CHRISTIAN MEDITATION AND YOGA BREATHWORK: COMPLIMENTARY INTERVENTIONS FOR PTSD

Beulah Savithri Joshua

Department of Community Care and Counseling, Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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Approved by:

Dr. Stephany Pracht, Committee Chair

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Abstract

This multiple-baseline experimental design study examined the impact of trauma-informed Christian yoga (TICY) and Christian meditation (CM) on posttraumatic stress disorder (PTSD) and its symptoms for adult trauma survivors at Lifepath Counseling, a private mental health treatment practice. The theories guiding this study were Adlerian and trauma theory, based on the idea that any trauma is defined as extremely upsetting emotional event that overwhelms the individual's internal resources, potentially leading to long-lasting psychological symptoms of PTSD in some cases. It was vital to explore efficacious and cost-effective treatment interventions to alleviate PTSD symptoms in this study. Complementary and alternative medicines (CAM) and evidence-based treatments for trauma have come to be important for the symptom reduction and improvement of healthy living. The current study proposed to understand the impact of CAM interventions TICY and CM along with exposure therapy of Eye Movement Desensitization and Reprocessing (EMDR) in PTSD symptom reduction. Adult trauma survivors at Lifepath Counseling Practice with PTSD symptoms were administered four weeks of CAM treatments of TICY and CM, along with EMDR. The physical PTSD symptoms, as expressed through blood pressure and heart rate, were observed and documented in a Weekly Check-In sheet at the end of every week and for four consecutive weeks of CAM interventions. The data were collected and analyzed using descriptive statistics. A regular blood pressure monitor was used to measure the blood pressure and heart rate in participants.

Keywords: PTSD, trauma, Christian meditation, yoga, EMDR

Dedication

I dedicate this manuscript to the Immortal and Infinite God that in His wisdom chose to reveal His attributes in common revelation including in the field of psychology. I dedicate this research and study to the fellow counselors, psychologists, and researchers who tirelessly with curiosity and humility seek to discover and understand the cutting-edge interventions as goals in treatment for healthy functioning and quality life.

I am grateful to my husband Joshua James for believing in stewardship of my skills, his persistent sacrifice, diligent prayers, and constant motivation and support in good and challenging times. I am deeply thankful for my two children Meshach Joshua and Sandra Joshua for their sacrifice of time with them, prayers for good health, and their support for me to persevere in the six years to complete the program.

I am thankful for my parents Samuel Ebenezer Jebamoney and Sarah Susila Ebenezer, who faithfully raised me in a Christian home and provided academic education in engineering. They faithfully laid strong foundation in love for God and to pursue academic excellence with passion and humility for the benefit of home and community.

May God be praised for now and all eternity for His glorious works in our lives.

Acknowledgments

I acknowledge with great reverence and honor to our only wise God our Savior Lord Jesus Christ, who enabled me with His power, presence, and ability to initiate and complete the study for His glory and exceeding joy. His wisdom and faith in Him have helped me to walk with courage, in places that can be risky, which immensely influenced the purpose and scope of the study.

I am sincerely grateful for my dissertation chair, Dr. Stephany Pracht, who was my constant source of encouragement, refreshment, and motivation. Especially, when situations became harder, she would remind of the end goal and steer me back to the focus on the target. Her deep love for God influenced and refreshed my mind and spirit through her short devotions. I was blessed with her academic astute, research techniques, and persevering mentorship in the field of psychology. I am thankful for my dissertation reader Dr. Christie Rogers-Larke for her insight, guidance, and expertise in EMDR throughout the dissertation process and completion.

I acknowledge the passionate support from the faculty of Liberty University, who diligently taught the psychology and trauma courses. I am deeply thankful for all the administrative staff who were prompt and kind and answered all types of calls over phone, when visibility at tasks of the program can be limited in an online mode.

