogenic events in the hospital may interfere with treatment delivery and adherence" (Shaw, McFarlane, & Bookless, 1997, p 438). As noted in Cusack et al. (2003), PTSD is highly prevalent among persons with severe mental illness (SMI). Cusack et al. completed a research study of men and women with a history of psychiatric hospitalizations who attended five mental health center clinics within a state public mental health system. The participants ranged in age of 19-73 with fifty-nine percent male, fifty-five percent Caucasian and fifty-three percent single. Ninety percent of the participants held a high school diploma or higher. The principal investigator of the study developed Psychiatric Experience Questionnaire based on the focus groups with consumer affairs coordinators to assess for the participants experiences that they found to be harmful in their stay at an inpatient setting. The Trauma- Assessment for Adults (TAA) was used to collect information from traumatic events experienced outside of a hospital setting and the PTSD Checklist (PCL-C) was used to measure the frequency of all the seventeen DSM-IV PTSD symptoms. A descriptive analysis was completed for all of the variables, a One-way ANOVA was completed to compare groups of variables and a multiple regression analysis was used to determine the relative contribution of previous trauma history and sanctuary trauma to the dependent variable of subjective distress. From this study it found that eighty-six percent of participants reported institutional traumatic events and procedures, forty-three point nine percent reported sexual or physical assaults, thirty-eight point six percent reported coercive measures, twenty-six

point three percent reported witnessing traumatic events, and twenty-two point eight percent reported verbal intimidation/abuse. Out of the total participants forty-seven percent reported experiencing a DSM-IV defined traumatic event while in the hospital, twenty-two percent reported witnessing physical assaults, eighteen percent reported experiencing physical assaults, seven percent report being sexually assaulted by another patient, and five percent reported witnessing another patient being sexually assaulted. The limitations of the study included not being able to generalize the study due to potential sampling bias, the subjects volunteered to complete the study from community mental health clinics using DSM-IV criteria, and the sample was small and not many outcome measures were used. This study relates to my study because it discusses the multiple ways that patients experience traumatic events in society and while they are hospitalized in an inpatient facility. Patients who are admitted into a psychiatric facility are SMI and have experienced some form of trauma or have been diagnosed with posttraumatic stress disorder (PTSD). Once a patient is admitted into the hospital, they are assigned to a specific housing unit with a treatment team that evaluates the patient using the risk assessment to measure risk for violence using the HCR-20 v2.

Treatment Team

The responsibility of the treatment team consists of identifying areas in which the patient needs treatment, referring patients to different treatment groups offered on the treatment malls, and assisting with initiating the increase in privilege levels by submitting the risk assessment HCR-20v2. Further discussion of the treatment groups, treatment mall, HCR-20 v2, and privilege levels will be discussed later in this chapter. As

discussed in the Mental Health Legal Advisory Committee document (2005), the treatment team determines the patient's privilege levels based on the patient's behaviors, mental health symptoms, and ability to follow the hospital rules. In the state psychiatric facilities in the Midwest, the patient's treatment team consists of a psychiatrist, psychologist, social worker, occupational therapist, substance abuse mental illness (SAMI) counselor, and nurse. The treatment team meets with patients a minimum of once per month to discuss their overall progress with treatment. A study completed by Bowers et al. (2005) conducted interviews with multidisciplinary staff regarding the rationale for admission, their care and treatment philosophy, and the roles of different professionals. The study used a total of forty-seven multidisciplinary staff that included thirteen ward managers, eleven occupational therapists, nine consultant psychiatrists, and fourteen nurses. It was noted that the more involved the treatment team members were in the patient's treatment, the more improvement the patient made with regard to his or her activities of daily living skills. The treatment team can refer patients for higher privilege levels based on patient progress in treatment. There are five privileges levels noted in the state psychiatric facility in the Midwest. Within the psychiatric facility the multidisciplinary team has to work with the patient to assist them with activities of daily living skills, attending treatment groups, and taking medication. The five privileges are discussed in further detail in the upcoming sections.

Privilege Levels

In a psychiatric hospital, the rate of the patient's privilege level increase determines when a patient is discharged from a state psychiatric hospital. Page, Hooke,

and Rampono (2005) completed a study analyzing the length of stay for inpatient psychiatric admissions. The sample consisted of 1,227 consecutive inpatient admissions with a participant mean age of 41.6. That included seventy-one percent of the sample were female and fifty percent of the sample had contact with the hospital one to two times prior to the time the study took place. The study found that within the first two weeks of stay in a psychiatric hospital the likelihood of being discharged was greater the first few days from admittance. After the first few days, the rate of discharge decreased around two weeks, one-month, and two-months from the patient's inpatient psychiatric hospitalization. The importance of discharge planning within a state psychiatric hospital is vital in planning the treatment of the patient during his or her hospital stay. Planning discharge from a psychiatric hospital with trauma informed care can decrease the rate of rehospitalization of the patients. In a study completed by Steffan, Kosters, Becker, and Puschner (2009) a systematic review and meta-analysis found studies from an electronic search of inclusion and exclusion criteria that they could use to extract data from. Of the studies that were found there were eleven studies that was included in their review and meta-analysis. Six of the studies were randomized and controlled trials, three of them were controlled clinical trials, and two were cohort studies. The limitations of their study was the small number of trials, small sample sizes, and that the results could only be generalized to the USA, Canada, and the UK, and further discharge planning should go into the specific diagnostic subgroups. It was highlighted in the study that trauma-informed care can improve the aftercare that patients receive in the community for the mental health care in the least restrictive setting due to their improvement in their mental

health symptoms (Steffen, Kosters, Becker, & Puschner, 2009), and presumably their risk for violence. This study relates to the importance of my study of properly planning the care and discharge of patients in an inpatient setting. It supports that with proper trauma care treatment it will improve the chances of the patient moving to the least restrictive setting and reducing rehospitalization.

Privilege levels in a state psychiatric hospital consist of five levels (Mental Health Legal Advisory Committee, 2005). On level one, the patient is considered high risk. On this level, the patient is admitted and assessed, is confined to the unit, and is on close watch by the unit staff. Level two is the level that patients are removed from close watch, but they are still restricted to the unit at all times (Mental Health Legal Advisory Committee, 2005). The patient is only allowed off the unit at the discretion of the patient's treatment team for meals and treatment mall groups. Level three is the level that the patient is allowed off the unit and can go to the patient bank and out on the treatment mall during specialized hours (Mental Health Legal Advisory Committee, 2005). On level four, the patient is allowed off the unit and allowed to leave the state psychiatric hospital under the supervision of a case manager from a local mental health agency or other hospital staff (Mental Health Legal Advisory Committee, 2005). Level four is also the level that patients begin to discuss their discharge planning, find housing, and other resources to assist them for when they are discharged from a state psychiatric hospital. Level five is the level that patients are allowed off grounds to attend day programs at a local agency, and they can go out on passes for a designated time (Mental Health Legal Advisory Committee, 2005). The passes allow the patient to visit family members, go to

work, locate housing, and return at a designated time that is set by the patient and his or her treatment team. The only way the patients can achieve these levels is by the treatment team submitting the HCR-20 v2 to assess and document detailed information regarding the patients' progress in their treatment, mental health symptoms, and ability to follow hospital rules through the lens of their treatment team. A forensic review team, which consists of two psychologists, determines each movement in patient privilege level. Prior to the forensic review team meeting with the patient, the interdisciplinary treatment team works collaboratively together along with the patient's case manager to complete an HCR-20 v2. McDuff, Cohen, Blais, Stevenson, and McWilliams (2008) provided a look into incorporating a screening technique in a psychiatric hospital to screen for patients at admission for a history of trauma.

Historical, Clinical, and Risk Assessment (HCR-20 v2)

Psychiatric hospitals utilize the HCR-20 v2 to assist in predicting the risk for violence in the hospital. In the past and present studies completed using the HCR-20 v2, it is noted to be a good predictor in assessing for recidivism in violence over a 12-month period and longer (Gomar-Soñes, Andrés-Pueyo, Pomarol-Clotet, & Arbach-Lucioni, 2011). Gomar-Sones et al. (2011) used a prospective longitudinal study with seventy-eight patients. The sample included 74.4% males with a mean age of 42.8, most of them were unemployed (97.4%), 75.6% were single and 73% had little to no education. This study found that patients who scored above the HCR-20 mean score were 2.1-2.5times more likely to be violent than those scoring below the mean score. The psychiatric hospitals in the Midwest also utilize the HCR-20 v2 to assess if the patient is appropriate

for their privilege level increases. With the use of the HCR-20 v2, the treatment team can assess the patient for the next level. The clinical and risk section is heavily reviewed when it comes to assessing for the next highest level in privileges. These two sections are a way to gage the patient's progress in his treatment. Tracking the changes in the scores for the clinical and risk sections over a five-year period will allow for the difference in variation at different points in the patient's treatment.

Treatment Malls

The treatment mall is what houses the patients' groups for mental health, substance abuse, personal care such as a barbershop and store, as well as activities that consist of arts and crafts, music, church, and exercise groups. As discussed in Goetz (2013), treatment malls are set up similarly to community colleges. In the state psychiatric hospitals, there are civilian patients mixed with forensic patients that are on the treatment mall. The forensic population can be admitted to the hospital initially as restoration to competency for a period of 30 days. After 30 days, the courts will consult the hospital to determine if the patient has been restored to stand trial. If the patient is unable to be restored, then the court will order the patient to be hospitalized for a longer period and be classified as not guilty by reason of insanity or incompetent to stand trial under court jurisdiction. According to Goetz (2013), the patient's length of stay can average about 120 days. While patients are on the treatment mall, clinical staff observes the interactions of patients with their peers and other staff.

