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Eye Movement Desensitization Reprocessing as a Complimentary Treatment for Clients with Addiction and Comorbid Trauma

JoAnn Kutsukos

EYE MOVEMENT DESENSITIZATION REPROCESSING AS A COMPLIMENTARY TREATMENT FOR CLIENTS WITH ADDICTION AND COMORBID TRAUMA

Doctoral Dissertation Research

Submitted to the Graduate Faculty of

National Louis University, Tampa

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In Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

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JoAnn Kutsukos

Master of Science at Palm Beach Atlantic University, May 2010

Bachelor of Science at University Nevada, Reno December 2000

Dissertation Committee Approval:

Joffrey S. Suprina — 11/18/21

Joffrey S. Suprina, Ph.D., Chair — Date

Marguerite Chabau — 11/19/21

Marguerite Chabau, Ph.D., Member — Date

ABSTRACT

Objective: The purpose of this study is to investigate eye movement desensitization reprocessing for those with substance use disorders and comorbid trauma. The research question is, how does the addition of eye movement desensitization reprocessing intervention assist treatment of those diagnosed afflicted with addiction and comorbid trauma as opposed to the treatment without eye movement desensitization reprocessing? Method: A quantitative study consisted of 24 participants consisting of 12 men and 12 women ages 18 years and older diagnosed with substance use disorder and comorbid trauma. Participants were recruited from an outpatient treatment substance use disorder facility where they were randomly assigned into two groups: treatment as usual or eye movement desensitization reprocessing and treatment as usual. Pretest and posttest measures were conducted to measure severity of trauma, anxiety, depression, and self-esteem. The intervention, eye movement desensitization reprocessing included 8 weekly 60-minute sessions. The treatment as usual treatment group received an additional weekly session to counter variance. A one-way analysis of variance for means was used as parametric analysis to examine eye movement desensitization reprocessing's effectiveness. Results: The treatment as usual and eye movement desensitization reprocessing group showed significant reduction in all measures trauma severity, anxiety, depression, and increased self-esteem. The treatment as usual group also showed improvement and reduction in symptoms from trauma and depression, however showed no improvement in anxiety and self-esteem. Conclusions: The results of this study suggest eye movement desensitization reprocessing protocol can successfully treat symptoms from posttraumatic stress disorder, anxiety, depression and increase self-

esteem with patients diagnosed with substance use disorder and posttraumatic stress disorder.

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Finally, my gratitude to Recreate Life Counseling's staff and to those who participated in this study. I gained valuable professional relationships that I hope to

continue in the future. Last, to the participants, I am thankful that I had a part of their mental health wellness journey.

DEDICATION

I dedicate this dissertation to those who are suffering from the disease of addiction and comorbid trauma. Their courage to overcome addiction and the accompanied trauma is commendable. However, the cost of overcoming this disease of addiction is due in part to the injustice from the societal stigma that may prevent them from seeking treatment. They are the soldiers that continue to fight for their lives and for their fallen comrades in this war.

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CHAPTER ONE: INTRODUCTION

In the midst of every crisis, lies great opportunity

—*Albert Einstein*

Overview

The quote from Einstein puts into perspective what may result in researching solutions for the current addiction and trauma crisis. The global problem is the loss of life and the significance of researching treatment interventions. The value and significance of this research topic involve alternative treatment for addiction and comorbid trauma history. Thus, the researcher elucidated and brought insight to possible treatments of addiction correlated with trauma. Due to the limited research on the treatment protocol for addiction with co-occurring trauma, the purpose of this study was to highlight eye movement desensitization reprocessing (EMDR) as a possible added intervention to treatment as usual (TAU) for addiction with a comorbid or a correlational trauma history.

Statement of the Problem

The issues of those who are faced with addiction and comorbid trauma are significant. The problem statement signifies that what is unknown is if and to what degree, or extent, combining EMDR and TAU versus TAU only will be effective, thus, the need to, through a quantitative method, measure the treatment outcomes for addiction and comorbid trauma.

Symptomologies that lead to individuals seeking treatment may present as "sedation, dizziness, nausea, vomiting, constipation, physical dependence, tolerance, and respiratory depression" (Mitchell, 2018, pp. 120-121). Additionally, individuals will seek treatment to address the traumatic impact from the disease of addiction. Mitchell (2018)

noted that, in combating the addiction epidemic in 2014, 21.5 million U.S. residents over the age of 11 had a substance abuse problem. Of those, 1.9 million were addicted to prescription pain relievers, and another 586,000 to heroin. Moreover, four of five heroin users reported beginning their heroin abuse while using prescription opiates. In 2012 alone, 259 million prescriptions were written for opioids, "which is more than enough to give every American adult his own prescription bottle of pills" (Mitchell, 2018, p. 120). Mitchell (2018) continued to address that addiction affects all classes and there is no social barrier to addiction. In this research, the general population that has been impacted by addiction and comorbid trauma is screened, pre-tested and post-tested to meet the research design's protocol utilizing EMDR.

This study contributes to unraveling the problem of treating addiction and comorbid trauma, by examining the intervention, EMDR, when added to TAU versus TAU alone. The research on caring for those with addiction and trauma with EMDR and TAU may elucidate the need for further studies on a larger scale than what this research design unfolded. The study also supported what is already researched and added to the literacy gaps on addiction and comorbid trauma.

Need for the Study

The global addiction crisis is the focus of McElrath and Joseph's (2018) research. McElrath and Joseph (2018) noted, "fatal overdoses have reached record highs in many regions of the world" (p. 177). Addiction has taken a toll in the life of those predisposed to addiction and the trauma associated with addiction. Addiction is a significant health crisis, regardless of treatment modalities as evidenced by the high relapse rates (Markus et al., 2015). Those researchers' findings supported that EMDR, as an evidenced-based

treatment for trauma has been known to reduce cravings and relapse rates. Further, they assessed efficacy and effectiveness of EMDR and TAU versus TAU alone. Their study supported that EMDR, as an "adjunct" treatment to substance abuse, was effective in reducing symptoms from the obsession or cravings and to alleviate the effects from trauma.

Though Marich's (2010) research is not current, the author's examination of EMDR in a study of women in recovery maintains what is current now that traditional models of addiction treatment do not address trauma and fail to recognize that trauma is part of the process. Furthermore, the author posited that the study of EMDR's effectiveness in treating addiction and comorbid trauma, has the "ability to combine cognitive, body-oriented, emotional, and experiential matter into a single treatment protocol" (Marich, 2010, p. 498). The significance and a purpose of this research study add to the body of knowledge of EMDR's efficacy to treat both addiction and comorbid trauma.

Purpose of the Study

Another purpose of this study was to examine EMDR as an intervention for treatment of addiction and comorbid trauma. The study compared findings in a quantitative methodology resulting in reducing symptoms of depression, anxiety, and trauma, and increasing self-esteem in two treatment groups: EMDR+TAU versus TAU by assessing the two treatment groups at baseline and at completion of treatment. The repercussion of trauma may lead to addiction. Other traumatic issues that stem from trauma may result from the consequences of exploiting oneself with prostitution to obtain substances. Thus, such exploitation may result in physical, sexual, and emotional abuse.

According to Chen et al. (2015), alcohol inhibits logical reasoning leading to sexually risky behaviors such as prostitution. Another health factor Lake et al. (2015) found was emotional trauma may lead to poor societal and health outcomes. Therefore, finding treatment is challenging, though necessary, for addiction with comorbid trauma as Pizzimenti and Lattal (2015) researched treatment for trauma. Those researchers noted a correlation between trauma and substance use. Their study expounded on their findings that the fear from trauma interacts with the use of substances, which leads to a possible drug addiction.

In this pilot study, a statistical analysis utilizing descriptive statistics described participants' characteristics tested at baseline and then at posttest. An examination from the findings compared the results when the independent variable, EMDR, is added to TAU versus TAU alone. Sample *t*-tests were chosen to assess change in the scores from the four questionnaires measuring the dependent variables: posttraumatic stress disorder (PTSD), anxiety, depression, and low self-esteem. The pretest scores on those variables were normally distributed and parametrically analyzed using *t*-tests (Perez-Dandieu & Tapia, 2014). A quantitative analysis evaluated a sample population subjected to EMDR and TAU versus TAU alone.

The sample population in this study was doubled from Perez-Dandieu and Tapia's (2014) study and was comprised of 24 adult male and female participants, who were prescreened for substance abuse and a comorbid trauma disorder, as well as provided consent and invitee forms for each participant's signatures. The procedure of utilizing EMDR to reprocess traumatic events was measured by the participants' symptoms of trauma, depression, anxiety, and low self-esteem to note treatment effectiveness. Those

participants in the EMDR + TAU and TAU groups received treatment at a substance abuse treatment facility. The EMDR + TAU received eight EMDR sessions along with their weekly individual session with their primary therapist. The TAU treatment group received an additional eight sessions to their already weekly therapy sessions to counter variance.

Perez-Dandieu and Tapia (2014) researched treatment standards in a pilot study on trauma in addiction with EMDR and proposed, "reprocessing traumatic memories with EMDR would lead to measurable changes of addiction symptoms" (p. 304). Their results demonstrated participants in the EMDR + TAU group had a decrease in posttraumatic stress disorder (PTSD), depression, and anxiety symptoms. However, in that same EMDR + TAU treatment group, their findings resulted in no decrease in substance use at post-treatment. The objective from this study was to seek similar results when adding EMDR to TAU and what follows is the research question and hypothesis.

Research Question and Hypothesis

The research question for this clinical study was: How does the addition of EMDR intervention assist treatment of those diagnosed afflicted with addiction and comorbid trauma as opposed to the treatment without EMDR? Trauma that occurs from patients using substances may result in incarceration, overdoses, and loss of life. Green et al. (2016) postulated from their study that the rate of incarcerations has risen due to those individuals who suffer from the impact from physical, emotional, and sexual abuse.

The abuses are the mental health symptoms that are derived from addiction and comorbid trauma and are the dependent variables in this study, while the assessments are

being utilized to measure those symptoms. Those characteristics are anxiety, depression, PTSD, and self-esteem. The independent variables are the treatment interventions EMDR added to TAU and TAU alone.

The first hypothesis of this study was that utilizing EMDR to desensitize traumatic and addiction memories would lead to measurable changes and improve overall treatment outcomes. Those specific measurable changes refer to the mental health indicators of anxiety, depression, trauma severity, and increased self-esteem.

Additionally, the second hypothesis was a null statement that there is no difference when EMDR is supplemented to TAU versus TAU alone to decrease mental health symptoms and increase self-esteem.

A significant addition to treating addiction would be to examine coping strategies or the desensitization of cues or recognizable triggers to prevent relapse. Participants' abilities to identify, then desensitize, those triggers, manage cravings, and then to be aware of cognitive, emotional, and physical cues during early recovery, additionally assists with relapse prevention (Brewer et al., 2013). The purpose for researching addiction treatment protocol is to reduce mental health symptoms from those afflicted with the disease addiction and comorbid trauma, and then to increase their quality of life.

Assumptions, Limitations, and Delimitations

In this study, the assumption was that EMDR would benefit those diagnosed with and afflicted by addiction and comorbid trauma. EMDR already has the approval from highly regarded organizations such as the Veteran's Administration and the Department of Defense to treat trauma (Flanagan et al., 2018). The other assumption underlying this research, was that addiction may also be traumatic. Therefore, EMDR would also assist

those with addiction to desensitize the traumatic events and the obsession to seek substances.

The limitations to this study were not limited to or exhaustive of the following factors. The sample size of 24 participants (as in this study) was small. A larger pool of participants would further validate the findings on EMDR's effectiveness to treat those with addiction and comorbid trauma. Additionally, the subjectiveness of the participants' answers to the scales may have provided a lack of trustworthiness of the data.

The delimitation of this study was that there is no such thing as perfect research. This study's research goals, objectives, and analysis were developed by following previous studies in the hope to build on previous studies' findings. Thus, the results from this study and research recommendations are contributing factors to further examine EMDR's efficacy, which may or may not be fully reliable.

Definition of Terms

There are five key phrases used in this research study that require defining: (a) substance abuse, (b) treatment, (c) trauma, (d) EMDR, and (e) traumatic memory.

The first word, substance abuse, is defined by the DSM-5 as an individual who has dependency on substances or behaviors that meet the 11 criteria of use (American Psychiatric Association, 2013) and where:

> diagnosis is further qualified with specifiers for severity, as well as substance type. The severity scale identifies two to three criteria to indicate a mild disorder; four to five criteria to indicate a moderate disorder; and six or more to indicate a severe disorder. Further diagnostic specifiers include intoxication, withdrawal,

> substance and medication-induced disorders, and unspecified substance-induced disorders. (Stewart et al., 2016, p. 318)

The second key term is treatment, which, according to Huỳnh et al. (2016), includes medical professionals and a psychiatrist in a clinical setting in an outpatient program; the treatment occurs through clinical individual and group sessions. The group sessions, in this study, were psychoeducational sessions that explain chemical dependency, relapse prevention, 12-step education, cognitive behavioral therapies, motivational interviewing, and dialectical behavioral therapy groups. In addition, Pagano et al. (2015) noted that treatment includes 12-step programming, which is encouraged as an approach to treating those with substance abuse disorders.

The third key term, trauma, is defined as:

> Exposure to: death, threatened death, actual or threatened serious injury, or actual or threatened sexual violence, in the following way(s): direct exposure; witnessing the trauma; learning that a relative or close friend was exposed to a trauma; indirect exposure to aversive details of the trauma, usually in the course of professional duties. (Krupnik, 2019, p. 256)

The fourth key term is EMDR, an evidenced-based therapy for trauma-related disorders (Krupnik, 2019):

> EMDR is a psychotherapeutic approach, grounded in the adaptive information processing model, which hypothesizes that pathology is a consequence of unprocessed, distressing past experiences. Exposure to the traumatic memories combined with bilateral stimulation, usually in the form of eye movements, enables processing of traumatic memories. (Karatzias et al., 2019, p. 807)

EMDR is specifically an intervention to assist with illicit memories of traumatic events that may adapt information and lead to a reduction in distress and/or negative emotions. Additionally, EMDR may integrate the process from the negative emotions to a positive and more adaptive state emotionally.

Finally, the fifth key term is traumatic memory, defined as any event resulting in a lasting negative effect (Krupnik, 2019). Based on the DSM 5's definition of a traumatic memory or event, Krupnik (2019) asserted that is when a person is exposed to death, threatened death, serious or threatened injury, and/or sexual violence. The key words are not limited or exhaustive to the research study as all areas were explored for this study.

Summary

Due to the increasing rise of addiction to substances, associated trauma, and loss of life globally, there is a gap in research for a treatment protocol helping individuals dealing with addiction and comorbid trauma. Iwanicki et al. (2018) researched and found that an estimated 200,000+ deaths from addiction have been reported from 1999 to 2016 by the Centers for Disease Control (CDC). The CDC reported that more than 80% of deaths occurred from an overdose from one or more illicit drugs such as heroin, prescription opioids, fentanyl, cocaine, or methamphetamine ("Overdose deaths and the involvement," n.d.).

Research also revealed that current interventions have been unsuccessful with patients relapsing 40-50% after one year of successful treatment and then an increase to 70% relapse just three years later (Heitmann et al., 2017). That recent research validated the need for further studies regarding the treatment of patients dealing with trauma and addiction. McHugh et al. (2017) posited that, from their findings on relapse rates with

cocaine users, there was a 70% increased relapse rate from the surveys obtained from those attending an outpatient treatment. Furthermore, Green et al. (2016) noted the impact from trauma may have a lifetime of mental health and substance use disorders, recognizing the need for evidence-based treatment for addiction and trauma history.

Evidence-based treatment for addiction and trauma has evolved over the past five decades with behavioral therapies as a framework for intervention (Morgenstern et al., 2013). Past treatment for addiction and trauma addressed patients' behavior by focusing on coping skills and strategies for staying sober and mentally stable. Morgenstern et al. (2013) noted motivation for change is dependent on treatment outcomes, thereby noting the significance of utilizing evidence-based modalities. Addiction and trauma treatment protocols included traditional methodologies; Brewer et al. (2013) stated that cognitive behavioral therapy (CBT) has been the standard protocol for treating addiction and trauma. However, those same researchers suggested alternate approaches, and EMDR is one such potential alternate approach for trauma and addiction.

Continued research was the recommendation to support EMDR as an alternate treatment protocol for addiction and comorbid trauma. The objective of this study was to research and compare EMDR + TAU versus TAU alone. The purpose in researching gaps in addiction and trauma protocol validates the need to continue studies to address the societal and financial issues from addiction and comorbid trauma. In addition, another major problem that needs more research in the addiction and comorbid trauma concern is the recidivism rate. Why? Because addiction and comorbid trauma have and continue to cost society billions of dollars annually and continue to warrant further research.