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List of Abbreviations

Adaptive Information Processing (AIP)

American Association of Christian Counselors (AACC)

Attachment to God Inventory (AGI)

Autonomic Nervous System (ANS)

Christian Meditation (CM)

Cognitive Behavior Therapy (CBT)

Cognitive Processing Therapy (CPT)

Complementary and Alternative Medicines (CAM)

Dialectical Behavior Therapy (DBT)

Dissociative Experiences Scale (DES)

Eye Movement Desensitization and Reprocessing (EMDR)

Heart Rate Variability (HRV)

Institutional Review Board (IRB)

Parasympathetic Nervous System (PNS)

Posttraumatic Growth (PTG)

Posttraumatic Stress Disorder (PTSD)

Rapid Eye Movement (REM)

Sympathetic Nervous System (SNS)

Trauma-Informed Christian yoga (TICY)

Trauma-Informed yoga (TIY)

Veterans Affairs (VA)

Chapter One: Introduction

Overview

Trauma has recently been researched and studied keenly (Briere & Scott, 2015). This chapter explains and emphasizes the importance of researching effective interventions for trauma survivors with PTSD symptoms. The "Background" section explains the early stages of understanding trauma and its historical, social, and theoretical backgrounds. The following section, "Problem Statement", focuses on the research gap concerning the effective trauma interventions for PTSD, and explores the TICY and CM along with EMDR. At the same time, TICY and CM have provided effective outcomes for other mental health disorders, which are explained. The section "Purpose Statement" explains the PTSD symptom reduction to improve the cognition of the negative self and the variables in the study. The section "Significance of the Study" focuses on the impact of TICY and CM on negative cognition, anxiety, blood pressure, heart rate, and associated PTSD symptoms in a trauma survivor. Finally, the section "Research Questions" identifies the related research questions related to negative cognition, anxiety, blood pressure, and heart rate variables in PTSD symptoms. The "Definitions" section explores the meaning of psychological terms relevant to this study.

Background

PTSD has had debilitating effects on the trauma survivors physically, emotionally, and psychologically, limiting their daily ability to function (Laliotis, 2020). The diagnostic manual for the fields of Psychiatry and Psychology, the Diagnostic and Statistical Manual of Mental Disorders (5th ed.; DSM-5; American Psychiatric Association [APA], 2013), categorizes PTSD, its etiology, and symptoms that impair the cognitive, functional, personality, and social skills of an individual, thus diminishing the quality of his or her life. The diagnostic features of PTSD

include eight criteria with five symptom clusters: (a) the reexperiencing of trauma; (b) avoidance, numbing, and coping patterns; (c) hyperarousal; (d) self and ego processes; and (e) interpersonal affiliative patterns of attachment, bonding, intimacy, and love (APA, 2013; Wilson, 2004). Evidence-based trauma treatments for PTSD symptom alleviation have been researched and are available to trauma survivors (Karatzias et al., 2019; Laliotis, 2020; Phillips et al., 2022). Though pharmacologically assisted treatments such as fluoxetine, paroxetine, sertraline, and venlafaxine have shown PTSD symptom reduction, psychological treatments have shown better evidence for symptom reduction (Bisson & Olff, 2021). However, most trauma survivors do not have the privilege, flexibility, or financial sufficiency (More et al., 2021) to have proper access to prestigious evidence-based treatment to find relief for their PTSD symptoms.

Historical Background

In the past, trauma treatments have included pharmacology and psychotherapies of Cognitive Behavior Therapy (CBT), Cognitive Processing Therapy (CPT), and EMDR (Schottenbauer et al., 2008; Schwartz, 2016; Taylor et al., 2020). Beginning in the 1960's CBT and CPT, and in the 1980's Dialectical Behavior Therapy (DBT) and other various psychotherapies, such as exposure therapy and EMDR, were developed to heal trauma and PTSD, facilitated to recognize the trauma survivor's ability to address unhealthy dynamics and to develop healthy relationships while allowing the therapist to witness the trauma shame, grief, and anger (Schwartz, 2016). PTSD treatments since World War II included the pharmacology and psychotherapy approved by the Veterans Affairs (VA) of the United States government (PTSD: National Center for PTSD, 2022).

Pharmacology

SSRIs are effective and less lethal when overdosed for both war veterans and civilian populations, and much safer than older antidepressants (Briere & Scott, 2015). Taylor et al. (2020) wrote that Westerners often use pharmacology treatment for trauma exposures. Braun et al. (2021) reported lower medication usage for depression and anxiety with a yoga intervention that reduced stress levels and improved mood. Schwartz (2016) shared that there is no single therapy method for the best healing of PTSD; hence, a combination of psychotherapies can be administered in the context of a healing relationship with a trusted therapist.