Dvoskin and colleagues (2002) discussed the development of a state psychiatric hospital that incorporated a treatment mall within the facility for the patients. A

treatment mall was developed to provide a replication of society for the patient. The treatment is a way for the patients to develop social, emotional, cognitive, and behavioral development while hospitalized. This is an important part of the treatment that patients receive while that are hospitalized within the research setting that I plan to use data for my research. "Patients who are active and valued participants in their own individualized treatment plan can measure their success by increased opportunities and tolerance for work, study, and socialization in their home communities" (Ballard, 2008, p. 31). The study also provided information supporting the use of treatment malls in a psychiatric hospital setting. The article addressed the benefits of the treatment mall for psychiatric patients' recovery and found that there was a ninety-two percent rating of overall satisfaction of the treatment mall groups and activities and an eighty-one percent rating of patients reporting that the treatment mall was helpful with preparing for discharge. Donat (2006) discussed the use of day treatment programs in public psychiatric hospitals for patients that are psychiatrically impaired and discussed the use of behavioral science in developing the day program classes offered to the patients to assist in their recovery. In the study Donat introduced two phases of treatment; the first phased introduced facilitating communication between treatment teams and class leaders, and the second phased introduced using generic objectives as guides. The findings are that by the end of phase I (nine months) the class leaders' assessment of appropriateness of individualized objective improved from eighty-six percent to ninety-one percent. At the end of phase II the appropriateness of the individualized objectives for members of their classes improved to ninety-four percent. The limitations Donat's study was the absence of

psychosocial rehabilitation programming (PSR) class members. Even with the identified limitation, the study still provided a view of the needs from the patients who require assistance. Holland and colleagues (2005) discussed the implementation of a treatment mall in a hospital in Washington, D.C. The article reviewed the steps taken to implement the treatment mall, prepare staff and patients, and provide effective treatment on the mall. Webster and Harmon (2006) discussed the importance of decision makers in the treatment mall programs. With all of the supporting information discussed above regarding the use of treatment malls in psychiatric hospitals, there remains a gap in the literature that supports the use of the specific trauma programs M-TREM, DBT, or art and healing with determining if a patient's risk for violence as measured by the HCR-20 v2 is appropriate to progress in their treatment.

Progressing Through Treatment

When it comes to treatment in a psychiatric facility, patients may feel helpless in their treatment and may feel as if they do not have a voice. Killeen, Carter, Copersino, Petry, and Stitzer (2007) utilized secondary data analysis from the National Institute of Drug Abuse Clinical Trails Network (NIDA CTN). The sample size included 445 study participants selected randomly, but only 410 had valid treatment data that could be used for the study. A Pearson-chi square analysis was completed to dichotomous variables and independent t test for continuous variables. An ANOVA was completed to estimate the relationship of the prior treatment history for the outcome variables with treatment group and treatment history that was identified as the fixed independent variables. The study explored the use of prize-based incentives for substance abuse patients. The uses of

prizes as an incentive were researched to find out if the outcomes would relate to the patient's abstinence. Even though the discussion of prized based incentives showed improvements in retention and substance use outcomes after patients receiving standard treatment and abstinence based motivational incentives. It was not discussed as to how the issue of prize based incentives was effective with those who have longer stays based on the use of motivational incentives. Limitations of the study highlighted that neither the type or duration of prior substance abuse treatment episodes were noted and secondly the participants with one prior treatment episode was included in the less treatment – experienced group and created distinct patient subgroups. Johansson (2009) evaluated the psychiatric outpatient unit with patients admitted with an array of diagnoses and monitored by an interdisciplinary team. The findings of the study highlighted 64.5% of patients were improved regarding symptom remission but also a considerable number of patients (60.5%) still were involved in dysfunctional groups after their treatment. These two studies show that when patients are provided with an incentive such as gaining higher privileges towards their discharge partially based on their risk assessment HCR-20; they will participate in their treatment and achieve greater results regarding their treatment. My study had a view into the longer patient stays to identify if privilege of the treatment mall, increase in privilege levels, and attending a trauma program will play a role in the patient lowering their risk for violence

In the state psychiatric facilities in the Midwest, there is different track programming that is offered to the patient that he or she could be assigned to either by the patient's personal interests or by recommendation of the treatment team. The different

track programming consists of on-unit groups that include social work, substance abuse/mental illness (SAMI), occupational therapy and nursing groups, education, life skills, vocational programming, responsible adult development, community involvement, power and control, stigma, and clinical care components program. For the purpose of this research, the trauma track programming was examined to identify if patient attendance to the different trauma track programs created a significant difference in patient HCR-20 v2 risk assessment scores. In the coming sections of this chapter the trauma track programming of M-TREM, DBT, and Art and healing will be reviewed.

Men's Trauma Recovery Empowerment Model (M-TREM)

The men's trauma recovery empowerment model (M-TREM) is derived from the trauma recovery empowerment model (TREM). The trauma recovery empowerment model (TREM) is a program that is designed for females who have a history of mental illness, substance abuse, and trauma. The use of cognitive restructuring, psychoeducation, and coping skills training are incorporated in the weekly sessions of 75-minute meetings that last for 29 sessions. Trauma recovery empowerment model (TREM) has three parts that consist of empowerment, trauma education, and skill-building. The empowerment section discusses topics for assisting women with learning strategies for how to establish safe emotional and physical boundaries, self-comfort, and accurate self-monitoring (Community Connections, 2008). The trauma education section assists the women with addressing their abuse directly: this includes sexual, physical, emotional, and institutional abuse. The skill-building section of the program changes the focus of the program to problem-solving and skill-training with addressing the

communication style, decision-making, managing out-of control feelings, and developing safer relationships (Community Connections, 2008).

In previous studies, the trauma recovery empowerment model (TREM) showed a significant difference in patients' mental health symptoms, substance abuse symptoms, and trauma symptoms (Morrissey, 2005). In a study conducted by Fallot, McHugo, Harris and Xie (2011) a quasi-experimental study was conducted with 251 female participants who had a history of physical or sexual abuse and had severe mental illness with a substance use disorder. In the study, the participants completed an initial assessment prior to treatment, then again at 6 months and 12 months. Trauma recovery empowerment model was provided to 153 participants at two separate sites. These participants made up the experimental group. Ninety-eight participants who did not receive TREM at a third site comprised the control group. The findings of this study highlighted a fifty-two percent reduction in alcohol and drug abuse severity, anxiety symptoms and current stressful events for the participants who received TREM programming. There were no significant differences (31.8%) in the change of posttraumatic stress disorder, global mental health symptoms, or physical and mental health symptoms related to the participants quality of life or the exposure to interpersonal abuse (Fallot, 2011). The limitations of the study identified were the nonrandomized design, the difference in the setting, and differences in mental health symptoms. The strengths of the study that were highlighted include the consistent findings in substance abuse are relevant for trauma survivors who suffer from anxiety, personal safety, and exposure to current stressors (Fallot, 2011).

The male TREM program is titled M-TREM. The M-TREM is a 24-session program that focuses on the "development of shared emotional and relational vocabulary. The focus of the group then shifts to abuse and the connections between trauma and psychological symptoms, such as addictive behaviors and relationship patterns" (U.S. Department of Health and Human Services Substance Abuse and Mental Health Services Administration, 2001, p. 1).

The M-TREM program provided in the state psychiatric facilities in the Midwest of the United States is designed for male patients who have a history of mental illness, trauma, and substance abuse or dependence. In the psychiatric facilities in the Midwest of the United States, there are two groups for 45 minutes each per week. The M-TREM group is an open group and has two facilitators that lead the group with one being a licensed psychologist and one being a program administrator. During the group, the facilitators cover each of the twenty-nine modules. Due to the differing levels of comprehension in the groups, the facilitators may incorporate a movie that relates to the module they are discussing that week to assist the patients with applying the skills learned. The facilitators then discuss with the patients in the group their level of understanding of the specific module that is covered. Previous research identified that the TREM program provided the same significant difference in the male participants as the females (Community Connections, 2008). There continues to be studies surrounding M-TREM with relation to posttraumatic stress disorder (PTSD), anger and hostility, mental health symptoms, and interpersonal quality of life. After a review of the studies that are published in peer-reviewed journals and articles there is still a lack of

understanding of how the M-TREM program directly relates to a decrease in the risk for violence using the HCR-20v2. Other trauma programs that are offered on the treatment mall includes dialectical behavior therapy to address other ways that patients' experience trauma.

Dialectical Behavioral Therapy (DBT)

Dialectical behavior therapy (DBT) is a modified version of the traditional cognitive behavioral therapy that was developed by Marsha Linehan (Freedman & Duckworth, 2013). Dialectical behavior therapy was developed for the treatment of chronically suicidal and self-injurious individuals that have been diagnosed with borderline personality disorder. Dialectical behavior therapy consists of four modules: covering the skills of core mindfulness, interpersonal effectiveness, emotional regulation, and distress tolerance.

The core mindfulness skills module is considered to be the basis of the other three modules. It concentrates on helping individuals focus on accepting and tolerating the emotions they may feel when they begin to challenge their habits, patterns of behaviors, and upsetting situations (Freedman, 2013). Specifically, this module will assist the individual with learning how to become in control of his or her mind, observe and identify his or her self, decrease his or her sense of emptiness, and find ways to maintain his or her feelings, opinions, and decisions around others.

The second module, interpersonal effectiveness skills assists individuals with "developing strategies for asking what one needs, saying no, and coping with interpersonal conflict" (Linehan, 1993, p.70). This module assists the individual to

decrease intense, unstable relationships, and assists with maintaining relationships. The third module, emotional effectiveness skills assist individuals with "learning to understand their emotions, reduce emotional vulnerability, and decrease emotional suffering" (Linehan, 1993, p. 85). Emotional effectiveness skills help the individual recognize that ineffective health habits can contribute to high-intensity emotions. Individuals begin to work toward healthy habits to regulate their emotions.

The fourth module, distress tolerance skills, assists the individual "with the ability to accept, in a nonevaluative and nonjudgmental fashion, both oneself and the current situation" (Linehan, 1993, p.97). Distress tolerance skills provide the individual with the skills necessary to tolerate and accept distress and, therefore, decreasing impulsive behaviors towards drugs, alcohol, eating, sex, spending, and self-injurious behaviors.

Linehan et al. (1999) completed a study using Structured Clinical Interviews (SCID) and the International Personality Disorders Exam (PDE). These researchers found that female patients with a diagnosis of Borderline Personality Disorder and posttraumatic stress disorder showed a 65% decrease in duration of inpatient hospital stays and 45% decrease in emergency room visits after one year of DBT treatment. The study used a sample size of 28 women between the ages of 18 and 45 years of age. The sample criteria include the women having a diagnosis of borderline personality disorder and substance use disorder or polysubstance use disorder. Subjects were excluded from the study if schizophrenia, another psychotic disorder, or bipolar mood disorder criteria were met. The participants were randomly assigned. Twelve participants in the experimental group received DBT treatment and sixteen participants in the control group

received treatment as usual. Major findings reported there was a forty-two percent reduction in substance abuse for the participants that received DBT treatment compared to participants who receives treatment as usual. Sixty-four percent of the participants remained in the DBT treatment group as compared to twenty-seven percent of the participants in the control group. At follow-up it was reported that there were significant improvements based on the Global Social Adjustment (GSA) scale and the Global Adjustment Scale (GAS), in the social and global adjustment in the participants who received DBT as compared to participants who received treatment as usual.