Finally, as discussed in this chapter, the problem of those diagnosed afflicted with addiction and comorbid trauma implores the need for further examination on effective treatment. This leads to the purpose of this research to investigate EMDR as an intervention to supplement TAU when treating addiction and comorbid trauma. Thus, the following chapters are: (a) an examination of prior research literature in Chapter Two, (b) an explanation of the research methodology in Chapter Three, (c) an analysis of the results, findings in Chapter Four, and (d) a discussion and implications for further research in Chapter Five. All of the following are summarized from this pilot study treating addiction and trauma with EMDR.

CHAPTER TWO: LITERATURE REVIEW

Introduction

This chapter contains the scholarly literature to identify what is known about the treatment for those diagnosed with addiction and comorbid trauma. The literary research encapsulates the need for effective addiction and comorbid trauma treatment. Additionally, what interventions are currently available and effective to treat addiction and comorbid trauma are presented. Third, an exhaustive investigation of EMDR as a probable intervention to treat addiction and comorbid trauma was conducted. EMDR has been the primary protocol to treat those experiencing trauma or traumatic events. Shapiro and Brown (2019) noted that EMDR is the gold standard to treat trauma and PTSD. However, trauma has been researched and linked to addiction. The individual's use of substances leads to self-medication and dependency on substances. Those researchers further postulated such reasons for substance dependency is to disassociate from those experiences from sexual, physical, emotional, and mental abuse. Last, addiction is a learned behavior that requires clarity and definition.

Neurobiology of Addiction

Due to the epidemic loss of life from addiction, exploring alternative treatment methods by examining the effects of societal stigma on those with addiction, and intending to demystify addiction may lead to societal awareness. Exploring how to define addiction, and to understand why a person with addiction relapses, begins with the research on the brain disease model from the current studies from Albrecht (2014).

Albrecht (2014) reported the brain disease model (BDM) is applied to explain and interpret addiction-modified brain regions of memory, reward, and motivational circuitry.

Understanding that phenomenon increases awareness of why and how a person with addiction is motivated to seek a substance involuntarily. Albrecht found that addiction is an involuntary action due to the modification of the reward, memory, and motivation circuitry of the brain. It can lead to chronicity and can progress to increased use, tolerance, and quantity of the substance. The significance of gaining effective treatment is the American Society of Addiction Medicine's (ASAM) mission, which is to advocate for patients and the public, seeking an understanding of the disease of addiction. ASAM adds to the body of knowledge that clearly defines addiction as a chronic, persistent, severe medical disease involving the brain circuitry that is predisposed to individuals genetically, the environment, and from an individual's life experiences. The individual may engage in risky behaviors that becomes compulsive despite the negative consequence (American Society of Addition Medicine, 2017).

Sullivan (2012) noted addiction is a learned behavior. It affects the brain's reward circuitry involving a dopamine neurotransmitter, which, in turn, is released to the nucleus accumbens, which then reinforces addictive behaviors. Memories are stored in the hippocampus, which controls the measure of the reward. The more rewarding the memory toward the substance, the greater the motivation to seek the substance.

Albrecht (2014) surmised that it is the motivation, drive, or obsession to satiate the person suffering the addiction that compels the person even at the risk of further negative consequences. Rewards are found by the amount of dopamine released, typically where the maximum release of dopamine (from the ventral tegmental area, a region of the brain circuitry) is 200 units for an orgasm (primal innate behavior to procreate). The memory, motivation, and reward circuitry are modified from use of substances: four, six,

up to eight times the maximum 200 units of dopamine. The memory becomes salient and is immediately stored in the hippocampus toward the compulsion to use substances (Morgenstern et al., 2013). The risk of negative consequences an individual faces by seeking substances comes at a societal cost and therein lies the need for effective addiction treatment.

The societal and accrued costs derive from patients' maladaptive behaviors stemming from seeking substances through criminal acts and behaviors such as manipulation, lying, and stealing (Brewer et al., 2013). Other negative consequences from incarceration, unemployment, and financial, and relational losses are byproducts from addiction. Patients wo enter a 30-day treatment return home attempting to remain sober only to relapse and return to treatment, thus, falling into a treatment cycle, thereby adding to the stigma of the disease of why treat those when treatment fails?

The societal stigma of addiction arises and results in defeat to those afflicted with the disease of addiction and the disease regaining control of the individual's life. At that point, the stigma of addiction further causes guilt and shame resulting in resumption of drug use and/or further alcohol dependency (da Silveria et al., 2016).

This study examined the need for treatment reformation necessitated by the epidemic loss of life from addiction. Feldstein-Ewing and Chung (2013) stressed the importance of addressing treatments examining cravings due to areas of the brain dealing with motivational cues or triggers to substances.

Feldstein-Ewing and Chung (2013) emphasized the significance of neuroimaging to observe the neural modifications that occur during neural plasticity, altering cognitive processes and memory functions of the reward/memory/motivation circuitry. Those

researchers stated that neuroimaging assists with understanding the neuroscience of addiction and enhances treatment interventions, though it comes with a substantial financial cost and studies are limited. The typical exploration might include the following queries: Why do patients relapse? What tools are available to prevent relapse? However, the cost of addiction treatment due to the prevailing epidemic loss of life implores the need to study and explore alternative interventions by examining treatment alternatives.

Treatment for Addiction

Treatment standards that address human behavior and causality of substance use accompany approaches to treating addiction. Treatment for addiction includes hospitalization that is time-framed according to the patient's needs. Treatment includes medical, psychoeducational assessments, group and individual sessions, and case management. Interventions to treat addiction include several evidence-based modalities including CBT, dialectical behavioral therapy's (DBT) mindfulness, motivational interviewing (MI), and EMDR.

CBT has been the universal standard of treatment for addiction programming (Brewer et al., 2013). Vujanovic et al. (2017) studied addiction treatment and posited CBT and DBT as interventions for an individual's change and acceptance cognitively and behaviorally. Further, those researchers' purpose was to explore treatment elements such as DBT's mindfulness training, acceptance commitment therapy (ACT), and behavioral activation (BA) therapy for theoretical mechanisms of change. Vujanovic et al.'s (2017) findings led to hypothesizing that various behavioral therapies reduced depression and substance use. They researched mindfulness-based modalities that centered on cognitions and emotions versus behaviors and beliefs. Mindfulness training increases awareness of

the cues and triggers leading to unconscious use of drugs either by positive or negative cues or triggers. According to Brewer et al. (2013), the unconscious is motivated by the memory of substance use and is referred to as an "addictive loop," meaning that addiction is either triggered positively or negatively and is reinforced and memorized habitually (p. 367).

Lee et al. (2019) researched another standard addiction intervention treatment, MI, to assert change and motivate client autonomy. They emphasized that MI encourages clients to process and empower thinking through what the individual wants to change about themselves to create long-term change. Additionally, Lee et al. (2019) noted that MI improved treatment engagement according to their results from their sample population. They also noted motivating patients to treatment created autonomy and modified negative behaviors that led to addiction resulting in traumatic memories from the substance use.

According to Brewer et al. (2013), past treatment for addiction supports avoidance or modifying behavior to distract from cues and triggers, which was ineffective in preventing relapse. They further noted, "modest success, with abstinence rates for cognitively based treatments hovering between 20 and 30% for the past three decades" (p. 368). They researched an intervention, mindfulness training (MT), as an awareness of the emotions being experienced. Individuals paused internally and perceived those cravings physically and mindfully. MT is intended to assist with the perception of cues and/or triggers and their root causes without impulsive reactions. Brewer et al. (2013) continued to report that MT has shown to be successful in treating core belief issues related to addictive cravings. Also, they noted MT can be utilized to

create self-awareness for those with addiction, specifically, awareness of cravings and to strategically seek alternative thought processes instead of giving in to the substance use. Last, they noted additional studies are needed to provide supporting evidence for MT to treat addiction.

A leading scientific path to treat addiction is neuroscience. Research from Feldstein-Ewing and Chung (2013) validated the need to assimilate neuroscience and behavioral science when addressing addiction treatment. Their study supported an overarching theme to address neuroscience as a means of understanding how the addictive brain has adapted and changed physiologically and psychologically due to the learned behaviors stemming from addiction. Additionally, they reported how the brain adapted neurologically through "neural plasticity, that is, modifications in brain structure and circuitry" (p. 330). The brain adapts in the pleasure reward circuitry, (a region of the brain) to motivate to new memories that lessen the individual's cravings. Further, Ewing and Chung stressed the importance of addressing treatments examining cravings due to areas of the brain dealing with motivational cues and triggers to substances. The significance of neuroimaging is to observe the neural modifications that occur during neural plasticity, which alter cognitive processes and memory functions of the reward, memory, and motivation circuitry. Their research found that neuroimaging assists with understanding the neuroscience of addiction and enhances treatment interventions, though it comes with a substantial financial cost and studies are limited.

Albrecht (2014) posited, neurologically, the drive or obsession to addictive substances is what compels the person to use substances at the cost of negative consequences. That research supported the need for understanding the neurobiology of

addiction to examine treatment options. Albrecht's study implied that past addiction treatment options were inadequate and unsuccessful, thereby further research on addiction treatment modalities was recommended.

Wiechelt and Straussner (2015) noted those negative consequences, at times, come with a traumatic history. They found a correlation between addiction and trauma. Exploring what defines trauma and the impact from traumatic experiences will validate the examination of how the person's overall state of being is impacted and the use of substances to cope with addiction/traumatic events.

The Aftermath of Trauma

Lotzin et al. (2016) studied profiles of childhood trauma with substance use disorders. They noted the more severe the trauma and the more severe the psychiatric illness, the riskier and more impulsive the behaviors. Additionally, they formulated those types of childhood trauma resulted in differing substance use. Individuals associated with childhood physical and emotional abuse were linked with lifetime alcohol use and those associated with childhood sexual abuse self-medicated with drug use. Lotzin et al. (2016) concluded that their research identified patients' risk of substance use and the rationale to treat patients' specific treatment needs referencing a focus on addiction and trauma.

Trauma stems from an event that leaves an individual psychologically impaired. Whiteman et al. (2019) researched the effects of impairment that trauma has on those who survive. They expounded on how trauma psychologically distresses the individual behaviorally, cognitively, emotionally, and relationally. They noted the effects of trauma may lead to anxiety and depression that may develop to a substance abuse disorder. According to Whiteman et al. (2019), traumatic events that arise from sexual trauma are

linked to suicidal ideation occurrences. Moreover, they examined how trauma exposure has a link to sexual childhood trauma and noted childhood trauma increased future suicidal ideation and risky behaviors, which led to substance use disorders.

Van Nieuwenhove et al. (2020) similarly researched that those with childhood trauma history learn not to trust their primary caregiver, thus transferring mistrust to their adult life interpersonally. They noted from their clinical observation an association between childhood trauma and interpersonal difficulties that led to substance use to self-medicate mental health symptoms of anxiety and depression.

Van den Berk-Clark (2021) noted similar findings to what Whiteman et al. (2019) found from their research. Those researchers posited that trauma may result in an individual's risky behavior and health problems. They noted those traumatized victims need more trauma-informed care to treat PTSD symptoms. Further examination of their study revealed that individuals exposed to childhood trauma seek assistance from their primary care physician only to confront inadequate trauma screening and lack of primary care physician competency. Last, they recommended a reform for trauma treatment to equip with thorough screening and with trauma-informed guidelines for the physician to follow.

Treatment for Trauma

The need for treatment of trauma has been paramount in past and present crises, and Henning and Brand (2019) noted a shortage of clinicians to treat trauma. Their research indicated there is a sense of urgency to train clinicians to address this shortage. According to those researchers, what was lacking, overall, for trauma clinicians, was the significance of the clinician's self-care. Along with the lack of the clinician's self-care

was the importance of gaining initial therapeutic relationships with their clients and the stabilization of those traumatized clients. Further, they noted the significance of the clinician's competency and the ability to treat clients per treatment guidelines for trauma. Trauma treatment has evolved, although one treatment has remained constant as an intervention for trauma, which is CBT, as researched by Brown and Courtois (2019).

Brown and Courtois (2019) noted for treating trauma, CBT has been the intervention most widely used and recommended; however, their research concluded that EMDR received only conditional recommendation. Their research also showed that clinicians require outside training and need to seek post-degree continuing education from programs that are established from organizations such as the International Society for Traumatic Stress Studies, the International Society for the Study of Trauma and Dissociation, and the Eye Movement Desensitization and Reprocessing Therapy International Association. They researched alternative developing treatments from CBT to treat trauma, which were yoga, acupuncture, and meditation to reduce anxiety symptoms. In addition, they posited that, for effective treatment, clinicians should meet clients where they are, and to seek the individual's goals for treating their own specific trauma. Last, they implored clinicians to gain further clinical training, which meets the Institute of Medicine standards to address both trauma and addiction.

Trauma and the Impact to the Brain

How trauma affects the brain is another area that requires further investigation. Bücker et al. (2015) researched childhood trauma (CT) in their study, and trauma's impact on the brain. They stated, "brain-derived neurotrophic factor is a member of the neurotrophin family and is important for brain development, plasticity, and maintenance

of neurons in adult life and plays a critical role in the formation of long-term memory and other cognitive processes" (p. 361). Further, due to the CT and its effects on the development of the brain, (due to the lower level of the brain-derived neurotrophic factor) there is a correlation to mental health disorders such as schizophrenia, bipolar disorder, and PTSD. The complex research regarding the connection between CT and the brain signifies the importance of the clinician's competency, the understanding of the impact from trauma and the need to continue studies examining CT damage on the brain.

Perryman et al. (2019) researched the importance of clinician's knowledge of the brain and its functioning, specifically, on how trauma impacts the brain. Their research noted 60% of men have been exposed to trauma in their lifetime, either by combat disaster, physical assault, or an accident or with witnessing an injury or death. Further, they noted 50% of women have endured a traumatic event in their lifetime generally from childhood sexual abuse and sexual assault.

Perryman et al.'s (2019) recommendation for clinicians is to train in neuroscience to understand the brain's reactive states to combat traumatic events. Treating those individuals with trauma, utilizing neuroscience as an intervention, may provide trauma-informed competent clinicians. Researching trauma and addiction will elucidate the need for further clinical studies that examine effective treatment for both.

Trauma and Addiction (Dual Diagnosis)

Wiechelt and Straussner (2015) noted the DSM-5 defined trauma for PTSD as an individual witnessing or experiencing, "exposure to actual or threatened death, serious injury, or sexual violation via direct experience, witnessing in person, learning that a close friend or family member experienced such an event, or repeated extreme exposure

to aversive details about traumatic events" (p. 2). They noted individuals may severely react or respond to trauma, whereas others may not. Wiechelt and Straussner (2015) noted that 56% of individuals will experience a traumatic event and may develop PTSD. They stated that prolonged trauma exposure manifests symptoms of anxiety, depression, disassociation, and substance use. Though their research was not exhaustive, they recommended specific trauma-informed care for substance user programs. Victims of trauma have gained a coping skill to reduce traumatic symptoms of anxiety and depression by self-medicating, as Burnett et al. (2016) researched.

Burnett et al. (2016) referenced similar statistics as Wiechelt and Straussner (2015) did, positing an individual's lifetime experience from traumatic events, though they noted substance use is the "self-medication" hypothesis to relieve distress from the traumatic events. The researchers noted stress and substance use exposure was the contributing factor to the individual's substance abuse relapse. They posited how a person processes and one's resiliency determines how one adapts and transitions from traumatic events. Hammersley et al. (2016) added to the body of knowledge through their research of coping mechanisms to alleviate symptoms of anxiety and depression.

Hammersley et al. (2016) researched the same topic as Burnett et al. (2016), that individuals self-medicate to avoid intrusive thoughts, to cope and escape mental health symptoms such as anxiety and depression. Further, Burnett et al. (2016) noted repeated childhood trauma progresses to substance abuse chronicity. They posited the individual's sense of responsibility of the related trauma as a coping skill to accept one's reality, and to let go of the victimization. When individuals accept the responsibility of the trauma is what Hammersley et al. (2016) referred to as the "sense of agency and personal

responsibility" (p. 137). They surmised that limited research has been documented regarding an individual's traumatized experience that has developed into a substance abuse problem. Additional literature that validated the self-medication model was from the research findings of Ertl et al. (2016), who studied the cause and effects from trauma.

Ertl et al. (2016) found a scarcity of research that focused on lifetime effects from family and veterans with trauma. Their findings aligned with other research depicting alcohol-related use to self-medicate deviations, such as anxiety and depression. Significant findings in their research concluded that those with childhood trauma will leave treatment earlier, and relapse, than those individuals with no trauma. Additionally, participants in their study noted alcohol relieved PTSD symptoms: nightmares, flashbacks, isolation, and startled responses. Last, Ert et al. noted that reformed treatment protocols would benefit by adapting to pre-evaluations, screenings, and detox.