Psychotherapy

A research study on psychotherapy for PTSD by Matheson and Weightman (2021) shared that psychotherapy promotes recovery by rebuilding relationships, creating involvement in the broader community with peer support groups, helping to overcome difficulties in trusting others, and discussing trauma in the context of established relationships of trust. A study by Kaiser Permanente on unresolved childhood trauma shared that it has a significant toll on physical health, where standalone medication or psychotherapy treatments do not yield trauma resolution (Schwartz, 2016).

Complementary and Alternative Medicines

Kaiser Permanente shared that CAM interventions such as acupuncture, meditation, yoga, exercise, and restful relaxation could benefit trauma recovery and mind-body health (Schwartz, 2016). A study by Knabb et al. (2021) reported that Christian-distinctive meditative intervention helped participants to focus on God when responding to trauma-based intrusive memories, using four mental skills of attention, present focus, awareness, and acceptance to significantly reduce rumination. Trauma treatments for PTSD often begin with pharmacology, later including

psychotherapy (Briere & Scott, 2015) and CAM for holistic healing of mind and body and trauma resolution.

Social Background

Generic PTSD Treatments and Limitations

PTSD affects 8% of the general population during their lifetime and causes extreme psychological stress (Schottenbauer et al., 2008). A review of 55 empirical studies by Schottenbauer et al. (2008) revealed that CBT and EMDR might not be suitable for all trauma survivors because of the high nonresponse and dropout rates. The remission rates for people who struggle with depression, a PTSD symptom, were low from generic PTSD treatments (Haller et al., 2019). In general, a population that was severely clinically depressed showed significant improvement with antidepressant treatment, but those with low depressive symptoms did not improve (Haller et al., 2019). During memory processing of traumatic material among trauma survivors, benzodiazepines and some street and recreational drugs might interfere to limit effective outcomes (Briere & Scott, 2015).

CAM as Accepted Adjunct for PTSD Treatment

Depression, a symptom of PTSD and a leading cause of disability among the world's population, has been shown to respond well to CAM practices of herbs and dietary supplements, meditation, relaxation, acupuncture, tai chi, qi gong, hypnotherapy, and mind and body practices such as yoga and chiropractic manipulations, which have also been emerging into consideration for PTSD treatment in general (Haller et al., 2019). Voorendonk et al. (2022) observed that physical activity such as yoga, aerobic resistance, or stationary cycling were associated with decreased PTSD symptoms. Focusing on physiological trauma reactions, such as blood pressure, muscle tension, and stress levels, has become essential. Participants of the study by Hashimoto

(2018) were able to change their mind-body states to relaxation and vital states through actions of "laughter yoga."

CAM Focus on Cardiovascular Risk and PTSD Symptom Reduction

Research conducted by Ranney et al. (2020) with participants who were trauma-exposed active-duty firefighters with high cardiovascular risk of high blood pressure revealed that they struggled with exacerbated PTSD and depression symptoms. Similarly, nightmares among veterans with PTSD were related to poor cardiovascular condition; reducing nightmares in veterans improved their cardiovascular health (Ulmer, 2020). The practice of yoga, along with medication, has been reported to reduce stress and improved cardiovascular measures and increased strength and flexibility, thus promoting physical and mental well-being (Tillin et al., 2019). The study by Bourassa et al. (2020) reported that exposure therapy might alleviate cardiovascular health risks associated with PTSD. Understanding PTSD symptoms associated with cardiovascular risks and physiological reactions added more emphasis on CAM interventions apart from other various psychotherapies.

Theoretical Background

Adlerian theory and trauma theory were the theories guiding this study. Alfred Adler's Individual Psychology theoretical concept stated unity and uniqueness in everyone, along with handling feelings of inferiority (Seligman & Reichenberg, 2014; Tan, 2011). Adler theorized that children who succeeded in handling the feeling of inferiority in life challenges could develop growth and power in positive ways. In contrast, the pampered, neglected or rejected children could become discouraged and hopeless to overcome their inferiority (Seligman & Reichenberg, 2014). Adler's lifestyle concept is that each person needs to find their place in the world, overcome feelings of inferiority, and achieve goals to attain significance, meaning in life,

superiority, choice and responsibility, competence, and mastery (Corey, 2009; Seligman & Reichenberg, 2014). Adler theorized that the individual framework does not continue to develop, when average human growth does not occur or interruption in life happens as an adult (Seligman & Reichenberg, 2014). However, the adaptive individual framework and the optimum approach to align lifestyle with self-ideal, could happen by realizing feelings of pain and inadequacy, changing behaviors and attitudes, and reframing faulty logic of self during abuse and neglect, overcoming the feelings of inferiority to appreciate self (Seligman & Reichenberg, 2014).