Some noted limitations included: (a) the use of the same institution to conduct the study (b) the sample size was small which could have affected the statistical power (c) there were issues with being able to generalize the results to a sample size that had more dysfunctional participants and males (d) there was a difference in therapist adherence levels in DBT, and (e) the participants in the DBT treatment group received more treatment as compared to participants who received treatment as usual (Linehan, et al., 1999).

The strengths from this study included: (a) the assessment measures were identical to the original outcome measure that was used, (b) a urinalysis was utilized during the study to ensure participants were tested for all major drugs, and (c) even though there was a small sample size, the results of the DBT treatment group still suggested that there was a large effect of the treatment that reduced substance abuse, helped to retain participants in treatment, and improved the social and global adjustment of the individuals (Linehan, et al., 1999).

The state psychiatric facility in the Midwest where the study occurred, offers the DBT group twice a week for 45 minutes each group. This group is an open group and is led by two licensed psychologists. One licensed psychologist leads the group on Mondays, while the other licensed psychologist leads a group on Thursdays. With the studies identified, there were still no direct links to how the use of DBT affects the risk for violence and impulsive behaviors if attending the DBT group. There is one other trauma group, Art and healing that is offered in the state psychiatric facility in the Midwest that assists with treating trauma in patients.

Art and Healing

Art and Healing is a form of therapy that is valuable in the mental health realm of treatment. It is suggested that creative activities can have a healing and protective effect on the mental well-being of patients (Leckey, 2011). Therapeutic art is a form of self-expression and assists in reducing blood pressure, stress, and increases the effectiveness of the immune system. There have been controversial research reports related to Art and healing treatment that suggests such treatments are weak. Assumptions were also made that the treatment lacks reliability and validity (Leckey, 2011, p. 502).

In a literature review completed by Leckey (2011) to investigate the effectiveness of creative activities and mental health well-being, an initial search of the literature found 47 studies that were identified regarding art and healing groups, but 36 of the studies were excluded due to them not directly linking the use of creative arts with the target client population of the current study or with mental health and well-being. The remaining 11 studies utilized quantitative and qualitative research methodologies that

indicated possible outcomes of mental state, interpersonal skills, social functioning, quality of life, and satisfaction with care. Between the 11 studies the age of participants ranged from 16-65, and the sample size ranged from 18-3900. There were different stratigies utilized in each of the 11 studies that included descriptive studies, quasi-experimental studies, and mapping. The major findings of these studies highlighted that engagement in creative activities do help to improve self-esteem, quality of life, and personal growth (Hacking, Secker, and Kent, 2006). Other studies found that creative arts assisted with improving depression and anxiety (White, 2009). As noted in Leckey (2011) it is difficult to measure the effectiveness of art and healing because of the lack of consistency and a clear definition.

Art and Healing is a program that was developed to work with those who have posttraumatic stress disorder or traumatic brain injury. The art and healing program cover three areas: awareness, discovery, and sharing. This program allows an individual to use art, music, writing, visual arts, and movement to express his or her thoughts and to assist with changing perspective, mood, and health (Nobel, Pickering, and Safyer, 2010). The Art and healing group offered at the state psychiatric facility in the Midwest of the United States, is led by a licensed psychologist and an occupational therapist. The art and healing group is an open group and meets twice a week for 45 minutes each. During the first session of the week, the patients participate in identifying a term such as abuse and they each craft a form of art to express what that term means to them. During the second session, the patients discuss their form of art that they have chosen and explain their thoughts and feelings regarding what that term means to men and women.

Gantt (2007) completed an outcome study with 72 participants. Ninety-eight percent were caucasian, seventy-seven percent were female, the y ranged between the ages of 13-69 with fifty-seven percent of the participants reporting having been physically and/or sexually abused in their childhood. The program provided art therapy, hypnosis, and video therapy in a naturalistic setting that utilized a pre and post test. The pre and posttest was measured by self-report using the following scales: Dissociative Experiences Scale (DES), Symptom Check List-45 (SCL-45), Toronto Alexithymia Scale (TAS), Impact of Events Scale (IES), and the Dissociative Regression Scale (DRS) a six-item questionnaire that was developed by the author to measure regression. The treatment provided occurred over a 1-2 week time frame Monday-Friday from 8:30am-4:30pm with a 1 hour lunch scheduled. The findings of the study were that 44% of the participants showed improvement, 8% of the participants remained unchanged, and 3% of the participants were worse after the treatment. Some of the limitations of the study included (a) researchers used a sample of convenienace (b) there were no comparison groups and (c) the study used self-report measures which does not always capture critical information that is needed in a study. Some strengths that were noted were that in the absence of functional regression trauma processing can occur without any delays and those who do not have access to trauma treatment can make progress by obtaining 1-2 week marathon treatment. It was determined in the study that a more controlled larger study would need to be completed to if the results were to be found relevant. However, even with this literature review there still remains a gap that directly links the use of Art and healing with the reduction of risk for violence as measured by the HCR-20 v2.

There are studies in the discipline of human services that further discuss the use of trauma focused treatment and the use of the HCR-20v2, but there are not any research studies found that contribute to the knowledge of how these groups reduce the risk for violence as measured by the HCR-20 v2. The next section will highlight some of the studies found that discuss the use of trauma focused treatment and HCR-20v2. The next section will also discuss studies related to the research questions identified for the research study.

Related Studies in Human Services Discipline

Researchers in the discipline of human services have approached the problem of trauma treatment and assessing for risk of violence by providing programs and groups geared to focusing on the trauma, but it does not directly link the treatment to the patient's progress towards reducing risk for violence. According to Suarez, Belcher, Briggs and Titus (2012) co-occurring substance use and trauma exposure are associated with increased risk of mental health disorders, school underachievement, and involvement with multiple systems of care. Their study utilized data sets from two different sites; the first site, the National Child Traumatic Stress Network (NCTSN) used a subset of data from 3,304 youths between the ages of 13-17 years, with 63% being female and 56% Caucasian; no other ethnicities were noted in the data set obtained from NCTSN. The data set criteria used adolescents that were primarily eligible for public insurance such as Medicaid. The second data set came from the Center for Substance Abuse Treatment (CSAT). A subset of 13,871 youths between the ages of 13-17 years with 27% being female were the participants. The data set criteria used included youth

that were entering substance abuse treatment. The study utilized descriptive statistic, logistic regression models, and a 2 X 2 Pearson chi-square test to analyze the data sets. From their study, results supported the co-occurrence of complex symptom patterns of posttraumatic stress and substance use that would benefit from an integrated system of care. Limitations of this study highlighted the cost-sharing requirements, different treatment that was provided and the cap on benefits. Even with the limitations noted the study still provided evidence documenting the many problems that adolescents experience in regards to with co-occurring traumatic stress and substance abuse issues with their involvement with multi-service systems. It is important that cross training across the forensic field and the mental health field occur in multiple settings including psychiatric facilities, jails, hospitals, prisons, and law enforcement officials.

Based on the literature review, I selected the independent variables as attendance to the trauma groups and the dependent variable as the risk for violence as measured by the HCR-20 scores over a five-year period. The study allowed me to identify whether attendance to a trauma group is related to a reduction in risk for violence as measured by the HCR-20 over a five-year period.

Retrospective data collected over a five-year period was used. Allen and Howell (2008) used retrospective data to evaluate and promote understanding of the content and implementation of the risk assessment tool HCR-20v2 within a high-security hospital. The study viewed risk in institutional violence over a 12-month period following the initial assessment. Allen and Howell (2008) used a sample size of 62; the mean of age of participants was 38. Participants in the study were diagnosed with mental retardation,

personality disorder, schizophrenia, and other Axis I disorders. From this study it was found that in the 12-month follow-up seventy-four percent of the participants were noted to be involved in at least one violence episode, fifty-seven percent were reported to be involved in a level one incident which involved physical aggression or violence that resulted in an injury, and sixty-eight percent were reported to had been involved in a level two incident that involved general aggression of verbal aggression or damage to property (Allen and Howell, 2008).

The HCR-20 scores in my study were analyzed with the historical score remaining constant. The historical score is information that is gathered during the initial assessment for risk gathered using the HCR-20 v2. This includes information prior to the patients' hospitalization such as previous violence, age at first violent incident, relationship instability, employment problems, substance use problems, major mental illness diagnosis, psychopathy, early maladjustment, personality disorder, and prior supervision failures. The clinical score changing over a five-year period and includes information related to the patients progress at the current time. This includes the patients' insight, negative attitudes, active symptoms of major mental illness, impulsivity, and responsiveness to treatment. The risk scores changing over a five-year period includes the plans feasibility, exposure to destabilizer, personal support, compliance with redemption attempts and any stressors. Since the clinical and risk scores are assessed at the present time, the scores will provide an indication of the progress that the patient is making over a five-year period. The next section will provide a concise summary of the

findings in the literature review, identify how my research study will fill the gap in the literature, and highlight areas that still need to be studied.

Summary and Conclusions

In a review of the literature, it is apparent that the use of M-TREM, DBT, and art and healing are beneficial in the treatment of inpatient psychiatric patients (Fallot, 2011; Foundation for Art and Healing, 2010; Freedman, 2013). It is also apparent that the use of the HCR-20 v2 is a valid and reliable tool to evaluate how likely a patient will become violent in the future (Douglas, 2011). The use of the HCR-20 v2 has been tested in many different settings including psychiatric hospitals. Unfortunately, there are limited studies evaluating the patient's progress with the use of trauma treatments such as M-TREM, DBT, and Art and healing and whether they reduce risk of violence as measured by the HCR-20 v2.

The present study assisted in gaining an understanding of how the use of trauma programming (M-TREM, DBT, and Art and healing) impacted patient risk for violence as measured by the HCR-20 v2. This study contributed to the mental health profession because it will help inform administrators about the benefits and weaknesses of using the trauma track program, and the M-TREM group specifically, and their impact on patient risk assessment outcomes for patients with trauma-based symptoms and substance abuse issues. Patients may benefit from the trauma track program if they are identified as having a history of mental illness, substance abuse, or trauma. By properly identifying and addressing the appropriate treatment for patients, this could decrease the rate of relapse for mental health patients with trauma-related symptoms and help to close the

revolving door that occurs in the state psychiatric hospitals for these patients (Goetz, 2013).