Trauma and Addiction Treatment

The treatment protocols for both trauma and addiction reveal the necessity of programs for recovery, such as Najavitis et al.'s (2015) research on the 12-step self-help groups as a source for recovery from addiction. Those self-help groups included: Alcoholics Anonymous, Narcotics Anonymous, and Gamblers Anonymous, to name a few. They examined the correlation and impact between substance use disorders and trauma. Noted was the limited attention to patient's trauma in 12-step self-help groups. The other findings they noted were the negative connotations of whom the addict has harmed, whereas those victims of trauma were the ones harmed. The verbiage of the 12 steps, step 1, "We admitted we were powerless over our addiction" (Najavitis et al., 2015, p. 1787) disempowers those traumatized victims. Trauma survivors may see their trauma

as a primary concern that is secondary to the substance use, whereas the 12-step program views the addiction as the primary cause. Najavitis et al.'s (2015) research was a pilot study that focused primarily on females with PTSD and (substance use disorder) SUD and self-help groups. They also found there were limited numbers of 12-step self-help groups for trauma, though more research was needed. Last, their findings concluded that women valued and found trauma-focused and substance use disorder group participation helpful. Seeking Safety is a program for women with trauma and substance use and justified an examination by Kaiser et al. (2015) to note its treatment worthiness.

Seeking Safety provided training for women dealing with symptoms from trauma and education on substance abuse. The program offered: "Safety, PTSD: Taking Back Your Power, Detaching from Emotional Pain (Grounding), When Substances Control You, Asking for Help, Red and Green Flags, Honesty, Recovery Thinking, Setting Boundaries in Relationships, Coping with Triggers, Healing from Anger and Self-Nurturing" (Kaiser et al., 2015, p. 404). According to their study, although there were improvements in the samples' trauma symptoms, the participants showed no change for substance use. They noted, however, the participants may have falsified their report for substance use as being negatively viewed by the treatment program. Kaiser et al. (2015) noted results concurred with other studies on PTSD and SUD treatment, with research favoring positive findings for trauma rather than substance abuse. Therefore, if trauma and mental health disorders are linked with addiction, Pagano et al.'s (2015) research may provide added support from their findings on social anxiety disorder and addiction.

Pagano et al. (2015) studied the comorbidity of social anxiety disorder and substance use with adolescents. They posited that there may be a possible correlation

between trauma-related anxiety leading to a probable incarceration history, greater risk of heroin or substance use, as well as first use at an earlier age. However, their findings concluded positive results for participants attending sober self-help groups. Those self-help groups provided adolescents' optimal outcomes of reduced recidivism, incarceration, and relapse.

Additionally, a pilot study that researched PTSD from Zepeda Méndez et al. (2018) confirmed the need for additional studies on EMDR to treat trauma and addiction. They postulated that 80% of trauma patients have one or more comorbid psychiatric disorders such as a substance use disorder. However, additional research is recommended and prompts the study on EMDR, an intervention that provides treatment relief for both trauma and addiction.

EMDR

Francine Shapiro created EMDR therapy in 1987 to reduce the intensity of disturbing thoughts, under certain conditions. Matthijssen and van den Hout (2016) researched EMDR and postulated the negative symptoms of a patient's trauma were reduced by tasking the working memory through dual exercises. EMDR relies on bilateral stimulation (BLS) of the right and left-hand hemisphere of the brain as in rapid eye movement (REM) during later stages of sleep. A BLS example is back and forth eye movement, alternate sides of the body tapping, and alternating tone in headset to achieve the result of desensitizing a traumatic memory. The patient gained a lower threshold of emotional discomfort via EMDR BLS; additionally, the patient's memory of the trauma is lessened, and the patient can problem-solve the trauma, moving onward with their life.

Further research was recommended and Matthijssen and van den Hout (2016) stating that eye movement (EM) is an abstract concept that implores further studies to examine if EMDR reduces the vividness or the emotional disturbance from a traumatic memory. According to Shapiro and Brown's (2019) research, EMDR was found to reduce the negative emotional symptoms experienced by patients who experienced traumatic events.

Shapiro and Brown (2019) researched the development of EMDR and posited that fear-based, complex developmental, intergenerational, attachment, or even one-time trauma may benefit from EMDR treatment. They added that developmental trauma may require further sessions to clear the target incident's frozen memory. Shapiro and Brown (2019) noted regulating agencies, such as the EMDR International Association and the EMDR Humanitarian Assistance Program (EMDRHAP), were significant to research, train, and to certify EMDR practitioners. Those same agencies assist victims of trauma by offering pro-bono sessions during mass trauma and target those individuals suffering from occurring traumatic casualties.

Shapiro and Brown (2019) continued to explain what occurs during a typical EMDR session. The EMDR specialist will utilize the eight-phase protocol to target the patient's trauma incident. The process addresses the past, the present, and the future timeframes that may trigger responses, and then adapts to a preferred narrative or cognitive core belief system. Extensive disassociation cases require additional training for the practitioner and additional resourcing for the patient to prepare for EMDR sessions. Equally as significant in the process is the therapeutic alliance and trust between the patient and the practitioner. The patient is directed to a grounding technique utilizing

guided imagery as a resource when the patient's trauma is overwhelming during the EMDR session. Additionally, during the sessions, the patient is supported by a specialist to assure safety during the processing.

Shapiro and Brown (2019) researched EMDR's format, which Francine Shapiro developed in 1987. It is constructed of eight phases that address the patient's traumatic memories: (1) gathering of patient's history, (2) utilizing of resources to ground the patient, (3) assessing their core beliefs, (4) reprocessing the memory utilizing bilateral stimulation, (5) installing positive core beliefs, (6) body scan for any sensations, (7) closure to check for possible uprising memories or dreams, and (8) reevaluate the original target memory and other traumatic memories that may have linked to the original traumatic event. The next phase in researching effective treatment for addiction and comorbid trauma is to investigate EMDR's competency.

Competency of EMDR

EMDR is an evidenced-based treatment modality that has been widely accepted by the U.S. Department of Veterans Affairs and U.S. Department of Defense treatment guidelines for trauma (Flanagan et al., 2018). Additionally, EMDR has been noted as an evidenced-based and innovative treatment for PTSD and trauma (Shapiro & Brown, 2019). Balbo et al. (2019) noted similar research confirming EMDR's therapeutic efficacy from random trials supporting EMDR's effectiveness for processing traumatic memories. Additionally, those researchers noted the World Health Organization (WHO) endorsement of EMDR for trauma, whereas the American Psychological Association (APA) utilizes CBT, cognitive processing therapy, and cognitive therapy for treatment

for trauma (Balbo et al., 2019). Treatment efficacy from EMDR was also investigated for mental health issues due in part that mental health concerns are linked to addiction.

Gauhar (2016) also researched EMDR efficacy for treatment of depression, and those study's findings indicated similar results supporting an increase in the participants' quality of life and a reduction in depression and trauma. In addition, Gauhar (2016) noted EMDR's potentiality to treat patients with depression, though that researcher noted no studies examined EMDR as the primary treatment protocol. That research was the first preliminary study to treat depression with EMDR, and the findings indicated desensitization of depression and trauma after six to eight EMDR sessions. Last, the researcher posited future studies were needed to examine EMDR as the stand-alone treatment for depression and trauma.

Shapiro and Laub (2015) noted parallel findings with their research examining recent traumatic episode protocol (R-TEP) conducting EMDR with those participants that were traumatized from a missile attack in Gaza, south of Israel. Their research also examined EMDR's efficacy that reduced participant's trauma symptoms from events such as the 2012 earthquakes in Italy and the 2009 terrorists bombing in Istanbul. An emergency EMDR "toolkit" was developed to assist firsthand responders to traumatic events, and to gain data to formulate an effective intervention for traumatic events. The researchers hypothesized and concluded that EMDR R-TEP would improve participant's trauma and depression symptoms in large scale traumatic events. Political traumatic events such as terrorism are life threatening requiring an effective intervention such as EMDR.

Another traumatizing occurrence in one's life, such as cancer, could benefit equally from EMDR, as Jarero et al. (2015) researched. They studied cancer patients from Monterey, Mexico utilizing EMDR to reduce PTSD and depressive symptoms. Their study indicated that intervening with EMDR-integrated group treatment protocol (IGTP) was a supportive procedure for cancer patients with PTSD symptoms that resulted in EMDR's efficacy to treat trauma. EMDR efficacy research concluded with Shapiro and Brown's (2019) study on EMDR as an effective treatment for trauma. They postulated EMDR's effectiveness to address all three components of trauma: the cognitive, somatic, and affective. The research investigation follows in synchronization to examine EMDR treatment competency for addiction.

Competency of EMDR to Treat Addiction

EMDR's competency for trauma has been researched and established as competent; however, Markus et al. (2017) researched the limitation of existing addiction treatment utilizing EMDR. However, they researched addiction focused (AF)-EMDR that targets frozen memories elicited by past high-arousal events from substance use. During EMDR the memories unlock, and new neural pathways are adapted that allow for a new problem-solving memory that is rewritten in the hippocampus. Thereby, in addiction those frozen memories of cravings, urges, compulsion to use substances are desensitized. The aim of that research was to globally address trauma-focused (TF)-EMDR and AF-EMDR to support results that the use of EMDR has provided a "valuable intervention in addiction treatment" (p. 13). The aim of this study is to research EMDR as an integrative component to treat addiction and trauma.

Kiessling (2016) postulated EMDR is not only utilized as a trauma treatment intervention, but the objective for its use is also to identify maladaptive and adaptive networks. Memories are a collection of neural pathways stored throughout the brain and include (a) emotions, (b) sensations, (c) thoughts and (d) images. Additionally, Kiessling's EMDR research noted an adaptation to link, bind, and re-consolidate the memory network. The principles behind adapting to preferred memories or neural pathways are the byproduct of when neurons are fired and wired together. In the memory process, maladaptive cognitions may isolate and become triggered from past emotions; sensations that cause faulty, distorted beliefs resulting in the inability to link, consolidate and update to a preferred belief system. Kiessling (2016) noted that the approach of EMDR treats the core belief by targeting the frozen memory and processes the negative irrational belief to an adaptive, preferred core belief. EMDR activates the problem-solving process focusing on both the positive and negative emotions, sensations, and beliefs, thereby effectively adapting, linking, and consolidating memories. The patient's new adaptive core belief may encounter the onslaught of memories that are cued and/or triggered to addiction as van den Hout et al. (2013) found when investigating and assessing EMDR's competency.

Van den Hout et al. (2013) referenced EMDR as a treatment to reduce addictive cravings or cues by reducing the memory's vividness and future memory recall. They posited EMDR as superior to other interventions, including CBT, as an intervention to treat addiction. As vivid memories were recalled during the EM, the working memory theory hypothesized that future real-life memories become less vivid and less disturbing. However, those researchers noted the limitations to these findings resulted from

participants' self-reports. Despite the limitations, their research summarized that EMDR is an effective treatment for trauma and addiction due to the desensitization of the traumatic memories. They recommended that additional studies were needed, as Bae et al. (2015) added to the body of this investigation.

Bae et al. (2015) examined the desensitization of triggers and urge reprocessing (DeTUR) EMDR with patients addicted to gambling and found that EMDR was effective and timely with fewer sessions, three in comparison to approximately 14 sessions of CBT. They posited those therapies, such as EMDR, and body psychotherapy sessions are a faster treatment response because of the process involving access to the sensorimotor areas of the brain stem, thus, reducing urges and memory cues. What the researchers noted was that urges, physical sensations, and triggers create a physical arousal; EMDR reduced the pathological gamblers' (PG) physical stimulation to gamble. Additionally, the processing of the physical symptoms reduced the urges to relapse to gamble. In their study, two participants reported improvement just after one session. They listed barriers of problem gamblers, which were guilt, shame, and the stigma that is associated with addiction. And those barriers prevented change, though DeTUR EMDR provided support to issues of confrontation and judgment. Bae et al. (2015) further cited the limitations of the research were their small sample size, no control group, and the self-reported questionnaires. However, their study noted favorable treatment for patients with PG and in a relatively shorter treatment stay. A pilot study of EMDR treatment for addiction and trauma from Perez-Dandieu and Tapia (2014) also added to the body of knowledge on EMDR's competency.

Perez-Dandieu and Tapia (2014) investigated the effects of EMDR treatment with persons with addiction and trauma, and they proposed EMDR would be effective for treating addiction symptoms. The participants in their study were given two types of treatment: TAU or treatment with an additional eight sessions of EMDR. The results of their study found that there were reduced symptoms of anxiety, depression, trauma, and increased self-esteem. However, their study limitations were the small sample size of 12 participants, females only, and the researcher bias due to the same person that applied EMDR was also the evaluator. Their study recommended more research to validate the intervention's effectiveness to treat trauma and addiction.

Czyz and Muhlbauer (2015) studied patients in a community mental health setting to focus on the participant's inability to reintegrate back to their community without relapsing on substances. Their study concluded that EMDR may provide support as an adjunct intervention to TAU, working synergistically by providing effective SUD treatment. They also noted that EMDR's effectiveness would supplement both CBT and DBT by lessening the emotional impact from the trauma. Thereby, the individual adapted to a preferred core belief utilizing all four interventions CBT, DBT, transactional analysis (TA) and EMDR, which lessened the addiction symptoms. Those researchers noted that EMDR and TA desensitized the frozen memory, by modifying the dysfunctional childhood script. They surmised that modification occurred through a neurological process via neural pathways, that adapt the individual's change of their core beliefs. Studies on EMDR competencies for addiction and comorbid trauma were required to understand EMDR, as also the need to research EMDR's limitations.

Limitations of EMDR

The limitation of EMDR's competency to treat addiction and comorbid trauma research was also examined. Mentioned previously, Bae et al. (2015) researched pathological gamblers utilizing EMDR. They posited that EMDR research may produce insufficient outcome measures due to the lack of the studies' randomization and pre-selection bias. Additionally, those researchers noted that, for problem gamblers, there were no reliable or well-designed measures to assess therapeutic instruments that were associated to problematic or secondary gambling issues.

Schäfer et al. (2017) validated similar results when they studied the limitations to assess EMDR's effectiveness. They noted the lack of random controlled trials (RCT) as they researched EMDR's effectiveness with patients diagnosed with SUD and PTSD. They concluded that trauma-focused treatment would benefit patients with SUD and comorbid PTSD, though there are few treatments that offer both SUD and PTSD.

Blankenship (2017) noted EMDR's shortcoming as a controversial "pseudo-science" intervention due to the use of BLS and the lack of scientific knowledge of how EMDR truly works. The other limitation noted in that research was the clinician's competency and what the training involved. The research posited that EMDR required an extensive training at an expensive cost to obtain and that is a limitation to those who are seeking addiction and trauma-focused training. However, Blankenship (2017) noted programs offering a sliding scale to those interested from those organizations offering EMDR training such as EMDR Humanitarian Assistance Programs (HAP) ("Training overview," n.d.). The research on treatment for addiction progressed to pursue continued examination of EMDR's competency and EMDR's effectiveness to treat trauma.

Competency of EMDR to Treat Trauma

In contrast to the literature to research EMDR's competency to treat addiction, there was a plethora of research for EMDR's competency to treat trauma. Schäfer et al. (2017) researched EMDR as a trauma-focused treatment, which was shown to be effective in patients with trauma. Acarturk et al. (2015) also researched the effectiveness of EMDR with Syrian refugees' trauma and found similar results that symptoms of PTSD and depression were reduced. Their study with the Syrian refugees had limitations of lacking randomized clinical trials and further studies with larger, similar populations were needed.

Schubert et al. (2016) researched the effectiveness of EMDR as a treatment for veterans with postwar traumatic symptoms in a developing nation. In their study, 21 participants were treated with EMDR therapy. The treatment findings supported the use of EMDR therapy as effective in reducing the symptoms of depression and anxiety in a cross-cultural, postwar and conflict setting.

Blankenship (2017) also researched modalities to treat trauma from PTSD. The focus of research elucidated neurobiology and referenced two areas of the brain that are inhibited (prefrontal area where neurocognitions are disrupted/distorted and the limbic system) and charged emotionally due to trauma that causes the freeze, fight, or flight condition. That researcher noted the neurocognitive and the limbic systems attempt to balance the uncontrollable and the emotional response from the trauma.

That study also explored treatments such as prolonged exposure (PE) therapy, cognitive processing therapy, trauma-focused CBT (TF-CBT), stress inoculation training (SIT), and EMDR therapies, which are all empirically researched and evidenced-based.

Blankenship's (2017) research validated, "84%-100% of single-trauma victims no longer meet PTSD diagnostic criteria after three 90-minute EMDR sessions, and that in comparing a single session with PE therapy, subjective units of distress levels sharply decreased with EMDR therapy" (p. 282). Other traumatic events involve incarceration stays in an individual's life as Brown et al. researched.

Brown et al. (2015) researched treatment for trauma and noted empirical studies that found a decrease in patient's repetitive incarcerations. They examined the missing components of treatment protocols and the significance of treating trauma. Their study noted EMDR's effectiveness that reduced recidivism in the criminal justice system. The study's sample population included 220 participants over a 5-year period; they collected data utilizing an integrated trauma treatment program (ITTP). Additionally, two empirically models were discussed, Seeking Safety and EMDR. Those researchers hypothesized that utilizing EMDR was supportive as an intervention to treat trauma. They concluded that there was a correlation between SUD and trauma. A quest now begins to research the competency of EMDR as an intervention to treat both addiction and trauma.

Competency of EMDR to Treat Both Addiction and Trauma

The literary review was narrow regarding treatment utilizing EMDR for both addiction and trauma. However, past research from DeBell and Jones (1997) elucidated EMDR's effectiveness and examined seven studies that utilized EMDR as a treatment for patients diagnosed with PTSD and comorbid SUD. Additionally, they questioned the developer, Francine Shapiro's, approach to a patient's ability to adapt and reprocess information. Their argument was that the process of EMDR: a) requires too many

sessions, b) patient's re-exposure to the trauma and, c) the lack of addressing the faulty cognitions from the exposure during those lengthy sessions.

Abel and O'Brien (2015) expounded that EMDR is an approach to treating addiction and trauma. Those researchers noted the use of a biopsychosocial approach to resolve addiction problems because patients experiencing addiction are burdened with trauma past or present. They hypothesized that EMDR would be effective to treat both trauma and addiction because a patient's memories are integrated in the regions of their brain and are recalled when cued or triggered. The researchers postulated that patients will involuntarily choose addiction over their basic needs or life itself. Therefore, they concluded that treating the trauma will reduce the need for substances.

Brown et al. (2015) analyzed childhood traumas and referred to the areas that cause trauma including physical, emotional, and sexual abuse. Other areas of concern were family, relational, legal issues, and childhood neglect and abandonment. They noted that there was a risk correlation to abusing substances, as well as mental and physical health issues. Thus, the severity of the mental health and substance use prevented the patient from seeking treatment and resulted in them choosing to self-medicate. The National Institute on Drug Abuse (NIDA) concurred with the self-medication model and with Brown et al., noting the significance of therapy to reduce trauma severity and successful treatment outcome. Additionally, those researchers postulated that the National Association of Drug Court Professionals (NADCP) recommended a mandated drug court of 12–18-month treatment stay to reduce recidivism among mental health and drug offenders. The drug court offered evidenced-based modalities, such as Seeking

Safety and trauma treatment from EMDR. Brown et al. also utilized EMDR therapy for its ability to lessen the severity of the trauma, thereby reducing the need for substances.

Other notable governmental departments researched and validated EMDR's efficacy for substance abuse and trauma. Agencies such as The U.S. Department of Veterans Affairs (VA) and U.S. Department of Defense (DOD) endorsed EMDR for behavioral treatments for substance use and PTSD (Flanagan et al., 2018). However, the research on EMDR and addiction is limited and requires additional studies to validate EMDR as a supportive treatment for addiction and comorbid trauma as the study provided by Perez-Dandieu and Tapia (2014).

The study by Perez-Dandieu and Tapia (2014) hypothesized, "reprocessing traumatic memories with EMDR would lead to measurable changes in addiction symptoms" (p. 306). The results of their study were positive for reducing trauma symptoms. However, there was an insignificant decrease of alcohol and substance use. Their research formulated a significant finding that EMDR decreases trauma, anxiety, and depressive symptoms and may be utilized as an intervention before a patient becomes abstinent. Additionally, EMDR was found to increase an adaptive perspective from desensitizing the traumatic past memory to a preferred adaptive present and future life functioning. The limitations to their study were their small sample size of only 12 female participants and the treatment of EMDR was given by the same evaluator, which may have biased the results. Their research concluded with the need for future examination of EMDR's effectiveness to treat addiction. Lastly, additional studies such as this one will expand the limited scholarly research and synthesize the data to test for rigor, trustworthiness, and reliability.

Summary

The literature review summarizes the need to continue examining EMDR as a modality to treat those experiencing addiction and comorbid trauma. EMDR was used as the intervention in this research to examine efficacy and effectiveness in reducing symptoms of addiction and comorbid trauma that may cause relapse and or loss of life. Finally, a data analysis of EMDR treatment, presented in Chapter Four, will provide rationale to include EMDR as a treatment protocol for individuals with addiction and comorbid trauma.

Evidenced-based treatment for addiction has evolved over the past five decades with behavioral therapies as a framework for intervention (Morgenstern et al., 2013). Addiction treatment protocols include traditional methodologies; however, EMDR offers patients alternate intervention choices. Brewer et al. (2013) stated that cognitive behavioral therapy has been the standard protocol for treating addiction. However, those researchers suggested alternate approaches with integrating modalities to address core issues, such as what causes relapse in addiction.

Patients with addiction are, for the most part, currently receiving treatment addressing cognitive deficits dealing with the frontal cortex functioning specifically, decision-making, judgment, and actions. Impairment in these areas from the disease of addiction challenges a patient's quality of life where obtaining basic needs is compromised by the need to obtain substances. Patients with addiction are motivated to seek substances, thus view the treatment cycling as a norm or new way of life.

Significant findings resulting from the examination, assessment, and analysis of treatment models are lacking due to the minimal to no research being conducted in all

three areas for treatment of addiction and trauma. The purpose in researching gaps in addiction and trauma protocol, validated the need to continue studies to reduce recidivism and loss of life. Why? Because addiction and trauma have cost society billions of dollars annually and continues to warrant further research.

In summary, in this pilot study a quantitative methodology was utilized to evaluate EMDR as an intervention to treat addiction and trauma.

The following will be discussed in Chapter Three with the details of the who, what, when, where, and how EMDR when added to TAU affects treating those diagnosed with trauma and addiction. Additionally, the ethical considerations are examined as well in the following chapter due to the high-risk population sample size.

CHAPTER THREE: METHODOLOGY

Introduction

The overwhelming recidivism rates, fatalities, and societal costs appear to implore treatment protocols that address those patients diagnosed with a substance use disorder. EMDR is an intervention to address those with a substance abuse disorder and comorbid trauma and assist a patient's memories to become less vivid and desensitized when triggered to past triggers and cues. In this research, the aim is to examine EMDR + TAU versus TAU alone that will also address addiction and comorbid trauma.

The societal issues and loss of life from addiction comorbid trauma is the focus of this study, which will attempt to formulate whether EMDR treatment for addiction and comorbid trauma is a supplemental protocol. Also, the intention was to research and to examine if EMDR will make a difference to the treatment standards to remedy the crisis of addiction and comorbid trauma.

Statement of the Problem

The issues of those that are faced with addiction and comorbid trauma are catastrophic and is a global epidemic. The CDC statistics show that "the number of drug overdose deaths increased by nearly 5% from 2018 to 2019 and has quadrupled since 1991. Over 70% of the 70,630 deaths in 2019 involved an opioid. From 2018 to 2019, there were significant changes in opioid-involved death rates" (CDC, 2021). The problem statement for this study is regarding to what extent EMDR and TAU versus TAU only will be effective. A quantitative method measured the treatment outcomes for addiction and comorbid trauma

Research Questions and Hypotheses

The research question for this study is: How does the addition of EMDR intervention assist treatment of those diagnosed afflicted with addiction and comorbid trauma, as opposed to the treatment without EMDR? The first hypothesis of this study was that utilizing EMDR to desensitize traumatic and addiction memories would lead to measurable changes and improve overall treatment outcomes. Those specific measurable changes refer to the mental health indicators of anxiety, depression, and trauma severity and increase self-esteem.

Additionally, the second hypothesis was a null statement that there is no difference when EMDR is supplemented to TAU versus TAU alone to decrease mental health symptoms and increase self-esteem. The intention of this research was to conduct a quantitative study utilizing questionnaires that will measure a comparison between TAU + EMDR and TAU alone. Additionally, assessments for each presenting problem will be conducted at baseline and at completion of treatment to determine treatment outcome.

A quantitative approach was intended to clarify and synthesize the findings of EMDR's effectiveness by measuring the results derived from a sample size population. The results from the collected data may further validate the need for additional studies. In this pilot study, 24 participants met the DSM-5 criteria for chemical dependency, along with a comorbid diagnosis of PTSD from traumatic events that existed with those suffering from addiction.

Participants with PTSD symptoms will self-medicate to address those symptom issues, which will lead to substance use and dependency. This research included measurements accounting for variables of age, gender, mental health symptoms of

anxiety, depression, self-esteem issues, and trauma history. The treatment standards and the study site were a controlled environment due to the participant's daily monitoring, with weekly nursing and medical care. Additionally, the participants attended weekly group and individual sessions to note and document participant's progress. The instruments utilized were the following: (a) PTSD Checklist-Specific (PCL-S; Weathers et al., 1993) (see Appendix D), (b) the Beck Anxiety Inventory (BAI; Beck et al., 1988) (see Appendix E), (c) the Beck Depression Inventory (BDI; Beck et al., 1961) (see Appendix F), and (d) the Coopersmith's self-esteem inventory (SEI; Coopersmith 1981) (see Appendix G). The measures have both a baseline and posttests to examine intervention's worthiness and to add to the body of knowledge.

The quantitative research methodology facilitated the collection of data for each variable where the dependent variables were the characteristics that were derived from addiction and comorbid trauma, and the assessments were utilized to measure the symptoms. Those characteristics were anxiety, depression, PTSD, and self-esteem. The independent variables were the treatment interventions EMDR added to TAU and TAU alone. Synthesizing the data collected from the quantitative methodology measures provided what EMDR's impact to TAU treatment group in comparison TAU alone. Depaoli et al. (2018) noted that the development of a quantitative method is a catalyst for change, and that is the aim of this study, which is that EMDR may provide that catalyst for treatment change to TAU. The quantitative method identified the specific instruments and data sources used to collect all the different data necessary for this study.

Research Methodology

The study was conducted utilizing a quantitative methodology to question the effectiveness of EMDR as a complimentary intervention to treat addiction and comorbid trauma. This design used a pre- and posttest quantitative assessments to provide data comparing TAU and TAU with the intervention EMDR (Báez et al., 2019). The quantitative design supported the researcher to investigate EMDR's efficacy to treat addiction and comorbid trauma by use of assessments to measure mental health symptoms of depression, anxiety, trauma severity, and self-esteem.

The sampling strategy was random, with participants derived from the treatment center where the research was conducted. In this pilot study, the sample population size was doubled to 24, consisting of both men and women, 18 years old and older. The participants were provided with the details of the study, and they were given informed consents (Appendix A) to sign before the study began. The participants took part in a pre-experimental design where the researcher studies two groups and provides an intervention during the experiment. This design had a control group to compare with the experimental group (Creswell, 2014).

Research Design

A quantitative research design was utilized for the purposes of this study. A comprehensive review of the literature was done covering significant research focusing on addiction, trauma, treatment for each and then treatment for both in order to examine effectiveness in the intervention EMDR to treat addiction and comorbid PTSD symptoms of anxiety, depression, trauma severity, and self-esteem. The aim was to measure and

analyze the data at baseline and posttest to determine EMDR's change or no change to TAU and the difference or no change to TAU alone.

Participants and Sample Size Justification

The quantitative method was the most appropriate design to collect the data to answer the question: How does the addition of EMDR intervention assist treatment of those diagnosed afflicted with addiction and comorbid trauma, as opposed to the treatment without EMDR? Participants were randomly chosen, equaling 12 participants selected for the TAU treatment group and 12 randomly chosen participants chosen for the EMDR and TAU treatment group as they were admitted to a treatment facility during the admission process. The participants were matched gender to gender for each of those groups (EMDR + TAU versus TAU alone). The age of participants was at least 18 years and older. Those participants were admitted to a substance abuse treatment facility where they underwent an admission process that included medical and psychiatric care. Also, participants were assessed by a licensed mental health clinician to gather information and to diagnose the clients in order the ensure they met criteria for substance use disorder and comorbid trauma.

The research conducted by Perez-Dandieu and Tapia (2014) was a pilot study that targeted a sample population of 12 participants 18 years and older. The recruiting process for this study was completed when the Clinical Director at Recreate Life Counseling consented to the research being conducted (see Appendix B) and assigned participants to their primary therapist. Those therapists then introduced the research proposal to their own case load and queried if any of those participants were interested in partaking in the study. If they were, then the therapist and researcher, when needed, reviewed the

provided consent and invitee forms (see Appendix A), and presented them for the participant's signatures.

Instrumentation

The types of data collected further delineated effective treatment for addiction and comorbid trauma. Thus, that data will measure the participant's anxiety, depression, trauma symptoms, and self-esteem. The measures used in this research were those mostly utilized from the Perez-Dandieu and Tapia (2014) research, to build on their study's findings. They are: (a) the PTSD Checklist-Specific (PCL-5; Weathers et al., 1993), which assesses and monitors PTSD symptoms according to the DSM-IV criteria (see Appendix D); (b) the BAI (Beck et al, 1988) measures before and after intervention anxiety symptoms (see Appendix E); (c) the Beck Depression Inventory-II (BDI-II; Beck et al., 1961) evaluates depressed symptoms, cognitive and somatic issues (see Appendix F); and, (d) the Coopersmith's Self-Esteem Inventory (SEI; Coopersmith 1981) (see Appendix G) which measures the individual's self-esteem and self-worth. The instruments were chosen to scale participant's symptomologies that are prevalent with addiction and comorbid trauma. All of the measures were utilized to compare the TAU treatment group to the TAU + EMDR treatment group.

Demographic Questionnaire

The demographic questionnaire was intended to provide information to establish a comparison between the groups: EMDR + TAU and TAU alone (see Appendix C). The research participant's responses to the questions in the different sections of the questionnaire included information referencing gender, age, and marital status to name a few. According to Noel et al. (2019), demographic questions were a necessary part of the

research because to examine participant's characteristics may provide and elucidate findings to a particular gender, age, and race, as in this pilot study with treatment of addiction and comorbid trauma.

PTSD Checklist-Specific (PCL-5)

The PTSD Checklist-specific (PCL-5, Weathers et al., 1993) is a 20-item self-report questionnaire to assess PTSD symptoms (see Appendix D). That assessment was created by the staff at the VA's National Center for PTSD and supported by the American Psychological Association's ethical guidelines. The PCL-5 instrument is intended for use by qualified health professionals and researchers. The 20-items match the list of the DSM-5 PTSD symptoms. Participants are asked to utilize a 5-point Likert-type scale that examines how bothered they have been during the last month by any of the symptoms on that self-report. According to Weathers et al. (1993), the measure is internally reliable. In this study, the research included measuring trauma symptom alterations at baseline and at treatment completion.

Beck Anxiety Inventory (BAI)

In this research of addiction severity, anxiety symptoms were collected from the participants, which were measured to examine treatment effectiveness. The BAI measures the symptoms of anxiety through a 21-item self-report (see Appendix E). The assessment differentiates between depression and anxiety and the symptoms are on a 4-point Likert scale from 0 (not at all) to 3 (severely—I could barely stand it). The scores range from 0 to 63 and the cutoff scores are 0 to 7 (minimal anxiety, 8 to 15 (mild anxiety), 16 to 25 (moderate anxiety), and 26 to 63 (severe anxiety). According to Gray et al. (2016), "an internal consistency of the BAI for the general population was .92. The

Cronbach's alpha for the current sample was $\alpha = .95$." (p. 189). In this study, measuring anxiety at baseline and at treatment completion examined discriminant validity for addiction treatment effectiveness and will examine whether adding EMDR to TAU may effectively treat anxiety symptoms through a pre- and posttest scoring to rate the participant's anxiety symptoms.

Beck Depression Inventory-II (BDI-II)

The BDI-II is a scale utilizing a 21-item self-report, which measures depressive symptoms (see Appendix F). According to Foa et al. (2016), "Among an outpatient sample (n 500), the BDI-II demonstrated excellent internal consistency, with a coefficient alpha of .92" (p. 1161). In their study, the BDI-II was used to investigate discriminant validity for posttraumatic symptoms among participants experiencing past traumatic events. The study by Perez-Dandieu and Tapia (2014) utilized the BDI to assess EMDR's effectiveness and their findings shown a reduction in the TAU+EMDR group ($t = 4.385$, $p = .007$) resulting in statistical significance where $t = 4.385$, $p = .004$).

Coopersmith's Self-Esteem Inventory (CSEI)

Reed and Enright's (2006) study utilized the CSEI, which contains 25 true-false statements (e.g., This is like me or not like me") that evaluate self-attitudes in areas of self, social, and family (see Appendix G). There is a range of scores from 0 (low score) to 100 (high score). Those researchers noted effective reliability and validity from their findings of the participants who were randomized to treatment groups with a mean intervention time that was 7.95 months ($SD = 2.61$). The relative efficacy of forgiveness therapy (FT) and alternative treatment (AT) was assessed at p .05. Participants in FT experienced significantly greater improvement than AT participants in depression, trait

anxiety, posttraumatic stress symptoms, self-esteem, forgiveness, environmental mastery, and finding meaning in suffering, with gains maintained at follow-up (M = 8.35 months, SD = 1.53). Perez-Dandieu and Tapia's (2014) results formulated a "significant increase in the TAU and EMDR treatment group ($t = -3.372$, $p = 012$") (p. 306).