In addition, patients will benefit from the information regarding the type of treatment they receive to assist the treatment team with making recommendations to the appropriate treatment groups to lower patient risk for violence. The study will bring about social change in the way that treatment is provided in the state psychiatric hospitals. It will bring awareness to the appropriate plans for successfully treating patients and will provide them with a long-term plan for a successful recovery instead of a short-term plan of action. Therefore, the use of quantitative data analysis using a nonequivalent control group method allowed the necessary research to be conducted to gain a deeper understanding to answer the research study question as to whether the use of trauma group program attendance as a form of treatment decreased the patient's risk for violence over time. Chapter three will provide an explanation of the nonequivalent control group design and a detailed outline of the research plan.

Chapter 3: Research Method

The purpose of this study was to identify if there is a significant difference in patient risk for violence among inpatient males that have a diagnosis of schizophrenia, schizoaffective disorder, bipolar disorder, or posttraumatic stress disorder based on the type of trauma group counseling program that participants have attended. This study was conducted in a state psychiatric hospital in the Midwest of the United States. This section will provide an in-depth review of the nonequivalent control group research design and the rationale for its use, the research methodology, and the threats to validity.

Research Design and Rationale

The literature review for this dissertation study did not identify any prior studies that showed a decrease in risk for violence related to a participant's attendance in trauma treatment groups. The studies identified by the literature review all used the same nonequivalent control group quantitative design that is utilized in this dissertation study. In a recent study, for example, the use of the nonequivalent control group design was utilized to assess if there is a difference in the time restriction at night between the hours of 10:00pm-6:00am in order to reduce the incidence of assaults in New Castle, Australia (Kypri, 2011). In this study, I used the nonequivalent control group design to allow me to use retrospective data from ABC State Psychiatric Hospital (pseudonym), compare the control group, and the experimental groups that are not essentially equivalent similar to the New Castle study (Trochim, 2006). This design does not have a feature for randomly assigning a sample population, per Campbell (1963).

In this study, the use of a nonequivalent control group allowed me to compare the M-TREM, DBT, and art and healing groups. My use of archival data compared preexisting groups from the data set in which the participants were already assigned to the specific groups. My analysis compared these groups to identify if any of them showed a significant difference in reducing the risk for violence as measured by the HCR-20v2 risk assessment. The independent variable in the study was identified as the specific trauma program attended, consisting of three categories: men's trauma recovery empowerment model (M-TREM), dialectical behavior therapy (DBT), and art and healing. The dependent variable was identified as the difference in the risk for violence as measured by scores on the HCR-20v2, a value that was computed from the difference over a five-year period in participant's scores on the HCR-20 v2.

A one-way ANOVA was used to identify if there is any significant difference in the risk for violence as measured by scores on the HCR-20 v2, a value that will be computed from the difference over a five-year period in participant's scores on the HCR-20 v2 and if that difference relates to the attendance of the trauma group attended. This ANOVA analysis was specifically used to determine if there was a significant difference in risk for violence assessment for participants after attending the M-TREM group, DBT group, or the art and healing group. Assumptions of ANOVA included that the groups are independent and unrelated, excluding participants that have attended more than one group. This method was also used by Taku, Cann, Tedeschi, and Calhoun (2012) to investigate posttraumatic growth and perceived growth among Japanese youths and determined whether or not there was greater growth reported in those who have

experienced trauma. Taku et al. (2012) used a one-way ANOVA to reliably relate the objective severity of the adversity to the perceived growth. Similarly, in this study I employed a one-way ANOVA to determine the risk for violence.

Methodology

This section will discuss in further detail the methodology that was used for the study. It will provide information regarding the sample size, sampling and procedures, the use of archival data, instrumentation and operationalization, a data analysis plan, threats to validity, ethical procedures, and data confidentiality.

The sample size in this study was determined using the G*Power analysis F test for ANOVA. The study used a nonprobability convenience sampling and purposive sampling procedures due to the use of archival data. As discussed further in this section Cohen's power primer was used to determine the effect size for the study.

Population

The target population of this study also consisted of men who had been inpatients at ABCSPH with severe mental illness and who have a diagnosis of schizophrenia, schizoaffective disorder, bipolar disorder, or posttraumatic stress disorder. The target population also had a history of participating in M-TREM, DBT, or art and healing trauma group programming. Toussaint (2007) identified the TREM program as being effective if the participants attended 12 or more sessions; as a result, this dissertation study set a minimum of attendance to 12 sessions to qualify a participant's data for use in the study.

Sample Size

The sample size estimated for this study was 73 participants. I computed this number using the G*power analysis F test for ANOVA (Faul, 2009), which is the test to account for all of the variables in the test. Due to the use of a single research site the sample size was less than other studies cited such as Toussaint, (2007).

Sampling and Procedures

The type of sampling that I used in this study was the nonprobability convenience and purposive sampling. Due to my use of archival data, there was no possibility of completing a probability sampling. The use of nonprobability convenience sampling allowed me to utilize the individual patients that are available at the state psychiatric hospital in the Midwest used in this study, ABCSPH. The purposive sampling allowed me to list criteria that would qualify the data to be utilized in the study. These criteria included participant gender, mental health diagnosis, and which trauma programs were attended. An additional criterion included patients who had assessment scores on the HCR-20 v2 instrument prior to beginning the trauma program treatment group and then had additional scores after attending at least 12 group sessions. The assignment of a specific trauma group program depended on the referral from the treatment team.

The specific procedure for how the samples were drawn was the use of archival data. At the time of the study, ABCSPH collected data for the purpose of tracking the attendance of patients to the treatment mall groups. Additionally, HCR-20v2 scores were regularly collected to assess the risk for violence of the patients in the hospital. The sampling frame for inclusion into the study consisted of male forensic patients who were

or had previously hospitalized at the time of the study with a mental health diagnosis of Schizophrenia, schizoaffective, bipolar, and major depression or posttraumatic stress disorder, and had been residents at ABCSPH at some period of time during the last five years. These criteria for inclusion in the study led to it only including men who had participated in either the M-TREM, DBT, or Art and healing groups for at least 12 sessions. Included participants also had recorded in their charts at least three HCR-20 v2 scores within the same five-year time period. One assessment score was recorded before the participant started attending a group and two assessment scores were recorded after the participant attended at least 12 sessions of trauma group. The exclusion criteria for the study excluded male civil or voluntary status patients; male patients who have not attended 12 sessions of M-TREM, DBT, or Art and healing trauma programming; and male patients who did not have two HCR-20v2 scores.

I chose the effect size based on both the literature and the G*power analysis (Faul, 2009). Cohen's power primer was developed by Jacob Cohen in 1992 as a way to standardize statistical power analysis for behavioral research studies (Faul, 2009). Cohen developed the terms small, medium, and large in terms of the operationalizing the effect sizes. According to this method, a small effect size is operationalized as .10, a medium effect size is operationalized a .25, and a large effect size is operationalized as .40 based on an ANOVA analysis. For an effect size of .25, α err prob of .20, power of .80, numerator *df* of 1, number of groups of 2 (clinical and risk sections of HCR-20 v2), and number of covariates of 3 (M-TREM, DBT, and art and healing), a sample size of 73

archival data was required. I chose the effect size, the alpha level, and the power level based on the estimated availability of data and Cohen's Power Primer (Cohen, 1992).

Archival Data

For me to gain access to the archival data, I had to request permission through the state psychiatric hospital in the Midwest of the United States, which will be further referred to as ABC State Psychiatric Hospital (ABCSPH) for the remainder of this study. The process will be discussed in further detail later in this section. Archival data that I used was gathered from the treatment mall and the forensic office located inside the state psychiatric facility. This data consisted of the attendance of each of the groups, participants of the groups, gender of the participants, and three of their corresponding HCR-20v2 scores. The archival data spanned over a time period of ten-years to ensure I had enough data that will meet the above-mentioned criteria.

The procedure for gaining access to the data set included reviewing XYZ policy (ABC State Psychiatric Hospital [pseudonym], 2014) that discussed the guidelines that govern the development, implementation, review approval and monitoring of research and investigational activities at ABCSPH. I had to identify which type of research I plan I conducted within ABCSPH that was identified as "documentary research." I then had to request to present a proposal to ABCSPH research committee through the committee chair, for review and consideration of my study.

At the next scheduled meeting, ABCSPH's research committee invited the researcher to attend and present her study for discussion, review, and consideration. If, the proposed study is not approved, the researcher can critique her proposed study and

represent it at the next scheduled ABCSPH research committee meeting. Once the study was approved the researcher's study was forwarded to the medical staff executive committee (MSEC) and appropriate IRB(s) for further review and consideration. The approved study had to be submitted to the MSEC and ABCSPH central office IRB for final review and approval. Once the approval from the ABCSPH research committee, MSEC, ABCSPH central office, and IRB(s) the researcher was allowed to begin the research study.

Instrumentation and Operationalization

The use of the HCR-20 assisted with identifying a history of trauma. The HCR-20 v1 was initially developed and published in 1995 by Douglas, Hart, Webster and Belfrage in response to demand to have a systematic way to assess forensic patients as inpatient and outpatient. Due to the lack of user-friendliness and clarity in administration and coding procedures, HCR-20 v2 was developed and published in 1997.

As discussed in Webster, Douglas, Eaves, and Hart (1997) HCR-20 Manual, The HCR-20 v2 is a checklist that assesses risk factors for violent behaviors in patients based on self-report, collateral reports, records, and information from the treatment team and current and past case managers. The checklist consists of 20 items that include; ten items past historical factors, five present clinical factors, and five future risk management issues. These variables can gain relevant information related to the patient's past, present, and future. The lower the scores are on the risk assessment HCR-20; the lower the risk is determined for an individual. The higher the scores are on the risk assessment HCR-20, the higher the risk is determined for an individual.

There have been over 200 studies using the HCR-20 v2. In a study by Singh (2011) 2100 clinicians were surveyed from 44 countries, and it was found that the use of the HCR-20 v2 was the most used measure to assess for risk of violence. Of all of the studies using the HCR-20 v2; it was found that the HCR-20 v2 was more strongly related to violence than any other measures. The HCR-20 v2 works comparably with patients from different countries and across continents, and it works similarly for men and women; it is sensitive to change, and the change predicts the potential for patient violence (Douglas, 2013). The HCR-20v2 is an appropriate instrument to use in this study because it has shown consistent inter-rater reliability and concurrent validity in predicting violence in over 2500 studies since 1997 (Douglas, 2011). As noted in Singh (2011), the HCR-20v2 was found to be able to measure the propensity for patient violence than other studied measures.