Yu et al. (2015) researched the relationship between implicit self-esteem (ISE) and explicit self-esteem (ESE) and utilized the CSEI and their findings were "Cronbach's α coefficient and split-half reliability were .83 and .84, respectively" (p. 522). An evaluation from this research study monitored participant's self-esteem pre and posttest in the TAU and EMDR group and the TAU only group, in order to build on the research available from Perez-Dandieu and Tapia (2014).

Data Collection Procedures

The Recreate Life Counseling Treatment Center located in Boynton Beach gave permission to conduct the study (see Appendix B). The participants were selected from individuals who were seeking treatment via a call center and met the facility's admission criteria. All participants received medical care for addiction and trauma concerns at that treatment facility which serves patients at a detox, residential, outpatient level of care. The participants received addiction treatment according to the facility's treatment policies and procedures.

Participants were validated by a licensed physician and clinical director of the facility. Participants met the criteria for substance dependence and comorbid trauma according to the DSM-5 diagnostic features for substance use disorder. TAU was provided according to the standards of the facility's protocol. EMDR was provided by the qualified EMDR clinicians per the standard EMDR International Association protocol

(Shapiro & Maxfield, 2002). Participants were given informed consents and screened for self-esteem, severity from addiction, depression, anxiety, and trauma history. Participants in the TAU plus EMDR group were scheduled to meet weekly with the EMDR therapist over the course of their treatment stay that included eight EMDR sessions.

Participants were assessed for both trauma and addiction to meet criteria according to the DSM-5. Treatment informed consent was obtained, as well as for the other administered inventories. All randomly assigned 24 participants received TAU, medical screening for anti-craving medications (substances and alcohol), psychiatric evaluations, medication management to reduce anxiety, depression, and PTSD symptoms. The TAU participants were scheduled to receive treatment (Appendix G), which included two weekly one-hour individual therapy and 35 hours of group sessions, intended to increase insight to the stressors of daily living and nursing to address medical care.

Participants received eight additional sessions with both groups: eight EMDR sessions over the course of treatment to the EMDR and TAU and a total of two weekly individual sessions to the TAU to control variance. During the EMDR session, EMDR's subjective units of disturbance (SUD) were scaled from 0-10, (10 most disturbed), which measured the participant's disturbance from the target traumatic incident. Utilizing EMDR's eight-phase protocol, the participant recalled the targeted traumatic memory, then applied what belief statement he/she identifies with, for example, "I am unsafe, powerless, unworthy, or unloved." Then the participant referred to a preferred adaptive belief such as, "I can begin to believe that I am safe, I can control what I can, I am okay

as I am, and I am loved." The session of BLS commenced, whether through tapping, lights, sounds, or eye movement, as per each participant's preference.

The participant's emotions were evoked to the visualization of the targeted memory while the BLS were performed. A set of 25 BLS movements were conducted; then the participant was directed to what was noticed and what was associated to the target memory. The participant continued BLS sweeps until there were no new associations to the initial targeted traumatic memory. Subjective units of disturbance scores were questioned and when the score reaches zero then the installation of the positive core belief is installed. Each participant was then asked to respond on a scale of 1-7 (7 completely true) and thereafter, until the participant felt the belief was completely true. Each participant was asked to report any body sensations or tension in the body while focusing on the preferred adaptive belief and the initial target memory. The BLS sets were performed until the body scan results in a relaxed and "tension free" state. With each set, the clinician asked the participant the strength of the distressing memory utilizing the SUD score. The EMDR closed with the patient expressing his/her feelings, SUD (0-10), validity of cognition, and body scan for body sensations.

Statistical/Data Analyses

In this study, comparing EMDR and TAU and TAU alone, descriptive statistics were utilized to define a baseline. A questionnaire was utilized to obtain demographics of the participants (see Appendix C). That questionnaire noted comparison for age, sex, and ethnicity to name a few. Furthermore, the groups were compared by clinical measures: (a) trauma, (b) self-esteem, (c) depression, and (d) anxiety. Pre- and posttests were conducted to assess any change in each participant's symptoms. (Perez-Dandieu & Tapia,

2014). In this pilot study, an analysis utilized descriptive statistics depicting participant's characteristics at baseline. That information was then corresponded within a sample *t*-test for means to assess change in scores from the four questionnaires measuring the variables: PTSD, anxiety, depression, and self-esteem. The pretest scores on those variables were normally distributed and parametrically analyzed using *t*-tests to determine any statistically significant difference between pre- and post-intervention scores (Perez-Dandieu & Tapia, 2014).

Ethical Considerations

The ethical considerations of this study required a full National Louis University Institutional Review Board (IRB) review due to the high-risk population of patients with substance use disorders and addiction. The National Louis University's IRB approved the pilot study to begin the research on February 2, 2021.

See Appendix L for a copy of the approved Informed Consent. The participants were given the information of the aims and design of the study. Additionally, participants were told that their confidentiality, anonymity and personal health information would be held under the strictest confidence (Collins et al., 2018).

Participants' data were held separately from the collected data and only accessible to the researcher. Another ethical consideration of the study's data collection and analysis, to maintain participant anonymity and confidentiality, is that no personally identifying information was presented in the Findings chapter. Additionally, the participant's personal information was stored electronically and protected in the participant's medical records. Only the researcher and those staff involved in the study had access to any of the participants' data. Finally, the study data does not include

participant's personal information. The participant's safety procedures were followed by adhering to the treatment center's safety policies and procedures. The participant's safety was coordinated with this researcher and the treatment center's management in the event of an emergency which would then be reported to the Ethics Committee to continue or terminate study with the participant's best interest. The participant's safety was protected due to the safety standards of the inpatient treatment facility (Schäfer et al., 2017) and the IRB requirements for conducting ethical research.

Last, the ethical consideration of the participants from the TAU treatment group that received no complimentary intervention, EMDR was taken into account and those participants were given a session if requested. The other ethical concern from those in the EMDR + TAU treatment group had the risk of re-experiencing the past traumatic memories, thus causing a potential issue from a relapse and/or dropping out from the study. Finally, the participants' ethical and safety issues included ending their ability to end their involvement to the study at any time.

Limitations and Delimitations

The methodological limitations were several. First, the sample size of 24 consisted of 12 men and 12 women in each of the treatment groups. The small sample population size decreased the generalizability of results. The other limitation was that the researcher conducted the treatment utilized in the study, which may have biased the results. The research noted that a limitation is the fidelity of the EMDR therapist to exclusively adhered to the protocol, versus another possible EMDR clinician who integrates other modalities such as CBT, DBT, or MI to name a few (Shapiro & Brown, 2019).

A limitation to this research study referencing EMDR as an intervention to treat addiction and comorbid trauma was the lack of previous studies. Additionally, the limitation of a clinician's hesitancy to use EMDR was due to of the possibility of triggering cravings, consequently leading a patient to relapse. Lastly, the participant's measures assessing anxiety, depression, trauma severity and self-esteem might have been skewed due to participant's subjective responses and the veracity of the self-report measurement scales (Fluerkins et al., 2018).

Delimitations were the choices to conduct this study at an outpatient treatment center rather than an inpatient treatment facility where the patients are monitored continuously by staff. Another delimitation from the study was the participants were provided therapy by the researcher involved in this study, rather than having a separate EMDR therapist. A separate EMDR therapist from this clinical study, would have no interest influencing the results or swaying the results to show EMDR's effectiveness. Also, the TAU group was also influenced by this researcher by conducting the weekly group therapy sessions. Therefore, having the researcher totally separate from this clinical study would have provided an objective stance to the research findings.

Summary

The key points of this study were to assess those diagnosed with a SUD and comorbid trauma utilizing EMDR to reduce trauma severity, anxiety, depression, and to increase self-esteem. Thus, conducting a pretest and posttest measure between each of the treatment groups: TAU and TAU + EMDR were meant to provide data to analyze. The study's data underwent an ANOVA statistical analysis as a means to describe the finding's results.

The research question comparing EMDR to TAU to TAU alone aligned with a quantitative methodological approach. This study allowed for data analysis and the examination of EMDR as a complimentary intervention to treat addiction comorbid trauma. The aim of utilizing scales to evaluate mental health symptoms in each treatment group provided data referencing the effectiveness and efficacy of EMDR to treat addiction and comorbid trauma (Zepeda Méndez, 2018).

Finally, the quantitative methodology examined the comparison between the two treatment groups, which were EMDR + TAU and TAU alone. A repeated analysis of the variance between EMDR + TAU versus TAU alone was utilized. Analyzing a one-way ANOVA for means was used as parametric analysis to examine EMDR's effectiveness. The purpose of the ANOVA was to investigate the effects for each treatment group's measures of anxiety, depression, self-esteem, and trauma severity and the differences between the groups. Additionally, a SPSS ANOVA analysis was used to assess to what extent (significantly or not) to those factors that influenced the level of the EMDR results. Chapter Four examines the data and the result findings to evaluate EMDR as an intervention to treat addiction and comorbid trauma.

CHAPTER FOUR: RESULTS OF THE STUDY

Introduction

The problem addressed in this study was the global epidemic of addiction and the trauma that comes with this disease and how to effectively treat those suffering from both addiction and PTSD. The purpose of this study was to quantitatively investigate the complimentary treatment intervention, EMDR, utilized while treating participants with addiction and comorbid trauma when receiving TAU versus TAU alone. Specifically, the aim was to note any correlations, treatment variations, significant changes with or without EMDR when treating those with addiction and comorbid trauma. Additionally, the intention was to note the study's participant's increased, decreased, or no changes to their mental health symptoms from trauma, depression, anxiety, or self-esteem issues. The participants were provided informed consent to treatment and completed the demographic questionnaire, as well as the PCL-5 for trauma (PCL-5, Weathers et al., 1993), the Coopersmith Self Inventory (CESI) (Reed & Enright, 2006), BDI-II (depression) (Foa et al., 2016), and BAI (anxiety) (Gray et al., 2016).

Research Question and Hypothesis

The research question for this study was: How does the addition of EMDR intervention assist treatment of those diagnosed afflicted with addiction and comorbid trauma as opposed to the treatment without EMDR? The hypothesis was that EMDR as a treatment modality will have a notable change in decreasing presenting problems of addiction, anxiety, depression, and trauma issues, and will increase self-esteem with those suffering from addiction with comorbid trauma. The null hypothesis statement is

that there is no difference when EMDR is supplemented to TAU versus TAU alone to decrease mental health symptoms and increase self-esteem.

Descriptive Data

A total of 24 participants attempted to complete the treatment project. However, two male participants dropped out of the study due to leaving treatment against medical advice (AMA) and relapsed on substances whereby reentering a detox level of care. Two more male participants were requested to fill the open slots for TAU treatment group with complimentary EMDR. The 24 participants completed their portion of the study successfully and the 24 respondents answered all the surveys pre and posttests. Thus, the final sample size for this study was $n = 24$.

The full IRB review was necessary due to the high-risk population and, once the approval was received, the participants were recruited and given the informed consent and a description of what their participation would involve. The staff that was involved with the recruitment were fully trained clinicians who administered the assessments pre and posttest. The EMDR therapist was this researcher; however, if the study were done differently, two certified EMDR therapists who were separate from conducting the study would possibly ensure treatment fidelity.

Data Analysis Procedures

The analysis of the data aligned with the research question, since the addition of EMDR intervention effectively treated those diagnosed afflicted with addiction and comorbid trauma, as opposed to the treatment without EMDR. The 24 study participants consisted of 12 (50%) males and 12 (50%) females. The ethnic distribution was 16 (66.6%), Caucasian; 3 (12.5%), African American; 2, (8.33%), Latino or Hispanic; 2

(8.33%), 2 or more ethnicities; and 1 (4.16%); Other, which the participant specified as East Indian. The average age in years was 36.45 (SD=11.42) and the age range was 18-46 years. See Appendix A for descriptive statistics of the demographic variables and the six survey questions ranging from age, ethnicity, gender, level of education, relational status, and employment status.

Hypothesis Test Results

The hypothesis of this study was that, by utilizing EMDR to desensitize traumatic and addiction memories, measurable changes of the individual's mental health and improvement in overall treatment outcomes would occur. The results from the TAU treatment group alone are explained in the following Table 1, the TAU treatment group pre and posttest surveys of PCL-5 (trauma), BDI-II (depression), BAI (anxiety), and CSEI. The results from the posttests formulated that there was statistical significance in the TAU group for depression and trauma scores, whereas the anxiety and self-esteem scores showed none. The TAU group table results show the pre and posttest scores. The paired sample *t*-test analysis for all four measures indicates that the questionnaire for PCL5 and the BDI-II both have statistical significance because the *p* values are less than or equal to 0.05 where $p \leq 0.05$. as shown in Table 1 for sig. (2 tailed).

Table 1

TAU Paired Samples Test

				95% Confidence Interval of the Difference				
	M	*SD*	Std. Error Mean	Lower	Upper	*t*	*df*	Sig. (2-tailed)
PCL-5 Pre - PCL-5 Post	.1775000	.2023235	.0584058	.0489498	.3060502	3.039	11	.011
Coop Pre - Coop Post	−.143333	.229756	.066325	−.289313	.002647	−2.161	11	.054
BDI Pre - BDI Post	.0994000	.1256456	.0362708	.0195686	.1792314	2.740	11	.019
BAI Pre - BAI Post	.060667	.199215	.057509	−.065909	.187242	1.055	11	.314

The other tests for self-esteem and anxiety resulted in no statistical significance and that could be the result of the smaller population sample size. The null was rejected the research hypothesis for the two tests for trauma and depression was accepted. The results are similar to the EMDR + TAU treatment group participants, as there was statistical significance as shown in Table 2.

The EMDR + TAU treatment group table results show the pre- and posttest scores. The paired sample *t*-test analysis for all four measures revealed that the questionnaires PCL5, CSEI, BAI, and the BDI = II have statistical significance because the *p* values are less than or equal to 0.05 where $p \leq 0.05$. as shown in Table 4 for sig. (2 tailed).

Table 2

EMDR and TAU Paired Samples Test

				95% Confidence Interval of the Difference				
	M	*SD*	Std. Error Mean	Lower	Upper			
PCL-5 Pre - PCL-5 Post	.3808333	.2789192	.0805170	.2036165	.5580501	4.730	11	.001
Coop Pre - Coop Post	−.237083	.248179	.071643	−.394769	−.079398	−3.309	11	.007
BDI Pre - BDI Post	.1983333	.1704648	.0492089	.0900252	.3066415	4.030	11	.002
BAI Pre - BAI Post	.124417	.107544	.031045	.056086	.192747	4.008	11	.002

The figures depict statistical significance. The research hypothesis was accepted, and the null hypothesis was rejected. All participants improved their mental health symptoms from trauma, increased self-esteem, decreased depression, and anxiety.

The last tables are the comparison between the two groups EMDR + TAU treatment group and TAU treatment group alone. See Table 3.

Table 3

TAU and EMDR and TAU Independent Samples Comparison Test

Post-average	Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
	F	Sig.	*t*	*df*	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	.405	.531	−1.958	22	.063	−.06999	.03576	−.14415	.00416
Equal variances not assumed			−1.958	21.861	.063	−.06999	.03576	−.14417	.00419

Table 3 exhibits the statistical results between the two groups: EMDR + treatment group compared to TAU treatment group alone. The results show no statistical significance between the two groups. Therefore, the null hypothesis is retained because of the possible limitation of the sample size. There is insufficient statistical evidence to say otherwise.

Synthesizing the data collected from the quantitative measures provided what EMDR's impact was, compared to TAU, as shown by Tables 1-3. The independent variables, EMDR + TAU treatment group, impacted the groups separately, however lacking sufficient statistical significance between the two treatment groups. The groups did stand alone with their measures and that result could be based on this researcher's influence between the two treatment groups. Therefore, to further delineate between the two groups, further studies with a larger sample population and possibly one or more separate clinical providers for individual sessions would be necessary to control the study's variance. The independent variables do not better predict alone; therefore, additional studies with a larger sample size population would perhaps result in statistical significance.

The randomly selected participants were assigned to either the EMDR + TAU treatment group or TAU treatment group that were assessed at baseline and at the completion of treatment. The efficacy of EMDR in the treatment of addiction and comorbid trauma measured PTSD, depression, anxiety, and self-esteem. The pre/posttest results noted measurable changes in both groups with decreased trauma severity and depression symptoms. The statistical significance for the EMDR + TAU treatment group was evident for the measures of trauma severity, depression, and anxiety, as well as increased self-esteem. There was significant improvement in trauma severity for the TAU + EMDR treatment group ($t = 4.730$, $p = .001$), as well as decreased PTSD symptoms for the TAU treatment group ($t = 3.039$, $p = .011$). However, the scores for self-esteem differed between the treatment groups. The EMDR + TAU ($t = -3.309$, $p = .007$) resulted in statistical significance and the TAU treatment group ($t = -2.161$, $p = .054$) resulted in no increase in their self-esteem.

The comparison in the pre-treatment, post-treatment scores for depression resulted in statistical significance for both groups. The Beck Depression Inventory for both EMDR + TAU ($t = 4.030$, $p = .002$) and TAU treatment group ($t = 2.740$, $p = .019$ revealed a significant reduction in depressive symptoms. Between the last measure for anxiety, however, the EMDR + TAU treatment group also had statistical significance ($t = 4.008$, $p = .002$) while the TAU treatment group ($t = 1.055$, $p = .314$) was not statistically significant. The comparison between the two treatment groups showed no statistical significance ($t = 1.958$, $p = .063$).

Summary

This study investigated the feasibility of EMDR and found that EMDR + TAU treatment group is not statistically significant in comparison to TAU alone. However, EMDR + TAU was statistically significant throughout the measures and TAU was statistically significant for two of the four measures—depression and PTSD symptoms. In Chapter Five, a further discussion of the findings, strengths, limitations, recommendations for further research, and the implications from the study summarize the examination of EMDR to treat addiction and comorbid trauma.

CHAPTER FIVE: DISCUSSION AND CONCLUSION

Introduction

The purpose of this study was to investigate whether there was a difference in the treatment of addiction and comorbid trauma by adding the intervention, EMDR to TAU and the comparison to TAU alone. The dependent variables that were measured were mental health symptoms of trauma, depression, anxiety, and self-esteem. The research entailed eight sessions of EMDR provided to those participants who were willing to participate in the EMDR + TAU group. While TAUs are the gold standards of treatment for addiction and comorbid trauma, EMDR was the treatment of examination to analyze in this study. The participants who volunteered in this research responded positively and were receptive to participating in the treatment groups.

The TAU treatment group was provided no EMDR sessions; however, those participants were given the same number of individual sessions to counter the variance. The study findings showed that there was a significant reduction of PTSD symptoms and depression and a statistical significance with their decreased trauma and depression symptoms. Both groups, EMDR + TAU and TAU alone, benefited from treatment by adding a second session to their already scheduled program protocol. The findings from the results of the study discussed in Chapter Four were conclusive, that although comparing the two groups showed no statistical significance between them, the groups separately had results demonstrating otherwise, as the TAU group showed results of statistical significance with their past trauma and depression, and the EMDR + TAU had marked improvement across all the measures.

Summary of the Study

The purpose of this research was to explore the cause and effect of EMDR when added to TAU compared to TAU alone. The health and societal crisis from addiction and trauma is a global epidemic. Addiction is a lifelong disease and requires medical intervention along with clinical therapy. The reason for that type and level of care is because of the changes in the brain that are modified anatomically due to substance abuse. Those changes occur in the receptors that cause addiction, which then produce the individual's obsession and cravings to seek substances. The negative consequence of seeking substances may lead to trauma events. The negative outcomes stem from the sexual, physical, and emotional abuse that may occur when either seeking substances or when attempting to numb their feelings from the abuse. To manage their cravings and/or drug-seeking obsessions, treatment, medically and clinically is the individual's only course of action to help maintain sobriety and to lessen the trauma severity.

In summary, the amount of work involved to attempt and complete a research study is indicative of the result, or revelation, regarding what was explored. In this study, what was studied and revealed were the results from an intervention, EMDR, when added to TAU. Additionally, this research was an examination of EMDR and its effect on those afflicted with SUD and comorbid trauma. The importance of this study is what was discovered, which is that there was a positive outcome from EMDR that could help others seeking treatment to improve quality of life.

This chapter presents the following information: (a) the discussion of what was found from the results of EMDR added to TAU versus TAU alone, (b) implications one could infer because of this study theoretically and practically for future research,

(c) strengths and limitations to the study, (d) recommendation for future research, and (e) recommendation of the benefits to clinical practitioners from the findings and the conclusion.

Discussion of the Findings

The findings of the research resulted in noting that the intervention, EMDR, when added to TAU, was supportive of the participants' treatment of addiction and comorbid trauma. The added support of EMDR found decreased symptoms of trauma, anxiety, and depression, as well as increased self-esteem. From the previous study conducted by Perez-Dandieu and Tapia (2014,) four of their six scales were used in this study. The scales completed by the participants in this study demonstrated EMDR's effectiveness to reduce mental health symptoms of anxiety, depression, and trauma severity. Also, the scale for self-esteem showed marked improvement, as the result findings showed statistical significance.

The surveys that were given to the participants as part of their TAU noted that EMDR was the most significant part of their treatment. Those who participated in the EMDR + TAU wrote their own testimonies that are included in Appendix H, I, J, and K. The comments varied from, "I found EMDR to be more helpful than regular therapy" (Participant 4, personal communication, April 16, 2021) to "Thank you for basically changing my whole life around . . . from these childhood trauma nightmares for well over 20 years of my life" (Participant 9, personal communication, March 16, 2021).

Another participant's trauma was as significant; he was suffering from a past trauma when he was a fire fighter. The day of the fire, he elected to go on impulse into a fiery emergency to save an eight-year-old girl trapped in the building. The situation was

he entered the fiery building against his commander's order to attempt to save the child when he explained he heard her screaming for help. Ignoring his commander's order, he recalled the steps that he took that led him to having the child in his arms close to safety and enroute to an escape window. However, the blast from the fiery explosion from behind him, caused him to drop the girl who he was holding onto by her wrists to the concrete below and she died on impact. He reported that he received third degree burns on his back that are triggered to this traumatic memory every time he showers, and the water hits his back. His response to decrease this trauma was to self-medicate to ease his pain and from the fear of remembering the death of the eight-year-old girl. However, his response to EMDR was how, "grateful I am for the ability to take a shower and not get triggered anymore from the memory of when the water hits my scars on my back" (Participant 11, personal communication, April 3, 2021).

One other participant of the study offered her testimony as:

> EMDR helped me work through a lot of my past traumas and desensitize quite a lot of triggers. I am so grateful for being able to participate in this research project. EMDR also brought up a lot of memories that I had seemed to forget about, both positive and negative. I remembered parts of my childhood I didn't even know were there! Working through the trauma helped me learn to deal with my anxiety, eating disorders, body dysmorphia, and self-harm. It gave me insight on the reasons behind why I self-harmed. I was able to get to the root of the problems and work through them. I also struggle with addiction. I was in treatment when I received the EMDR therapy. Addiction also caused a lot of traumas in my life, which might've been the hardest part of my recovery to

> overcome. The nights I don't remember while using, the decisions I made that lead to consequences, things that held me back from living my life sober, was all worked on with EMDR. I am so thankful that EMDR helped me grow as a person, helped me process trauma that had held me back for years, and gave me a new perspective on life. (Participant 1, personal communication, March 3, 2021)

The other participants also commented with similar statements of satisfaction as their measures stipulated the statistical significance.

Schäfer et al. (2017) researched the effectiveness of EMDR in patients with SUD and comorbid trauma that examined a correlation with those associated with mental health symptoms and addiction-related problems. Additionally, the authors postulated that adding EMDR to TAU reduced PTSD symptoms in patients with SUD and comorbid PTSD compared with TAU alone. They also noted the need for treatment for trauma with addiction and, although their research was conducted in Germany, they recognized that, "most SUD inpatient rehabilitation centers in Germany do not offer integrated treatment for SUD and PTSD" (p. 2). The significance of this statement holds true in most other treatment centers found worldwide, according to this literature review. EMDR is widely used for treating trauma, as previously mentioned in this dissertation. However, Schäfer et al.'s (2017) research findings suggested that a more frequent use of evidence-based trauma-focused approaches to be routine to treat SUD and comorbid trauma supporting the earlier findings of the research from Wiebren and Hornsveld (2017)

Wiebren and Hornsveld (2017) previously studied EMDR when added to TAU versus TAU alone to reduce craving and drinking behavior in alcohol dependent outpatient participants. The objective of their study was to establish whether adding

EMDR to TAU would be feasible and safe even when the patient population is still using substances. The researchers' concern was whether the clinician would be fearful about triggering a craving or a relapse. Those researchers stated that EMDR is clearly the treatment for trauma; however, they suggested that EMDR's research on efficacy and effectiveness for treatment for addiction is limited. They further added that the limited research is unreliable dealing with circumstantial studies or case studies of substance related as behavioral addictions. The literature review in this dissertation found similar results noting limited studies of EMDR's effectiveness and efficacy treating both addiction and comorbid trauma. Perez-Dandieu and Tapia (2014) recognized EMDR's effectiveness and efficacy in their study treating trauma and addiction.

Perez-Dandieu and Tapia (2014) shared similar findings to those in this study, "reprocessing traumatic memories with EMDR would lead to measurable changes of addiction symptoms" (p. 303). Their findings analyzed six measures for trauma, depression, anxiety, self-esteem, addiction severity, and identifying feelings. Those findings showed that the "reprocessing of traumatic memories increases the likelihood of adaptive behavior by increasing self-esteem and decreasing depression and anxiety" (p. 307). Similar results were also found with the EMDR and TAU group. Those researchers summarized that information by reprocessing traumatic memories: "SUD sample reduced PTSD symptoms, indicating that EMDR treatment works to treat PTSD in substance abusers" (p. 307). They also concluded that their proposal created awareness for more focused treatment interventions, such as EMDR, to treat both addiction and comorbid trauma. Based on the limited scholarly literature research, case studies

including EMDR's feasibility to treat addiction and comorbid trauma was further validated in Flanagan et al.'s (2018) review of treatment options.

Flanagan et al. (2018) postulated the treatment of alcohol use disorder and PTSD. They stated that eye movement desensitization and reprocessing established "empirical support and is one of the therapies that has received endorsement in recent U.S. Department of Veterans Affairs and U.S. Department of Defense treatment guidelines" (p. 5). They reviewed that the treatment options are limited and needing improvement. Additionally, their research noted the difficulty of treating both SUD and trauma and, therefore, treatment standards are a significant health priority. Thus, the need for and importance of this research study building on the body of literature to examine EMDR as an option model to treat addiction and comorbid trauma.

The EMDR findings from this study, formulated that the participants were able to reprocess the traumatic memory that was emotionally disturbing and to increase mental health wellness and to reduce mental health symptoms. Additionally, the participants were randomly chosen, and they were able to end their participation at any time without disadvantages to their proposed TAU. The TAU treatment group participants were also given the opportunity to participate in EMDR sessions at the end of the research study if requested.

Implications of the Study

The findings from this study have implications for further investigating EMDR as a complimentary intervention to treat addiction and comorbid trauma. Considering all the interventions that treat mental health symptoms of addiction and comorbid trauma, researching EMDR was chosen to examine its treatment effectiveness. There is a need for

services to assist with those dealing with addiction and comorbid trauma due to the major problem in the recidivism rate. Why? Because addiction and comorbid trauma have and continue to cost society billions of dollars annually and continue to warrant further research. Further, as noted earlier in this research, the overwhelming recidivism rates, fatalities, and societal costs are reasons for society to examine effective treatment protocols to address those patients diagnosed with a substance use disorder and comorbid trauma. EMDR is an intervention to address those with a substance abuse disorder and comorbid trauma and assists a patient's memories to become less vivid and desensitized when linked to past triggers and cues. In this research, the results led to the formulation of further implications to continue studies to address the need to treat addiction and comorbid trauma.

A significant implication is that offering EMDR as a standard to treat addiction and comorbid trauma seems feasible and an effective method to reduce mental health symptoms. Those who have received past treatments that were ineffective may benefit from this added EMDR treatment to reduce those mental health symptoms of depression, anxiety, trauma, and decreased self-esteem. The format of this study could be further developed and enhanced to create an awareness of the treatment standard protocols to care for those afflicted diagnosed with addiction and comorbid trauma. Although the standard 28-day treatment stay is the norm for addiction and trauma care, extended and more intensive care to a possible 90-day stay, or more, would significantly benefit the patient and improve the data findings.

A key implication is the clinical treatment sites, such as an inpatient versus an outpatient setting. The risk factor for a relapse is reduced due to the inpatient stay and

could therefore result in improved study findings. A noteworthy proposal to the healthcare industry would be knowing whether the added EMDR intervention is cost effective to the standard program of care. The follow up of patient care could confirm EMDR's treatment results and was conducted in this study. A recommendation for the counseling industry would be to consider EMDR as a standard for treating addiction and trauma. Another recommendation would be to the organization, EMDRIA, to further advocate to SUD treatment facilities worldwide the importance of utilizing EMDR as part of the patient's treatment plan. One way to improve treatment standards is to continue further clinical studies utilizing EMDR as an intervention to treat addiction and trauma.

In summary, to be an effective researcher one becomes curious to investigate, examine, formulate, and then interpret from what one discovers from the study findings. There is a difference between a researcher and a clinician, which was difficult to recognize while conducting this study. Only after the study was completed that observation from the dissertation committee made the researcher aware of that phenomenon. The difference between researcher and clinician was another variable that was not accounted for and became evident during research. An implication for others conducting research is to have self-awareness and to examine oneself prior to conducting the research, and during, to note a possible limitation to the study as in this study's researcher's bias.

Recommendations for Future Research

A recommendation for future research is to seek an objective EMDR therapist who has no involvement with the research project. That approach would help keep the EMDR sessions free from subjective influence and the clinician has no potential gain

from the research study. Another recommendation is to recruit a larger sample size to determine statistical significance with the treatment groups of EMDR + TAU and TAU alone. A larger sample size that doubles from 24 to 48 would benefit each treatment group.

An additional recommendation for future research is to have more than one EMDR specialist and provider for sessions to serve the larger sample size population. Also, utilizing another intervention, such as DBT or MI to compare to EMDR, would further add to the data and to measure EMDR's efficacy. A longitudinal study would be valuable to add to the data on EMDR's efficacy to treat addiction and trauma. A study such as that would provide long-term data from the EMDR intervention treating addiction symptoms and trauma severity.

Last, examining EMDR's efficacy and effectiveness is a societal concern that implores continuing research to reduce the impact from those afflicted from trauma and addiction. Future continuing research on EMDR's efficacy would warrant assessments at 3, 6, 9, and 12 months. The collected data would then undergo a data analysis to then measure EMDR's degree of effectiveness. Similar research studies confirmed that further studies on EMDR to treat addiction and comorbid trauma were needed to quantify the data and analyze the results. Finally, a last recommendation is to include an addiction severity questionnaire to assess the participants' program of recovery to add to the data findings. The Addiction Severity Index Lite version is the recommended questionnaire that would measure problem severity scores (range 0 to 1) in seven areas found in individuals with substance use disorders regarding areas of alcohol, drug, medical, psychiatric, legal, family/social, and employment (Peavy et al., 2017).

Conclusion

The study contained no requirement for participants to follow up three months later after treatment; however, the participants were contacted to report their recovery maintenance. The EMDR and TAU group had 68% (8 of the 12) sobriety rate and they are working a program of recovery and they are productive members of society. The TAU group had 50% (6 of the 12) of the participants remaining sober and they too are all working a program of recovery and are productive members of society.

In summary, due to the global epidemic health crisis from addiction and comorbid trauma, the purpose of this study was to examine differences between the two treatment groups: EMDR + TAU versus TAU alone to treat those afflicted diagnosed with SUD and PTSD. The research question was answered and showed promising results for the intervention, EMDR, as a viable means to treat addiction and comorbid trauma. The results were hopeful, though as earlier recommendations stated, future research is needed to build upon what this study revealed.

This research was mutually beneficial to the field of addiction treatment, this researcher, and its participants, because of the reward to service those experiencing addiction and comorbid trauma and the significance to explore and examine effective treatment. This study yielded important conclusions to the counseling field that perhaps EMDR has viable potential for healing and the improved quality of life of those seeking sobriety from addiction and comorbid trauma.

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Appendix A

Informed Consent for Participants

Participant Informed Consent

You are invited to take part in a research study exploring the efficacy of intervention treatments that individuals with addiction and trauma receive. The researcher is inviting individuals over the age of 18 who are currently receiving addiction and mental health services at Recreate Life Counseling treatment facility located at 3652 S. Seacrest Blvd., Boynton Beach, Florida 33435 to be in the study to compare treatment as usual (TAU) versus TAU and eye movement desensitization reprocessing (EMDR).

This study is being conducted by a researcher named JoAnn Kutsukos, who is a doctoral candidate at National Louis University.

Background Information:

The purpose of this study is to compare the efficacy of TAU versus TAU and EMDR services.

Procedures:

If I agree to be in this study, I will be randomly assigned during the intake process to either the TAU treatment or the TAU and EMDR treatment groups.