The HCR-20v2 instrument was appropriate to use for my study because it has been used in previous studies that viewed risk factors along with a time period. Douglas (2011) viewed the testing of the changed assumption over time in the change and violence study. In a study completed by Michel et al. (2013) the use of the HCR-20v2 was utilized to predict aggressive behaviors in males living in the community with mental health diagnosis of schizophrenia. That study found the HCR-20v2 to be a significant predictor of increased violent behavior.

The HCR-20v2 risk assessment checklist has been used in 35 different countries, and has been translated into 20 different languages. The HCR-20v2 has been used to assess male and female forensic, prison, mixed (combined civil and forensic), civil, and

juvenile settings even though it is not recommended to be used with adolescents. In each of the multiple studies that cited the use of the HCR-20v2 mentioned above, it has been found that concurrent validity and inter-rater reliability were able to be established in the study sample.

In the state psychiatric hospitals in the Midwest of the United States, the HCR-20v2 is completed either by the unit psychologists or social worker. Each section of the HCR-20v2 includes in-depth information and rating of how the patient is progressing through his or her treatment. Within the historical section of the HCR-20v2, forensic review team can document the beginning of treatment from when the patient first entered into the hospital and prior to admission. The historical section of the HCR-20v2 score remains constant throughout the patient's hospitalization and doesn't change with treatment. The historical section of the HCR-20 checklist includes ten areas that would be coded and can range from 0-2 on a scale. H1 discusses the patients' previous violence. Violence is defined as "actual, attempted, or threatened harm to a person or persons. Threats of harm must be clear and unambiguous. Behavior would have to be fear-inducing to the average person" (Webster, 1997, p. 24). H2 is the youngest age at first violent incident. Age is established by the date of the known violent incident" (Webster, 1997, p. 31). H3 discusses relationship instability. This area only rates relationships that are "romantic," intimate, or nonplatonic partnerships. H4 looks at employment problems. As discussed in Webster (1997), employment problems would include refusing to seek legitimate employment, or having a history of having jobs within short-term periods or frequently being fired or quitting. H5 looks into substance use

problems. Substance use problems also include the misuse of prescription drugs. This area of the checklist focuses on the impairments and functioning of health, employment, recreation, and interpersonal relationships. H6 focuses on major mental illness that are identified by a diagnosis based from the DSM-V or ICD-10 as having disturbances of thought and affect such as psychotic illnesses and manic mood illnesses. H7 identifies psychopathy. This area is based on the "findings by Harris et al. (1993) that the PCL-R was the best-single predictor of violence in groups of schizophrenic and personality disordered individuals" (Harris et al., 1993). H8 focuses on early maladjustment. Early maladjustment has to be present in two of the three domains of home, school, and the community. H8 predicts later violence through childhood victimization or as a childhood victimizer or delinquent. H9 identifies personality disorders. Personality disorder is a diagnosis provided based on the DSM-V or the ICD-10. H10 discusses past supervision failures. This area looks into past failures of serious supervision of parole and probation. As defined by Webster (1997), serious supervision failure results in the patient being reapprehended and placed back into a correctional institution or mental health agency.

The clinical section assesses the patient's current treatment and response to his or her treatment. The clinical section is identified as the present section of the checklist and encompasses five areas. C1 is titled Lack of Insight; this area evaluates whether the individual can understand and can evaluate his or her mental processes, reactions, and self-knowledge. C2 focuses on negative attitudes. Negative attitudes are defined as an individual's thoughts becoming entrenched with antisocial, negative attitudes, and beliefs. C3 explains any active symptoms of major mental illness. C4 discusses

impulsivity. Impulsivity is defined as "dramatic hour to hour, day-to-day, or week-to-week fluctuations in mood or general demeanor" (Webster, 1997, p.57). C5 allows the assessor to assess the responsiveness to treatment. This checklist item includes unresponsiveness to criminal, psychiatric, psychological, social, or vocational problems. Each of these items in the clinical section has a score ranging from 0-2.

The risk section assesses the patients anticipated risk with their next privilege level towards discharge. Risk management items are based on assessing the future circumstances that the patient may experience. R1 identifies if the plans lack feasibility. This item could be due to the agency in the community choosing not to work with the individual due to the patient's behavior or lack of resources that are available to assist the patient. R2 denotes exposure to destabilizers. This will allow the assessors to identify if there are any factors that may cause the patient to destabilize due to ineffective professional care. R3 encompasses a lack of personal support and identifies if the individual has the support from friends or family members either emotionally, financially, or physically. R4 measures noncompliance with remediation attempts. This area identifies the individual's probability of noncompliance with medication, therapy, and following rules. R5 signifies stress and forecasts the sources of stress an individual may encounter and how he or she may cope with stress. Each of these items includes a rating of 0-2.

In one study, conducted using the HCR-20 v2, Allen and Howell's (2008) assessed for risk with regard to institutional violence. Retrospective data was utilized over a five-year period to evaluate and promote the understanding of the content and

implementation of the risk assessment tool within a high-security hospital. The study was able to highlight the institutional violence over a 12-month period after the initial assessment using the History, Clinical, Risk- 20 (HCR-20 v2) and the Structuring Clinical Judgment Risk (SCJ: Risk).

Since the development and publication of the HCR-20 V2 in 1997 there have been 2500 studies published on violence; there have been conceptual developments in risk assessments, and there were areas of improvement for the HCR-20 v2 (Douglas, 2013). However, even with over 200 studies using the HCR-20 v2, there are still no studies found using the HCR-20v2 scores to assess for effectiveness in trauma programming attendance for M-TREM, DBT and Art and healing. Since there have been new developments in risk assessments, the development and publication of the HCR-20 v3 in 2013 allowed the developers to expand the HCR-20 to incorporate the new developments. Version 3 will allow more studies to continue to develop and assess the risk for violence to account for the change in times, but for this study I focused on the use of the HCR-20v2 since there was archival data currently available using the HCR-20v2.

It is important to understand the risk for violence for a patient and the corresponding privilege level concerns. Privileges are assigned based on HCR-20 v2 scores. With higher privileges, comes a higher responsibility for the patient. As noted above, once a patient is on privilege level two he or she is allowed on the treatment mall to attend groups. This next section will discuss details about the treatment malls.

Interventions

The programs applied as trauma treatment on the treatment mall for patients utilized for this study included M-TREM, DBT, and art and healing. Further information regarding each of these programs will be provided below in more detail.

Men's trauma recovery empowerment model (M-TREM) was developed by Dr. Roger Fallot and a group of clinicians at Community Connections (Community Connections, 2008). As mentioned in Chapter 2 of this study, the M-TREM program was developed as a companion group for males to the women's trauma recovery empowerment model (TREM). It is noted, on Community Connections (2008); that there have been many programs developed to address veterans that have been in combat, but there were not any trauma programs developed to address male childhood trauma and violence that has been experienced throughout patient's lives. Other forms of trauma programs offered at ABCSPH are dialectical behavior therapy and art and healing.

Dialectical behavior therapy was developed by Marsha Linehan (Freedman, 2013). Dialectical behavior theory was developed as a modified version of CBT initially to provide treatment to patients who suffer from suicidal and self-injurious behaviors and have been diagnosed with borderline personality disorder. Even though DBT was developed for this specific reason, the program includes how to build core mindfulness skills, interpersonal effectiveness skills, emotional regulation skills, and distress tolerance skills. It is vital for patients to develop these skills to manage their stress, as these skills are measured in relationship to patient coping skills within the HCR-20v2 clinical and risk sections of the assessment.

Art and Healing therapy was developed by the Foundation for Art and Healing (2010). Art and healing therapy assists patients with developing coping skills that will assist them with exploration, empowerment, and engagement of building awareness of their thoughts. The development of these skills will be measured in the clinical and risk sections of the HCR-20v2 and will make an impact on the scoring measurements.

Toussaint, VanDeMark, Bornemann and Graeber (2007) reported that participants who received 12 or more TREM sessions improved more than those who received none or fewer than 12 sessions. The dialectical behavior therapy studies completed by Bohus, et al. (2004) reported that after one year of receiving DBT there was improvement in the participants' psychological, social, or global adjustment when compared to those who did not receive DBT. There were no subsequent studies found that support the number of sessions needed for Art and healing group to ensure the effectiveness.

Operationalization

The operational definition of risk assessment scores HCR-20v2 and is continuous data and is identified as the dependent variable (DV). The scores for the clinical and risk sections range from 0-2 for each checklist area. A higher score on the clinical and risk checklist would indicate a higher propensity for the patient to become violent. A lower score on the clinical and risk checklist would indicate a lower risk for violence. The total scores on the HCR-20v2 clinical and risk section can range from 0-20.

The operational definition for the independent variable trauma program for M-TREM, DBT, and Art and healing was operationalized as categorical data and was identified as the independent variable (IV). I will be able to count each time the patient

attended each of the trauma programs. The number of times the patient attended a group was identified as the covariate (CV) of 12 or higher.

Data Analysis Plan

The software that will be used to clean and analyze the data set is SPSS (IBM Corp., 2013). The cleaning techniques that were utilized included completing analyses of frequencies for each variable to ensure there are not any unexpected things entered into the data sets. The other form that I utilized to clean the data is the SPSS software to select cases to analyze (IBM Corp., 2013). Below is the research question that I used to analyze further with the above-mentioned analyses.

R1: Is there a significant difference in risk for violence as measured by the assessment scores on the HCR-20v2 (DV) in a state psychiatric hospital relative to specific trauma program attendance (IV) (M-TREM, dialectical behavior therapy (DBT), and art and healing)?

Ho1: There is no significant difference in risk for violence as measured by the assessment scores on the HCR-20v2 (DV) in a state psychiatric hospital relative to specific trauma program attendance (IV) (M-TREM, dialectical behavior therapy (DBT), and art and healing.

H1: There is a significant positive difference in risk for violence as measured by the assessment scores on the HCR-20v2 (DV) in a state psychiatric hospital relative to specific trauma program attendance (IV) (M-TREM, dialectical behavior therapy (DBT), and art and healing).

R2: Is there a significant relationship between the number of trauma programs attended (CV) and risk for violence as measured by the assessment scores on the HCR-20v2 (DV) in a state psychiatric hospital?

Ho1: There is no significant difference in the relationship between the number of trauma programs attended (CV) and the risk for violence as measured by the assessment scores on the HCR-20v2 (DV) in a state psychiatric hospital relative to specific trauma program attendance (IV) (M-TREM, dialectical behavior therapy (DBT), and art and healing

H1: There is a significant positive difference in the relationship between the number of trauma programs attended (CV) and the risk for violence as measured by the assessment scores on the HCR-20v2 (DV) in a state psychiatric hospital relative to specific trauma program attendance (IV) (M-TREM, dialectical behavior therapy (DBT), and art and healing.

R3: Is there a significant difference between the M-TREM treatment group (IV) and its impact on risk assessment scores (DV) when compared to the other treatment groups consisting of dialectical behavior therapy (DBT), and art and healing (IV).

Ho1: There is no significant difference between the M-TREM treatment group (IV) and its impact on risk assessment scores (DV) when compared to the other treatment groups consisting of dialectical behavior therapy (DBT), and art and healing (IV).

H1: There is a significant positive difference between the M-TREM treatment group (IV) and its impact on risk assessment scores (DV) when compared to the other

treatment groups consisting of dialectical behavior therapy (DBT), and art and healing (IV).

Research question one and hypothesis one was investigated using a one-way ANOVA. A one-way ANOVA was utilized to determine if there was a difference in attendance between the three different trauma programs and the risk assessment scores. The one-way ANOVA identified if there was any significant difference between the risks for violence as measured by the assessment scores on the HCR-20v2 and if it related to the attendance of the trauma programs offered. With a one-way ANOVA, I was able to identify if the groups were independent and unrelated have any significant difference. The dependent variable was the risk for violence as measured by the assessment scores on the HCR-20v2, a value that was measured over a five-year period. The independent variable was the specific trauma program attended, consisting of three categories: M-TREM, dialectical behavior therapy (DBT), and art and healing.

Research question two was investigated using the Pearson product moment correlation. The Pearson product moment correlation allowed the ability to identify if there was a significant relationship between attendance in the trauma programming and the risk for violence as measured by the assessment scores on the HCR-20v2. The Pearson-product moment correlation identified if there was a positive or negative linear association between the variables.

Research question three was investigated using the reliability-corrected Analysis of Covariance (ANCOVA). The reliability-corrected ANCOVA allowed for there to be an adjustment for pretest measurement error that would occur if an ANCOVA would

have been used for the specific design of nonequivalent control group design. This analysis will remove the bias that would occur in the ANCOVA analysis. The reliability-corrected ANCOVA allowed the ability to measure if there was a significant difference between the M-TREM treatment group and the impact it has on the risk for violence as measured by the HCR-20v2 scores compared to the other treatment groups consisting of dialectical behavior therapy, and art and healing.

Threats to Validity

Threats to internal, external, construct or statistical validity were identified as the interaction of selection, reactive effects of experimental arrangements, and multiple-treatment inferences. These forms of external threats to validity have been identified because of the type of setting in a psychiatric hospital and selection process of the participant's archival data. Due to the use of archival data the selection of the groups was already decided based on the treatment teams' referral and the participants' election to attend the groups. Since these factors are unable to be changed, the generalizability of the study is limited to psychiatric hospital settings.

Due to the use of the nonequivalent control group design when it relates to selection, the differences that existed prior to the group could affect the outcome of the study. In terms of the study, it could lead the outcome of the study results being reported that the groups did not make a difference in the risk for violence as measured by the HCR-20v2 when, in fact, the groups did make a difference in the risk for violence. The identified threats to internal validity were addressed by using randomly selected participants that meet the criteria.

Ethical Procedures

To obtain access to the archival data at ABCSPH, I have obtained approval through ABCSPH's research committee, MSEC, ABCSPH's central office, and ABCSPH IRB. I have included the actual emails and documents for review of each approval step obtained. I have obtained IRB approval through Walden University, Approval #: 03-16-2015-0322071 and ABCSPH's IRB.

Some ethical concerns that I had with regard to the recruitment of the archival data is gaining access to each patient's attendance record and forensic chart for the sole purpose of accessing their HCR-20v2 scores. I have reviewed general documents that each patient signs upon admittance to ABCSPH to identify if the informed consent covers the data that is collected for the purpose of research. After completion of the IRB process with ABCSPH, due to the use of archival retrospective data and a student intern I did not have to obtain informed consent. I coordinated with the student intern to complete and sign an informed consent form, complete NIH certification training, and ABCSPH training modules that included data collection, data security, and HIPPA. There were also ethical concerns that some of the patients whose data that I have access to may still be hospitalized as a patient at ABCSPH. Due to the use of de-identification of information by the student intern I was not be able to identify a specific participant's data.

Data Confidentiality

The archival data that I had access to was provided by ABCSPH. The protection for confidential data remained stored inside ABCSPH and on their computers that are

only accessible within the hospital. The computers were password protected and were kept in a locked room that is only accessible by key. The hard drive that the data is kept on is on an encrypted drive. The HCR-20v2 scores were kept in paper format in the forensic office. These documents are kept in a locked filing cabinet, in a locked office that is only accessible by the forensic department director by lock and key.

The data were accessible by me, my dissertation committee, a student intern, and the appropriate personnel at ABCSPH. Once the analyses were completed, and I have received approval for my dissertation, the data will be destroyed after 5 years. The data set that was received was cleaned of any identifying names, medical record numbers or descriptive, social security numbers, physical and electronic address, dates of births, hospitalization dates, discharge dates and any telephone numbers by the student intern. One other ethical issue that was identified was that I am completing the study in my work environment. I may have had indirect contact with the participants for whose data I am reviewing, but I will be unable to identify individual participants, due to the cleaning of data.

Summary

In this section, I reviewed the nonequivalent control group design necessary to complete the study. The use of the one-way ANOVA, Pearson-product moment correlation, and the reliability-corrected ANCOVA assisted me with answering the research questions to identify if there was a significant difference in the risk for violence as measured by the HCR-20v2 risk assessment scores as it relates to M-TREM, DBT, and Art and healing trauma programming. The use of archival data allowed me to research

data that was collected on a regular basis and was available at ABCSPH. These data were operationalized in ordinal, interval scales, and continuous data. SPSS software was used to clean and analyze the data. The threats to internal, external, construct, or statistical validity were highlighted in respective to the use of the nonequivalent control design in the setting and the use of archival data. In the next section, I will explore the findings from my study.

Chapter 4: Results

Introduction

The purpose of this quantitative study was to explore M-TREM, DBT, and art and healing attendance to identify if there is a significant difference in the risk for violence as measured by the HCR-20v2. This study explored whether the M-TREM group is more efficacious in positively impacting patient risk for violence as measured by the HCR-20v2 assessment scores than the other trauma treatment groups offered.

The findings of this study are discussed in depth with information regarding the data collection process including the time frame in which the data was collected, differences from the planned collection process in Chapter 3, demographic characteristics of the sample size, and the sample population. In this chapter, I will also discuss the one-way ANOVA, Pearson product moment correlation, and reliability corrected ANCOVA statistical analyses that were used to obtain my findings of my study including post hoc analyses. Tables are included to assist in illustrating the research analyses as well.

Data Collection

Once I received approval from the respective institutional review boards from Walden University approval # 03-16-15-0322071 and ABCSPH, I began collecting data from my research site. The time frame for data collection request was 18 days. During the first 11 days, a student intern collaborated with the treatment mall director to obtain attendance and number of times each participant attended M-TREM, DBT, and art and healing groups. During the next five days, the student intern utilized the electronic records system to obtain three sets of HCR-20v2 scores and coordinated them with the

specific data set received by the treatment mall director. The last two days were used to de-identify the data set and the student intern provided the de-identified data set to me. By the middle of the third week, I began creating my worksheet to begin the SPSS analysis.

Based on the original plan for the data collection process, I originally planned to use data from a 10-year timeframe for this study. However, the limited availability of electronic records system for recording the HCR-20v2 caused the provided data to only span a six-year timeframe. This limitation caused me to be unable to attain my original planned sample size of 73 participants. This posed a significant issue with external population validity of the study. With the lack of available data sets this study lacks the ability to be representative of the forensic male population that has experienced some form of trauma prior or during their psychiatric hospitalization. From the available data, I retrospectively identified 46 complete data sets that met the inclusion criteria. This included 16 data sets from the M-TREM group, 15 data sets from the DBT group, and 15 data sets from the Art and healing group.

The final sample used included data for 46 men between the ages of 20 and 62 years; participants were 39% African-American, 59% Caucasian, 1% American Indian, and 1% Puerto Rican. The mean age of the sample was 38.48 years. The sample included group attendance between 12 to 34 groups with a median attendance rate of 23.02 sessions and a standard deviation of 5.659.

One-Way ANOVA

A one-way ANOVA was conducted to determine if the risk for violence of patients in a state psychiatric hospital, as measured by the assessment scores on the HCR-20v2, was different relative to specific trauma program attendance (M-TREM, dialectical behavior therapy (DBT), and art and healing). Participants were classified into three groups: M-TREM (n=16), DBT (n=15), and Art and Healing (n=15). There were no outliers, as assessed by the boxplot; data were normally distributed for each group as assed by Shapiro-Wilks test ($p > .05$) except for the Risk 3 score for DBT with a p value=.031. I decided to carry on with the one-way ANOVA due to the sample sizes for each group being nearly equal in group sizes (Liz, Keselman, & Keselman, 1996). There was homogeneity of variance, as assessed by Levene's test of homogeneity of variances (H1 p=1.7, H2 p=.50, H3 p=.32; C1 p=.28, C2 p=.33, C3 p=.33; R1 p=.13, R2 p=.97, R3 p=.10). The risk for violence as measured by the assessment scores on the HCR-20v2 for the M-TREM Historical section increased from score 1 (n=16, M=12.4, SD=3.01), to score 2 (n=16, M=12.4, SD=3.14) but subsequently decreased with M-TREM Historical score 3 (n=16, M=13.4, SD=2.3). Table 1 shows the mean attendance rate to M-TREM, DBT, and Art and healing relative to the historical section when analyzed for Historical score 1, Historical score 2, and Historical score 3; it also compares the attendance rate of participants to each group over the period of measurement for the historical section of the analysis.

Table 1

One-Way Analysis of Variance of Historical Score

Historical Groups	Source	*SS*	*df*	*MS*	*F*	*p*
Historical 1	Between Groups	7.19	2	3.59	.41	.67
	Within Groups	375.27	43	8.73		
	Total	382.46	45			
Historical 2	Between Groups	11.71	2	5.85	.62	.54
	Within Groups	408.20	43	9.49		
	Total	419.91	45			
Historical 3	Between Groups	1.09	2	.55	.08	.92
	Within Groups	299.27	43	6.96		
	Total	300.37	45			

The risk for violence as measured by the clinical assessment scores on the HCR-20v2 for the M-TREM Clinical section increased from score 1 (n=16, M=3.4, SD=1.86), to score 2 (n=16, M=4.1, SD=2.14), but subsequently decreased with M-TREM Clinical score 3 (n=16, M=3.9, SD=1.89). Table 2 shows the mean attendance rate to M-TREM, DBT, and art and healing relative to the clinical section when analyzed for Clinical score 1, clinical score 2, and clinical score 3, and compares the mean attendance rate for participants to each group over the period of measurement for the historical section of the analysis.