I will be asked to:

Participate in 8 additional one-hour sessions (one session per week):

- If I am assigned to the TAU group, I will receive 8 additional one-hour individual counseling sessions (one per week).
- If I am assigned to the TAU and EMDR group, I will receive 8 additional EMDR sessions (one per week).

I will complete five questionnaires that include questions that will be conducted at admission and at completion of treatment.

- **PTSD Checklist-Specific** (PCL-5) that include 20 questions asking how bothered you feel in a very stressful experience that takes approximately 5-10 minutes to complete.
- **Beck Anxiety Inventory** (BAI) includes 21 questions, each question measures the severity of anxiety that takes 5-10 minutes to complete.

- **Beck Depression Inventory** (BDI) includes 21 questions, each question measures the severity of depression that takes approximately 10 minutes to complete.
- **Coopersmith's Self-Esteem** (SEI) is 58 item scale that includes 58 questions that usually describes how you feel, the questionnaire takes approximately 15 minutes to complete.
- **Brief Addiction Monitor** (BAM) drug abuse screening test is 10 questions, each question requires a yes or no response, and the tool can be completed in less than 8 minutes.
  Special Note**The BAM assessment is the only measure that Recreate Life Counseling already administers to clients. This researcher will utilize those results and include in the data analysis.

• All surveys will take approximately 50 minutes to complete at the beginning and the end of treatment.

Here are some sample questions:

1. **PTSD Checklist-Specific** (PCL-5): Having strong negative feelings such as fear, horror, anger, guilt, or shame? 0-not at all to 4-extremely

2. **Beck Anxiety Inventory** (BAI): How much have you been bothered by fear of the worst happening (0) not at all - (3) severely-it bothered me a lot

3. **Beck Depression Inventory (**BDI): (0) I do not feel sad - (3) I am so sad and unhappy that I can't stand it.

4. **Coopersmith's Self-Esteem** (SEI): check "like me" or "unlike me" *Question 9.* There are lots of things about myself I'd change if I could.

5. **Brief Addiction Monitor** (BAM): In the past 30 days, how many days did you drink ANY alcohol? Check your responses: ___(1) 1-3 to ___ (4) 16-30

Voluntary Nature of the Study:

This study is completely voluntary. Everyone will respect my decision of whether I choose to be in the study and I will not be penalized in any way if I choose to decline participation. If I decide to join the study now, I can still change my mind later. I may stop at any time without penalty.

Risks and Benefits of Being in the Study:

I am aware that I will not receive any compensation for my participation; however, I will receive additional counseling by participating in either group. I am also aware that my participation may assist future clients by informing the Agency and their counselors of the potential benefits of adding EMDR as a treatment protocol for clients like me.

Although there are few known risks to participation beyond those encountered as a client of TAU, being in this type of study as the participant in the TAU with EMDR involves some potential added risk as I may experience reactions during the EMDR sessions, including but not limited to a high level of emotional and physical sensations. A standard EMDR Consent and Release form is included in this packet to fully explain the EMDR process. However, if I have troubling reactions during the session, I will be fully supported by this researcher and the staff at Recreate Life Counseling Treatment Team at no additional expense to me.

Privacy:

Every effort will be taken to ensure confidentiality. The demographics questionnaire and assessment data will use a coding procedure for identification. Data will be kept secure by password protection and data encryption. All information will remain confidential but may be used in future publications and presentations. My personal identifying information will be removed from any data disclosed. The data will be kept for seven years after the completion of this study and will then be destroyed, which also aligns with Recreate Life Counseling Center agency protocols.

Contacts and Questions:

If I have questions now or later, I may contact the researcher, JoAnn Kutsukos, via jkutsukos@my.nl.edu. I understand that I can ask any questions I have before I begin the study. If I have any concerns or questions before or during participation that have not been addressed by the researcher, I may contact Dr. Joffrey Suprina by email at jsuprina@nl.edu or the co-chairs of the NLU's Institutional Research Board: Dr. Shaunti Knauth; email: Shaunti.Knauth@nl.edu; phone: (312) 261-3526; or Dr. Kathleen Cornett; email: kcornett@nl.edu; phone: (844) 380-5001. Co-

chairs are located at National Louis University, 122 South Michigan Avenue, Chicago, IL.

I can print or save this consent form for my records.

Statement of Consent

I have read the above information. I feel I understand the study well enough to decide about my involvement. By signing below, I understand and agree to the terms described above.

I give consent to treatment study involving TAU versus TAU and EMDR:

_____ _____

Signature of participant Date

_____ _____

Researcher Signature Date

Ms. JoAnn Kutsukos

Appendix B

Informed Consent for Research Site

Informed Consent

A study proposed by this researcher, JoAnn Kutsukos LMHC, CAP, requests consent from Recreate Life Counseling Center to administer research design with participants that voluntarily participate in this study and are receiving treatment from the Recreate Life Counseling Center substance abuse treatment program. As a researcher, I agree to follow all program rules and guidelines, and agree with treatment protocols that align with Recreate Life Counseling Center.

The researcher is inviting individuals over the age of 18 who are currently receiving addiction and mental health services at Recreate Life Counseling treatment facility located at 3652 S. Seacrest Blvd., Boynton Beach, Florida 33435 to be in the study to compare treatment as usual (TAU) versus TAU and eye movement desensitization reprocessing (EMDR).

This study is being conducted by a researcher named JoAnn Kutsukos, who is a doctoral student at National Louis University.

Background Information:

The purpose of this study is to assess comparison in TAU versus EMDR and TAU services.

Procedures:

In this study, the participant will be asked to:

- Complete five questionnaires that includes questions that will be conducted at admission and at completion of treatment.

  PTSD Checklist-Specific (PCL-5) that include 20 questions asking how bothered the participant feels in a very stressful experience that takes approximately 5-10 minutes to complete.

  Brief Addiction Monitor (BAM) drug abuse screening test is 10 questions, each question requires a yes or no response, and the tool can be completed in less than 8 minutes.

  Beck Anxiety Inventory (BAI) includes 21 questions, each question measures the severity of anxiety that takes 5-10 minutes to complete.

Beck Depression Inventory (BDI) includes 21 questions, each question measures the severity of depression that takes approximately 10 minutes to complete.

Coopersmith's Self-Esteem (SEI) is a 58 item scale that includes 58 questions that usually describes how the participant feels, the questionnaire takes approximately 15 minutes to complete.

Voluntary Nature of the Study:

This study is completely voluntary. During the research study, the participant's decision whether to choose or not to be in the study will be respected. No one associated with this survey will treat the participant differently if they decide not to be in the study. Additionally, this study is completely anonymous, no one will know if the participant did nor did not participate. If the participant decides to join the study, they are still able to change their mind later. The participant may stop at any time.

Risks and Benefits of Being in the Study:

Being in this type of study involves some risk of the minor discomforts that can be encountered in daily life, such as fatigue, stress, and concerns the type of relationships with the service provider. Being in this study would not pose risk to participant's safety or wellbeing. The benefits of the study include voicing the participant's thoughts and concerns regarding the therapy/counseling services that the participants are currently receiving. This study aims to provide research in the accommodations and the type of mental health therapy/counseling services that individuals receive for addiction and comorbid trauma.

Payment

This study is completely voluntary; there will be no reimbursement or payment for time.

Privacy:

Any information you provide will be kept anonymous. The research will not use personal information for any purposes outside of this research project. Also, the researcher will not include name or anything else that could identify the participant in the study reports. Data will be kept secure by password protection and data encryption.

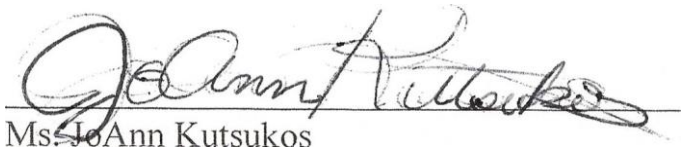
Contacts and Questions:

If you have questions now or later, you may contact the researcher, JoAnn Kutsukos, via jkutsukos@my.nl.edu. Recreate Life Counseling Center can ask any concerns or questions before or during participation that has not been addressed by the researcher, you may contact Dr. Joffrey Suprina by email at jsuprina@nl.edu or the co-chairs of the NLU's Institutional Research Board: Dr. Shaunti Knauth; email: shaunti.knauth@nl.edu phone: (312) 261-3526; or Dr. Kathleen Cornett; email: kcornett@nl.edu; phone: (844) 380-5001. Co-chairs are located at National Louis University, 122 South Michigan Avenue, Chicago, IL.

Please print or save this consent form for your records.

Statement of Consent

I have read the above information. I feel I understand the study well enough to decide about allowing this research study at Recreate Life Counseling Center. By signing below, I understand, consent, and agree to the terms above.



Ms. JoAnn Kutsukos

10/20/20

Researcher Signature Date

I give consent to allow JoAnn Kutsukos to solicit clients of Recreate Life Counseling Center as participants for the treatment study involving TAU versus TAU and EMDR:

Amanda Timonere, Clinical Director — Date 10/20/20

Staff Signature

David D'Agosta, Human Resources Director — Date 10/20/22

Staff Signature

Appendix C

Demographics Questionnaire

Demographic Questionnaire

EMDR Research Questionnaire

To conduct the research on the efficacy of EMDR as an added protocol to assist clients with addiction and trauma the following demographic questions will provide necessary support with the study findings. Please check the following answers to the questions listed below. Thank you for your participation.

1. What is your age range?

- 18-24
- 25-34
- 35-44
- 45-54
- Above 54

2. What is your ethnicity?
- African American
- Asian
- Native American
- Caucasian
- Latino or Hispanic
- Native Hawaiian or Pacific Islander
- Two or More
- Unknown/Other please specify if not listed above

- Prefer not to answer

3. Which gender do you identify most with?
- Male
- Female
- Non-binary and/or Other
- I would prefer to not comment

4. What is your highest level of education?
- Less than high school diploma
- High school diploma or equivalent degree
- No degree
- Bachelor's degree
- Master's degree
- Doctorate degree

5. What is your relational status?
- Partnership
- Co-habiting
- Married

- Divorced
- Separated
- Widowed
- Unmarried

6. What is your current employment status?
- Full-time employment
- Part-time employment
- Unemployed
- Self-employed
- Home-maker
- Student
- Retired

Thank you for your time and support for answering the questionnaire.

JoAnn Kutsukos
Doctoral Candidate at National Louis University

Appendix D

PTSD Checklist-Specific (PCL—S)

PTSD Checklist-Specific (PCL—S)

PCL-5 was open to the public domain.

PCL-5

Instructions: Below is a list of problems that people sometimes have in response to a very stressful experience. Please read each problem carefully and then circle one of the numbers to the right to indicate how much you have been bothered by that problem in the past month.

In the past month, how much were you bothered by:	Not at all	A little bit	Moderately	Quite a bit	Extremely
1. Repeated, disturbing, and unwanted memories of the stressful experience?	0	1	2	3	4
2. Repeated, disturbing dreams of the stressful experience?	0	1	2	3	4
3. Suddenly feeling or acting as if the stressful experience were actually happening again (as if you were actually back there reliving it)?	0	1	2	3	4
4. Feeling very upset when something reminded you of the stressful experience?	0	1	2	3	4
5. Having strong physical reactions when something reminded you of the stressful experience (for example, heart pounding, trouble breathing, sweating)?	0	1	2	3	4
6. Avoiding memories, thoughts, or feelings related to the stressful experience?	0	1	2	3	4
7. Avoiding external reminders of the stressful experience (for example, people, places, conversations, activities, objects, or situations)?	0	1	2	3	4
8. Trouble remembering important parts of the stressful experience?	0	1	2	3	4
9. Having strong negative beliefs about yourself, other people, or the world (for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous)?	0	1	2	3	4

10. Blaming yourself or someone else for the stressful experience or what happened after it?	0	1	2	3	4
11. Having strong negative feelings such as fear, horror, anger, guilt, or shame?	0	1	2	3	4
12. Loss of interest in activities that you used to enjoy?	0	1	2	3	4
13. Feeling distant or cut off from other people?	0	1	2	3	4
14. Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)?	0	1	2	3	4
15. Irritable behavior, angry outbursts, or acting aggressively?	0	1	2	3	4
16. Taking too many risks or doing things that could cause you harm?	0	1	2	3	4
17. Being "superalert" or watchful or on guard?	0	1	2	3	4
18. Feeling jumpy or easily startled?	0	1	2	3	4
19. Having difficulty concentrating?	0	1	2	3	4
20. Trouble falling or staying asleep?	0	1	2	3	4

Appendix E

Permission Documentation for BAI

The BAI was purchased from Pearson.

Beck Anxiety Inventory (BAI)

On the second page is a list of common symptoms of anxiety. Please carefully read each item in the list. Indicate how much you have been bothered by that symptom during the past month, including today, by circling the number in the corresponding space in the column next to each symptom.

	Not at all	Mildly, but it didn't bother me much	Moderately – it wasn't pleasant at times	Severely – it bothered me a lot
Numbness or tingling	0	1	2	3
Feeling hot	0	1	2	3
Wobbliness in legs	0	1	2	3
Unable to relax	0	1	2	3
Fear of worst happening	0	1	2	3
Dizzy or lightheaded	0	1	2	3
Heart pounding / racing	0	1	2	3
Unsteady	0	1	2	3
Terrified or afraid	0	1	2	3
Nervous	0	1	2	3
Feeling of choking	0	1	2	3
Hands trembling	0	1	2	3
Shaky / unsteady	0	1	2	3
Fear of losing control	0	1	2	3
Difficulty in breathing	0	1	2	3
Fear of dying	0	1	2	3
Scared	0	1	2	3
Indigestion	0	1	2	3
Faint / lightheaded	0	1	2	3
Face flushed	0	1	2	3
Hot / cold sweats	0	1	2	3

Appendix F

Depression Inventory-II (BDI-II)

Beck Depression Inventory (BDI-II)

The BDI-II was purchased from Pearson.

On this questionnaire are groups of statements. Please read each group of statements carefully. Then pick out the one statement in each group which best describes the way you have been feeling the PAST WEEK, INCLUDING TODAY!

Circle the number beside the statement you picked. If several statements in the group seem to apply equally well, circle each one. Be sure to read all the statements in each group before making your choice.

1 0 I do not feel sad.
- 1 I feel sad.
- 2 I am sad all the time and I can't snap out of it.
- 3 I am so sad or unhappy that I can't stand it.

2 0 I am not particularly discouraged about the future.
- 1 I feel discouraged about the future.
- 2 I feel I have nothing to look forward to.
- 3 I feel that the future is hopeless and that things cannot improve.

3 0 I do not feel like a failure.
- 1 I feel I have failed more than the average person.
- 2 As I look back on my life, all I can see is a lot of failures.
- 3 I feel I am a complete failure as a person.

4 0 I get as much satisfaction out of things as I used to.
- 1 I don't enjoy things the way I used to.
- 2 I don't get real satisfaction out of anything anymore.
- 3 I am dissatisfied or bored with everything.

5 0 I don't feel particularly guilty.
- 1 I feel guilty a good part of the time.
- 2 I feel quite guilty most of the time.
- 3 I feel guilty all of the time.

6 0 I don't feel I am being punished.
- 1 I feel I may be punished.
- 2 I expect to be punished.
- 3 I feel I am being punished.

7 0 I don't feel disappointed in myself.
1 I am disappointed in myself.
2 I am disgusted with myself.
3 I hate myself.

8 0 I don't feel I am any worse than anybody else.
1 I am critical of myself for my weakness or mistakes.
2 I blame myself all the time for my faults.
3 I blame myself for everything bad that happens.

9 0 I don't have any thoughts of killing myself.
1 I have thoughts of killing myself, but I would not carry them out.
2 I would like to kill myself.
3 I would kill myself if I had the chance.

10 0 I don't cry anymore than usual.
1 I cry more now than I used to.
2 I cry all the time now.
3 I used to be able to cry, but now I can't cry even though I want to.

11 0 I am no more irritated now than I ever am.
1 I get annoyed or irritated more easily than I used to.
2 I feel irritated all the time now.
3 I don't get irritated at all by the things that used to irritate me.

12 0 I have not lost interest in other people.
1 I am less interested in other people than I used to be.
2 I have lost most of my interest in other people.
3 I have lost all of my interest in other people.

13 0 I make decisions about as well as I ever could.
1 I put off making decisions more than I used to.
2 I have greater difficulty in making decisions than before.
3 I can't make decisions at all anymore.

14 0 I don't feel I look any worse than I used to.
1 I am worried that I am looking old or unattractive.
2 I feel that there are permanent changes in my appearance that make me look unattractive.
3 I believe that I look ugly.

15 0 I can work about as well as before.
1 It takes an extra effort to get started at doing something.

2 I have to push myself very hard to do anything.
3 I can't do any work at all.

16 0 I can sleep as well as usual.
1 I don't sleep as well as I used to.
2 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.
3 I wake up several hours earlier than I used to and cannot get back to sleep.