Table 2

One-Way Analysis of Variance of Clinical Scores

Clinical Groups	Source	*SS*	*df*	*MS*	*F*	*p*
Clinical 1	Between Groups	16.41	2	8.20	1.70	.19
	Within Groups	207.00	43	4.81		
	Total	223.41	45			
Clinical 2	Between Groups	23.07	2	11.54	2.17	.13
	Within Groups	228.40	43	5.31		
	Total	251.48	45			
Clinical 3	Between Groups	27.55	2	13.78	2.86	.07
	Within Groups	206.82	43	4.81		
	Total	234.37	45			

The risk for violence as measured by the risk assessment scores on the HCR-20v2 for the M-TREM Risk section increased from score 1 (*n*=16, *M*=2.4, *SD*=1.50), Score 2 (*n*=16, *M*=2.6, *SD*=1.63), score 3 (*n*=16, *M*=3.3, *SD*=1.92) (see Table 3). The risk for violence as measured by the assessment scores on the HCR-20v2 for the DBT Historical section decreased from score 1 (*n*=15, *M*=13.4, *SD*=3.36), to score 2 (*n*=15, *M*=13.7, *SD*=3.29), to score 3 (*n*=15, *M* =13.2, *SD*=2.78) (see Table 1).

The risk for violence as measured by the assessment scores on the HCR-20v2 for the DBT Clinical section increased from score 1 (*n*=15, *M*=4.3, *SD*=2.61), to score 2 (n=15, *M*=3.9, *SD*=2.75), but subsequently decreased for score 3 (*n*=15, *M*=3.7, *SD*=2.72) (see Table 2). The risk for violence as measured by the assessment scores on the HCR-20v2 for the DBT Risk section decreased from score 1 (*n*=15, *M*=2.6, *SD*=2.13), to score 2 (*n*=15, *M*=2.7, *SD*=1.68), but then subsequently increased for score

3 (*n*=15, *M*=2.9, *SD*=1.91). Table 3 shows the mean attendance rate to M-TREM, DBT, and art and healing relative to the Risk section when analyzed for the risk score 1, risk score 2, and risk score 3; it also compares the mean attendance rate for participants to each group over the period of measurement for the risk section.

Table 3

One-Way Analysis of Variance of Risk Scores

Risk Groups	Source	*SS*	*df*	*MS*	*F*	*p*
Risk 1	Between Groups	3.46	2	1.73	.55	.58
	Within Groups	136.28	43	3.17		
	Total	139.74	45			
Risk 2	Between Groups	3.40	2	1.70	.60	.55
	Within Groups	122.02	43	2.84		
	Total	125.41	45			
Risk 3	Between Groups	9.84	2	4.92	1.62	.21
	Within Groups	130.77	43	3.04		
	Total	140.61	45			

The risk for violence as measured by the assessment scores on the HCR-20v2 for the art and healing Historical section increased from score 1 (*n*=15, *M*=12.9, *SD*=2.42), to score 2 (*n*=15, *M*=13.1, *SD*=2.79), to score 3 (*n*=15, *M*=13.1, *SD*=2.87) (see Table 1). The risk for violence as measured by the assessment scores on the HCR-20v2 for the art and healing Clinical section decreased from score 1 (*n*=15, *M*=2.9, *SD*=2.07), to score 2 (*n*=15, *M*=2.5, *SD*=1.96), to score 3 (*n*=15, *M*=2.1, *SD*= 1.89) (see Table 2).

The risk for violence as measured by the assessment scores on the HCR-20v2 for the art and healing Risk section increased from score 1 (*n*=15, *M*=1.9, *SD*=1.67), to score

2 (*n*=15, *M*=2.1, *SD*=1.75) but subsequently decreased for score 3 (*n*=15, *M*= 2.2, *SD*=1.32) (see Table 3). The group means were not statistically significantly different ($p > .05$) and, therefore, the null hypothesis could not be rejected.

Post Hoc Analysis

There were no statistically significant differences in historical, clinical, and risk scores between the different trauma groups M-TREM, DBT, and art and healing, Historical 1 F (2, 43)=.412, $p > .05$; Historical 2 F (2,43)=. 617, $p > .05$; Historical 3 F (2, 43)=.079, $p > .05$. Clinical 1 F (2, 43)=1.704, $p > .05$; Clinical 2 F (2, 43)=2.172, $p > .05$; Clinical 3 F (2, 43)=2.864, $p > .05$. Risk 1 F (2, 43)=.545, $p > .05$; Risk 2 F (2, 43)=.598, $p > .05$; Risk 3 F (2, 43)=1.617, $p > .210$.

Pearson-product Moment Correlation

A Pearson-product moment correlation was utilized to investigate if there was a significant relationship between the number of trauma programs attended and the risk for violence as measured by the assessment scores on the HCR-20v2. A Pearson-product moment correlation was completed for each of the trauma program groups (M-TREM, DBT, and art and healing). The results of each trauma group using HCR-20v2 scores from three different assessments.

M-TREM

A Pearson's product-moment correlation was run to assess the relationship between M-TREM and HCR-20v2 scores 1, 2, and 3 in males aged 25 to 62 years. Preliminary analyses showed the relationship to be linear with both variables normally distributed, as assessed by Shapiro-Wilk's test ($p > .05$), and there were no outliers.

There was a small positive correlation between HCR-20v2 scores 1 and 2 and M-TREM group attendance,(r (98)=.119, p > .0005, R^2=.0142), (r (98)=.112, p > .0005, $R^{2=}$ .0125) with M-TREM group attendance explaining 1.4% of the variation in HCR-20v2 score 1 and 1.3 % of the variation in HCR-20v2 score 2 (see Table 4).

Table 4

Pearson Product-Moment Correlations for M-TREM Study Variables

M-TREM Group	Attendance	M-TREM HCR1	M-TREM HCR2	M-TREM HCR3
Attendance	1.00	.119	.112	-.044
M-TREM HCR1	.119	1.00	.710**	.372
M-TREM HCR2	.112	.710**	1.00	.535*
M-TREM HCR3	-.044	.372	.535	1.00

Note. **=Correlation is significant at the 0.01 level (2-tailed), *=Correlation is significant at the 0.05 level (2-tailed).

DBT

A Pearson's product-moment correlation was run to assess the relationship between DBT and HCR-20v2 scores 1, 2, and 3 in males aged 26 to 59 years. Preliminary analyses showed the relationship to be linear with all variables normally distributed, as assessed by Shapiro-Wilk's test (p > .05), and there were no outliers. There was a small positive correlation between HCR-20v2 scores 1, 2, and 3 and DBT group attendance, r (98)=.458, p > .0005, $R^{2=}$.209, r (98)=.260, p >. 0005, R^2=.067, r (98)=.461, p > .0005, R^2=.213 with DBT group attendance explaining 21 % of the variation in HCR-20v2 score 1, 6.7% of the variation in HCR-20v2 score 2, and 21.3% of the variation in HCR-20v2 score 3 (see Table 5).

Table 5

Pearson Product-Moment Correlation for DBT Study Variables

DBT Groups	Attendance	DBT HCR1	DBT HCR2	DBT HCR3
Attendance	1.00	.245	.065	.155
DBT HCR1	.245	1.00	.927**	.884**
DBT HCR2	.065	.927**	1.00	.899**
DBT HCR3	.155	.884**	.899	1.00

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

Art and Healing

A Pearson's product moment correlation was run to assess the relationship between art and healing and HCR-20v2 scores 1, 2, and 3 in males aged 20 to 52 years. Preliminary analyses showed the relationship to be linear with all variables normally distributed, as assessed by Shapiro-Wilk's test ($p > .05$), and there were no outliers. There was a small positive correlation between HCR-20v2 score 3 and art and healing attendance, r (98)=.105, $p > .0005$, R^2=.0110 with art and healing explaining 1.1% of the variation in HCR-20v2 score 3 (see Table 6).

Table 6

Pearson Product Moment Correlation for Art and Healing Study Variables

Art and Healing Groups	Attendance	AH HCR1	AH HCR2	AH HCR3
Attendance	1.00	-.279	-.161	.105
AH HCR1	-.279	1.00	.939**	.661**
AH HCR2	-.161	.939**	1.00	.664**
AH HCR3	.105	.661**	.664	1.00

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

Reliability Corrected ANCOVA

A reliability corrected ANCOVA was run to identify if there was a significant difference between the M-TREM treatment group and its impact on risk assessment scores when compared to other treatment groups consisting of dialectical behavior

therapy (DBT), and art and healing. An ANCOVA was run to determine the effect of three different trauma program groups and a control trial on a HCR-20v2 score 3 after controlling for HCR-20v2 score 2 risks for violence. There was not a linear relationship between HCR-20 v2 score 1 and HCR-20v2 score 3, as assessed by visual inspection of a scatterplot. There was homogeneity of regression slopes as the interaction term was not statistically significant F (2, 40) =1.245, p=.299. HCR-20v2 score 3 was normally distributed for groups DBT, art and healing, and M-TREM (control), as assessed by Shapiro-Wilk's test (p > .05). There was no homoscedasticity but there was homogeneity of variances as assessed by visual inspection of a scatterplot and Leven's test of homogeneity of variance (p=.116), respectively. There were no outliers in the data, as assessed by no cases with standardized residuals great than ± 3 standard deviations. After adjustment for HCR-20v2 score 1, there was not a statistically significant difference in HCR-20 v2 score 3 between interventions, F (2, 40) =2.824, p > .0005, partial $\eta^{2=}$.119. Post hoc analysis was performed with a Bonferroni adjustment HCR-20v2 score 3 was not statistically significantly greater in the control group vs DBT (p > .0005) and the art and healing (p > .0005) (see Table 7).

Table 7

Adjusted and Unadjusted Intervention Means and Variability for HCR-20v2 Score 3 With HCR-20v2 Score 1 as a Covariate

		Unadjusted		Adjusted	
Groups	*n*	*M*	*SD*	*M*	*SE*
Control	16	20.50	4.31	20.81	0.91
DBT	15	19.73	6.02	18.61	0.88
A & H	15	17.33	4.25	18.07	0.92

Summary

In summary, there were three research questions explored for this study. The first research question sought to identify if there was a significant difference in risk for violence as measured by the assessment scores on the HCR-20v2 in a state psychiatric hospital relative to specific trauma program attendance (M-TREM, DBT, and Art and healing). Since there was no significant difference in risk for violence between the trauma groups the null hypothesis was accepted for research question one.