17 0 I don't get more tired than usual.
1 I get tired more easily than I used to.
2 I get tired from doing almost anything.
3 I am too tired to do anything.

18 0 My appetite is no worse than usual.
1 My appetite is not as good as it used to be.
2 My appetite is much worse now.
3 I have no appetite at all anymore.

19 0 I haven't lost much weight, if any lately.
1 I have lost more than 5 pounds. I am purposely trying to lose weight.
2 I have lost more than 10 pounds. Yes _____ No _____ 3 I have lost more than 15 pounds.

20 0 I am no more worried about my health than usual.
1 I am worried about physical problems such as aches and pains; or upset stomach; or constipation.
2 I am very worried about physical problems and it's hard to think of much else.
3 I am so worried about my physical problems, that I cannot think about anything else.

21 0 I have not noticed any recent change in my interest in sex.
1 I am less interested in sex than I used to be.
2 I am much less interested in sex now.
3 I have lost interest in sex completely.

Appendix G

Coopersmith Self-Esteem Inventory

Permission to Use Coopersmith's Self-Esteem Inventory

For use by JoAnn Kutsukos only. Received from Mind Garden, Inc. on February 2, 2021 m [e]nd garden

www.mindgarden.com

To Whom It May Concern,

The above-named person has made a license purchase from Mind Garden, Inc. and has permission to administer the following copyrighted instrument up to that quantity purchased:

Coopersmith Self-Esteem Inventory Adult Form

The five sample items only from this instrument as specified below may be included in your thesis or dissertation. Any other use must receive prior written permission from Mind Garden. The entire instrument form may not be included or reproduced at any time in any other published material. Please understand that disclosing more than we have authorized will compromise the integrity and value of the test.

Citation of the instrument must include the applicable copyright statement listed below.
Sample Items:

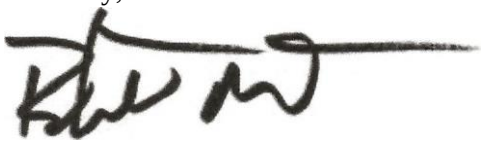
Things usually don't bother me.

I find it very hard to talk in front of a group.

There are lots of things about myself I'd change if I could.

I can make up my mind without too much trouble.
I'm a lot of fun to be with.

Sincerely,



Robert Most Mind Garden, Inc.

www.mindgarden.com

Appendix H

Participant 9 EMDR Testimony

Jo-Jo, 3/16/21

I just want to thank you from the bottom of my heart for basically changing my whole life around and also taking the time out of youre busy schedule to always accomodate my sudden need to see you with a problem. Whether it be big or small you always made sure I left you feeling some relief. If it wasnt for you the very first time I sat in youre chair telling me that you were confident you could help change my way of thinking so negatively on my core issues and getting me to do this EDMR therapy I probably would have left Recreate a couple weeks earlier. Ive had these childhood trama nightmares for well over 20 years of my life haunt me to the point I wanted to kill myself.

And at the time it felt like the only way to solve it. Even with Living the great life I was living and having the two amazing children and the best Fiance I was so overwhelmed by the tragic thoughts inside my head that made me take 250-25mg benadryls to never wake up and never have those horrible thoughts again. But after completing youre therapy and getting on some meds I can now Forgive the one person I never thought I could besides myself is my mother. I can now look back on what used to scare the shit out of me and not feel the horrific feeling I once had. And I can actually say I am feeling confident about myself and going home to my Fiance and children

with a new outlook on life.
I am so happy and
greatful I met you. I wish
you all the best and hope that
you can also help many more
clients the way you've helped
not only me but my whole
family because I know this is
just the start of a new life
for us.

Appendix I

Participant 4 EMDR Testimony

①

April 2021

I Did EMDR Sessions with JoJo at ReCreate Treatment Center in Boynton Beach, f She had me close my eyes and imagine a few scenarios. One time on a beach of my choice, another time on a train looking out that beac and another imagining each of my sisters floati about that Beach. I have long-term issues with my family of origin and my sisters. EMDR helped me reframe my emotions attach to my perspective from Resentment towards sympathy for them.

However, I found EMDR most effective for an "acute" more recent upset related to an old friendship. I mean more effective compare to an ongoing, life-long issue(s) with my family of origin.

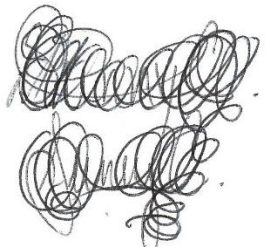
Anyway, I would get real heated & upset when thinking of a particular event with this old friend. After EMDR, when I think of

(2)

this particular friend now, and what happened, I have very little emotion attached to it anymore.

All in all, I found EMDR to be more helpful than regular therapy, which I've done before. Also I got more and more adept at picturing nice places in my minds eye with each successive session.

I do believe the patient must trust and feel safe with the therapist guiding the EMDR for it to work. Which means there should be some "get to know eachother" time prior to jumping in to EMDR.

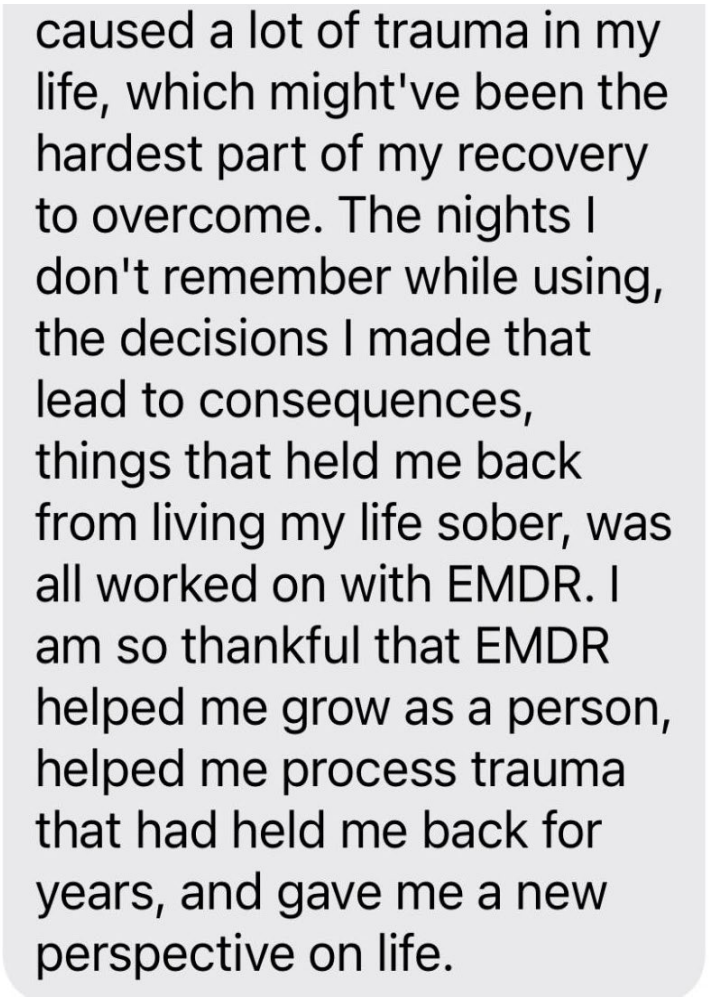


Appendix J

Participant 1 EMDR Testimony

EMDR helped me work through a lot of my past traumas, and desensitize quite a lot of triggers. I am so greatful for being able to participate in this research project. EMDR also brought up a lot of memories that I had seemed to forget about, both positive and negative. I remembered parts of my child hood I didn't even know were there! Working through trauma helped me learn to deal with my anxiety, eating disorders, body dysmorphia, and self harm. It gave me insight on to the reasons behind why I self harmed. I was able to get to the root of the problems and work through them. I also struggle with addiction. I was in treatment when I recieved the EMDR therapy. Addiction also

Participant 1 EMDR Testimony



Appendix K

Participant 11 EMDR Testimony

My name is ----------. Four years ago, I was involved in an accident while working for the New York City Fire Department. The accident was very traumatic and impacted my life and lead to my addiction. In November, I came to treatment for my substance abuse, every day was a battle with sleeping and waking up with the nightmares and the screams I would hear when I would lay down. The worst part was going into the shower and feeling the water hit my back and reminding me of being burned. I started EMDR with JoJo and I knew after the first session it helped me a lot. During the time the sessions went by, I started noticing the feelings and the memories of that day started to get easier. One thing I learned from EMDR is the day the accident happened, I blamed myself the entire time and it was not my fault, every time the memory comes up, I take it and turn it into a spectators point of view, meaning that day I was a civilian watching the entire accident happen, and I go up to the firefighter and tell him thank you for all that you do, and thank the firefighter for being so brave and a hero, it is because of you firemen that we are safe when a fire starts. Moving to the future, if I ever am in a situation that something like this accident occurs again, I know how to problem-solve and remember the tools I was taught in EMDR to help me get through the situation. I feel very confident that I will never suffer again because of EMDR.

Appendix L

IRB Approval

NATIONAL LOUIS UNIVERSITY
1886
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Office of the Provost
122 South Michigan Avenue
Chicago, Illinois 60603-6162

www.nl.edu
P/F 312.261.3121

February 2, 2021

JoAnn Kutsukos

Dear JoAnn Kutsukos:

The Institutional Review Board (IRB) has received your application for your research study "EMDR as a Complimentary Treatment for Clients with Addition and Comorbid Trauma" IRB has noted that your application is complete and that your study has been approved by your primary advisor and an IRB representative. Your application has been filed as FULL in the Office of the Provost.

IRB: ER00900

Please note that the approval for your study is for one year, from February 1, 2021 to February 1, 2022. As you carry out your research, you must report any adverse events or reactions to the IRB.

At the end of your approved year, please inform the IRB in writing of the status of the study (i.e. complete, continuing). During this time, if your study changes in ways that impact human participants differently or more significantly than indicated in the current application, please submit a Change of Research Study form to the IRB, which may be found on NLU's IRB website.

All good wishes for the successful completion of your research.

Sincerely,

Shaunti Knauth

Shaunti Knauth, Ph.D.
Chair, IRB

Appendix M

Curriculum Vitae

Curriculum Vitae

Curriculum Vitae

JoAnn Kutsukos

Place of Business: Advanced Recovery System
4905 Lantana Road, Lake Worth, Florida 33463
Business Phone: 561-340-7269

Home:
Cell Phone:
Email:

ACADEMIC BACKGROUND

Ed. D. COUNSELING EDUCATION SUPERVISION **Anticipated 2021**
National Louis University, Tampa, Florida

M.S. MENTAL HEALTH COUNSELING **2010**
Palm Beach Atlantic University, West Palm Beach, Florida

B.S. FAMILY STUDIES AND HUMAN DEVELOPMENT **2000**
University of Nevada Reno, Reno Nevada

ACADEMIC EXPERIENCE

Clinical Trainings **2012-2021**

Provided clinical training to clinical team during individual and group supervision. Trainings included: Community Reinforcement and Family Training (CRAFT), Dialectical Behavioral Training (DBT), and Eye Movement Desensitizing Reprocessing (EMDR), Communication Skills, Motivational Interviewing (MI), Cognitive Behavioral Therapy CBT, and Erikson's Psychosocial Stages of Development.

CLINICAL AND SUPERVISORY EXPERIENCE

EMDR Trauma Therapist
Advanced Recovery Systems, Lake Worth, FL 33463 **11/2019-till present**

Conduct weekly individual/family sessions, group therapy, biopsychosocial assessment,

continuing education, attend weekly supervision and client caseload, accurate documentation, chart auditing, and conduct peer review for audit purposes.

Clinical Director **4/2019- 10/2019**
Restore Hope, LLC, Stuart, FL, 34994

Provided leadership to both PHP, IOP, and OP programs overseeing clinical department managing scheduling of groups, supervision of clinicians, case managers, reviewing charts for audit for DCF and JCAHO. Conducted protocol for facilities policy and procedures as well as participated in DCF and JCAHO audits. Completed performance evaluations for clinical department and conducted interviews for hiring and meeting with staff daily for quality of client care and quality assurance for facilities. Created Client Four Levels Reward System to assist client's adherence to treatment success. Worked hand in hand with Operations as well as conducted daily treatment team meetings to assure client quality care

Clinical Director **8/2017-4/2019**
Garden of New Beginnings, North Palm Beach, Florida

Provided leadership to both PHP, IOP, and OP programs overseeing clinical department managing scheduling of groups, supervision of clinicians, case managers, reviewing charts for audit for DCF and JCAHO. Conducted protocol for facilities policy and procedures as well as participated in DCF and JCAHO audits. Completed performance evaluations for clinical department and conducted interviews for hiring and meeting with staff daily for quality of client care and quality assurance for facilities. Created Client Four Levels Reward System to assist client's adherence to treatment success. Worked hand in hand with Operations as well as conducted daily treatment team meetings to assure client quality care. Obtained JCAHO accreditation for Garden of New Beginnings May 2018 through the April 24, 2018, survey.

Certified EMDR Specialist **4/2017- 9/2017**
Recovery Team 450 Northlake Blvd., North Palm Beach, Florida

Certified EMDR (eye movement desensitization reprocessing) specialist, seeing clients that met past/present trauma reducing mental health symptoms. Treatment team would refer potential trauma patients for EMDR counseling assessments and followed up with 90-minute sessions.

Clinical Director **3/2017-/6/2017**
New Solutions Counseling Centers, North Palm Beach, Florida

Provided leadership to both PHP, IOP, and OP programs overseeing clinical department managing scheduling of groups, supervision of clinicians, case managers, reviewing charts for audit for DCF and JCAHO. Conducted protocol for facilities policy and procedures as well as participated in DCF and JCAHO audits. Completed performance evaluations for clinical department and conducted interviews for hiring and meeting with staff daily for quality of client care and quality assurance for facilities. Created Client Four Levels Reward System to assist client's adherence to treatment success. Worked hand in hand with Operations as well as conducted daily treatment team meetings to assure client quality care.

Primary Therapist **8/2016-3/ 2017**
Executive Recovery, 3565 SW Corporate Pkwy., Palm City, FL 34990

Conduct weekly individual/family sessions, group therapy, biopsychosocial assessment, continuing education, attend weekly supervision and client caseload, accurate documentation, chart auditing, and conduct peer review for audit purposes.

Project Facility Director, Clinical Director **3/2015-8/2016**
Serenity Now, Palm Beach Gardens, FL 33418 Darlene Bechard, Corporate Operations Director
561-245-1361

Project Facility Director: Opened new facilities to begin operation and to model facility from the main campus in Palm Beach Garden to the new facilities in Stuart and Delray Beach, Florida. Completed and set up housing for PHP residents for both PBG, Stuart and Delray sites including operations and housing.

Clinical Director: Provided leadership to both PHP and IOP programs overseeing clinical department managing scheduling of groups, supervision of clinicians, case managers, reviewing charts for audit for DCF and JCAHO. Conducted protocol for facilities policy and procedures as well as participated in DCF and JCAHO audits. Completed performance evaluations for clinical department and conducted interviews for hiring and meeting with staff daily for quality of client care and quality assurance for facilities. Created Client Four Levels Reward System to assist client's adherence to treatment success. Worked hand in hand with Operations as well as conducted daily treatment team meetings to assure client quality care.

Family Program Director and Assessment Director **6/2014-3/2015**
Recovery Associates, West Palm Beach, FL 33407 Lin Considine, Clinical Director 2801 North Flagler Drive, WPB, FL 33407 561-800-392-3180

Assessment of PHP, IOP, OP level of care for both programs conducting biopsychosocial, review charts, psychosocial didactic groups, conducted family sessions and provided a monthly family weekend. Created facility's first family program and successfully coordinated with families to assist with their program of recovery including client to promote family awareness of the disease model of addiction.

LICENSES AND CERTIFICATIONS

- Florida Licensed Mental Health Counselor est. 2013
- Florida Certified Addiction Professional est. 2014
- Florida Qualified Supervisor est. 2016
- Certified EMDR Specialist est. 2017

MEMBERSHIPS, ACTIVITIES, HONORS, AND AWARDS

- Conference Speaker for EMDRAA 2021 Conference: Building Better Lives 10/25/21
- Conference Speaker at UCF topic EMDR and Addiction 1/25/2019
- Emdria Organization since 2017
- Keiser University Professional Advisory Board Member since 2019

PROFESSIONAL TRAINING ATTENDED (Partial list):

February 2016 EMDR (Eye Movement Desensitizing Reprocessing) Stuart, FL
January 2016 Florida Qualified Supervisor Trainings
January 2015 Dialectical Behavioral Therapy Trainings Sandy Pines, Tequesta, FL
August 2014 CRAFT (Community Reinforcement and Family Training) Delray Beach, FL

Owner and Operator of an Online Therapy Counseling Center

Kutsukos Counseling Center
Website: www.kutsukoscounseling.com
Phone number: 561-379-7338