Research question two explored if there was a significant relationship between the number of trauma programs attended and risk for violence as measured by the assessment scores on the HCR-20v2 in a state psychiatric hospital. The study found a significant difference in the number of times a trauma group was attended and the risk for violence scores on the HCR-20v2; therefore, the alternative hypothesis was accepted for research question two.

Research question three explored if there was a significant difference between M-TREM treatment group and its impact on risk assessment scores when compared to other

treatment groups consisting of DBT and art and healing. The research study found no significant difference between the M-TREM group, DBT, or Art and healing; therefore, the null hypothesis was accepted for research question three.

With the results of the analysis there needs to be further investigation regarding the significance of trauma group programming in relation to the risk for violence assessment. Chapter 5 will discuss the interpretations of the findings, the limitations of the study, recommendations, and future implications.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of my retrospective quantitative study was to explore M-TREM, DBT, and art and healing attendance to identify if there is a significant difference in risk for violence as measured by the HCR-20v2. The study was conducted to explore if whether the M-TREM group is more efficacious in positively impacting patient risk for violence as measured by the HCR-20v2 assessment scores than other trauma treatment groups offered.

The results of the statistical analyses for this study suggest that there were no significant differences in risk for violence at the study site, as measured by the HCR-20v2 assessment scores, relative to the specific trauma program attended. These results were observed using data from patients who attended at least 12 sessions of men's trauma recovery empowerment model, dialectical behavioral therapy, or art and healing. The results of this study showed that there was a significant difference in the relationship between the number of trauma programs attended and the risk for violence, as measured by the assessment scores on the HCR-20v2 relative to specific trauma program attendance to M-TREM, DBT, and art and healing. The final result of this study was a finding that there were no significant difference between the M-TREM treatment group and the impact on risk assessment scores when compared to other trauma groups.

Interpretations

The results of the statistical analysis of study data showed a need for further investigation into the use of trauma track programming in state psychiatric facilities and

how they specifically affect the treatment of these patients in the hospital. These treatments offer valuable information regarding how they have helped clients in other modalities in the community but after an exhaustive search, no research was found that has been completed to identify if the trauma track treatment specifically impacts the risk for violence in the state psychiatric hospital. Prior research shows that patients admitted to a psychiatric hospital have experienced some form of traumatic experience; even admittance into the hospital itself can cause trauma (Cohen, 1994; Cusack, Frueh, Hiers, Suffoletta-Maierle, & Bennett, 2003; Frueh et al., 2005). Using the trauma treatment modalities in conjunction with the treatment a patient receives upon admittance increases their knowledge of how to become resilient, how cope with their trauma, become less of a risk for violence, and work towards discharge at a faster rate including discharge planning with continued trauma-informed care treatment in the community. The study completed by Steffen, Kosters, Becker, and Puschner (2009) indicated successful results for patients who have received trauma-informed care and have been discharged into the community due to the patients' improvement in mental health symptoms. The Steffen, Kosters, Becker, and Puschner (2009) study supports the findings of my study.

There is a gap in research in relation to the use of trauma programming and HCR-20v2 risk for violence in previous studies. Several previous studies have supported the use of trauma programming such as M-TREM, DBT, and art and healing in the inpatient settings (Fallot, 2011; Foundation for Art and Healing, 2010; Freedman, 2013) and the use of HCR-20v2 and its success in obtaining information regarding the risk for violence (Douglas, 2011). With the use of the HCR-20v2, the treatment team was able to assess if

the patient is making progress over time with regular use of the HCR-20v2 and the trauma track programming. The current study reviewed the results from the HCR-20v2 prior to the patient beginning the trauma track programming and during their attendance to the trauma track programming, but it did not review the final results of the patient's overall treatment including discharge and follow up after the discharge. The results of this current study demonstrate that there is still a need for further investigation on utilizing these two modalities as a way to assist patients to progress in their treatment if they have experienced trauma. This study assisted in extending the knowledge of this topic by bringing awareness to trauma treatment modalities that could assist and impact the success in mental health treatment of those who have experienced trauma and have a history of violence.

In this dissertation study, statistical analyses supported that the hypothesis that the number of times a patient attended the trauma programming reduces the participant's risk for violence. This applies to the context of the theoretical foundation of this study regarding cognitive theory (CT) and social learning theory (SLT). These two theories explain how the repetitive behaviors of attending the trauma groups assist in improving the patients' risk for violence scores on the HCR-20v2. The trauma groups offered psychoeducation to the patients, decreasing the risk for violence for those who attended the groups regularly. As discussed earlier, cognitive behavioral theory resulted in teaching the patients' to make positive choices and display positive behaviors, thereby decreasing the risk for violence during their hospitalization. Continued attendance to the groups is a way that patients' are making positive choices to continue their treatment and

learning ways to display positive behaviors. As discussed by Dvorskin et al. (2002), this also included positive reinforces that included being able to leave their respective units and going out on the treatment mall to further develop their social and learning skills that they then apply once they were discharged from the state psychiatric hospital.

The current study focused on M-TREM, DBT, and art and healing. The results showed that even though M-TREM and DBT are structured groups in nature with specific modules, attendance to these groups did not show any significant decrease in patients' risk for violence when compared to the art and healing group. The art and healing group was as effective as the structured M-TREM and DBT trauma group programming as long as the patients attended at least 12 groups. The current study showed that even attendance to the art and healing group as a form of trauma treatment can make an impact on patient's risk for violence (Leckey, 2011).

The results of this dissertation study showed that the historical score did not remain constant overtime as hypothesized. Over time, the historical score changed for a number of the data sets and an increase in the value of this score was seen as each HCR-20v2 assessment was completed. This could be explained as a result of at each assessment point more information was added to the historical section from reports by the patient, case management, other hospital units, or family members. In some of the data sets, a selected few of the clinical and risk scores changed over time also, but for a number of data sets the scores remained the same each HCR-20v2. This may well have been from the patient being reassessed for the same privilege level or the patient having a similar clinical and risk treatment status at the point of the assessment.

The results of the current study showed that the more a patient attends trauma programming treatment in a psychiatric hospital, the more likely it is that their HCR-20v2 score will decrease overtime. Even though this study did not support the hypothesis that a specific trauma program made more of a difference in reducing the risk for violence, it still supported the hypothesis that continued trauma programming will assist with lowering the patients' risk. This is particularly helpful for hospital administrators, because this study provides more information regarding planning a structured psychoeducational treatment for those who suffer from PTSD, severe mental illness, and substance abuse.

Limitations

The limitations of the present study were related to the gender of the participants, the lack of available data, and the sample size. Since the present study utilized retrospective data, the study only used men patient data for its sample set. Due to the use of the M-TREM program, which focused only on men, I was able to compare other males that were in other trauma treatment programs that were offered in the state psychiatric hospital. Due to the limited data set available for this study, the generalizability of the study may not apply to other populations at other state psychiatric hospitals or outside of state psychiatric hospitals. There was also a general lack of data relative to the criteria needed for the study. This was an issue with the lack of attendance records, the lack of records that included at least three HCR-20 v2 risk assessment scores, and the lack of consistent attendance to each of the trauma program groups. As a result, the sample for the present study only accounted for those who were already assigned to the trauma

treatment programs. This did not allow for control of the variables outside of choosing criteria that met the requirements of this study. Due to the retrospective data set, there could have been other factors such as medication regimen, individual therapy, or involvement in other treatment programs offered on the treatment mall that could have contributed to the impact of the increase or decrease of the HCR-20v2 scores.

Recommendations

This study brought up many different aspects of treatment that a patient may receive while being hospitalized in a state psychiatric facility. Some recommendations for further research may look into monitoring the attendance of each trauma group program offered and the different variables of treatment that the patient may receive and compare their scores using the HCR-20 v3 to those who do not participate in the trauma group program. Since there has been new developments of the HCR-20 the developers have now began studies on the use of the HCR-20v3. Another recommendation for further research is since this study focused on males it would be important for another study to focus on the trauma group programming for females and their risk for violence in a state psychiatric hospital.

Implications

As human service professionals, it is imperative that each professional that works with an individual, infant, child, adolescent, and/or adult be educated on trauma informed care. As each state psychiatric hospital provides care to each individual it is important that the care provided allows for the patient to disclose and receive proper care if they have experienced trauma. If the trauma is not addressed this could have a tremendous

impact on the success of the patient even if medication is provided to assist (Robinson, Smith, & Segal, 2015). The current study provided further information on the impact that trauma programming such as M-TREM, DBT, and art and healing groups have on the participant's treatment towards decreasing violence in a state psychiatric facility. This study can help inform hospital administrators on the importance of offering a variety of trauma group programming besides individual therapy.

Since this study utilized the social learning theory and cognitive theory, it allowed a viewpoint of how repetitive attendance to the groups can impact patient risk for violence. The topics that are covered in each of the groups during each session provide participants with valuable information to help deal with different situations that they may experience and how to work through their thoughts and feelings from the trauma that they have experienced.

Some recommendations for practice would be to identify each patient upon admittance into a state psychiatric hospital for experiencing any form of trauma. The treatment team should recommend the trauma group programs that are offered in the hospital to patients and allow them to discuss their different interests that they may enjoy such as art, music, psychoeducation, or talk therapy. Offering a variety of trauma program treatment can increase the patients' awareness of how to handle different situations effectively, which can decrease their risk for violence.

Conclusion

This study provided a view into the treatment of patients who have experienced trauma and their risk for violence in a state psychiatric hospital in the Midwest of the

United States. As patients are admitted into state psychiatric hospitals they are often not on their medications or this may be their first time they have had a psychotic break. Each patient admitted is unique in his or her own way and has to be treated as individuals. Medication regimens will not cure or fix everything that the patient may be experiencing and medication alone may only act as a temporary resolution to assist the patient with his or her mental illness. The true impact of treatment involves offering different ways to address patients' symptoms along with their history of trauma that they may have experienced. By offering different treatment regimens, patients may begin to develop the necessary skills to respond to environmental or mental stimuli in a nonviolent manner. The trauma group programs offered in the state psychiatric hospital in the Midwest of the United States allows for each patient to bring his or her unique abilities to the group and work on aspects of the trauma that he or she is willing to share. Continuing the trauma treatment throughout hospitalization will assist in improving patients' knowledge of their mental illness, trauma, and substance abuse, along with possibly decreasing their length of stay in the hospital.

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