Trauma theory posited that exposure to one or more traumatic events could lead to the development of PTSD symptoms (APA, 2013). The DSM-5 (APA, 2013) mentions that the essential feature of PTSD was the development of characteristic symptoms after exposure to one or more traumatic events, which might vary in each individual and result in fear-based emotional and behavioral symptoms, distressed mood states and negative cognitions, arousal and reactive-externalizing symptoms, and dissociative symptoms. Trauma is highly upsetting emotional event that overwhelmed the individual's internal resources, produced long-lasting psychological symptoms (Briere & Scott, 2015). The effects of trauma on the brain, the body, and the nervous system from a series of life circumstances had lasting effects on an individual's mental, physical, social, emotional, and spiritual well-being (Uhernik, 2017). Trauma responses could be intense and complicated because of the trauma survivor variables such as gender, age, race, socioeconomic status, family dysfunction, history of trauma exposure, dysfunctional nervous system, genetic predisposition, and peritraumatic dissociation (Briere & Scott, 2015). Based on the survivors' complicated trauma responses, Briere and Scott (2015) and Uhernik (2017) have chosen to endorse various interventions and theoretical models for effective PTSD treatment, including cognitive-behavioral, psychodynamic, mindfulness, and eclectic approaches.

The vital theoretical understanding is that since the effect of trauma on a survivor is intense and complicated, one type of trauma intervention would not fit the needs of all trauma survivors, who are different from each other due to nature and nurture (Briere & Scott, 2015). Seligman and Reichenberg (2014) wrote that the chief factor that trended toward using integrative and eclectic treatment was that no single theory had yet clearly captured the entire range of human experiences across the lifespan. They continued to describe the diversity of people seeking treatment who "vary according to many dimensions including culture, ethnicity, gender, sexual orientation, intelligence, abilities, interpersonal skills, life experiences, self-awareness, support systems, and symptoms" (p. 430). The Adlerian model caters to the need and provides more assistance for immediate concerns such as poverty, unemployment, and violence rather than individual dynamics (Tan, 2011). It is important for a clinician to keep in mind the diversity of the trauma survivor population that he or she will be serving; adhering to one preferred model of PTSD treatment could greatly reduce therapeutic treatment options.

Adler's contribution through individual psychology has become an important and relevant problem to be addressed in their society, as there has been a growing awareness of enduring harm that has resulted from childhood trauma (Seligman & Reichenberg, 2014; Tan, 2011). The DSM-5 addresses the diagnostic features of traumatic experiences and relates that the PTSD symptom expressions would vary with each trauma survivor. The Adlerian psychology provides practical lifestyle assessments and a wide range of interventions in four phases of treatment planning: (a) establishing the therapeutic relationship and setting goals; (b) assessment, analysis, and understanding of the person and the problem; (c) reeducation, insight, and interpretation; and (d) reorientation, reinforcement, termination, and follow-up. However, the interventions of immediacy, prescribing the symptom, confrontation, task assignments, humor,

silence, advice, and reflection of feelings are not exhaustive and lack body-mind connection for PTSD symptom alleviation. They also placed an emphasis on social motivation rather than individual dynamics (Liu et al., 2018; Seligman & Reichenberg, 2014; Tan, 2011).

Holistic and integrated trauma treatments include evidence-based therapies and CAM for effective healing outcomes and PTSD symptom reduction (Voorendonk et al., 2022). PTSD treatments accepted by the VA are prolonged Exposure Therapy and CPT (Braun et al., 2021; Sciarrino et al., 2020). Bradley et al. (2005) mentioned that there has been a consensus among scholars that CBT and EMDR are two capstone treatments for effective and sustained PTSD intervention and symptom reduction. A research study by Liu et al. (2018) recognized that EMDR is one of the top-tier evidenced-based treatments for PTSD symptoms, along with psychotropic medications. The study by Liu et al. (2018) pointed out that the CAM approaches for PTSD treatment are on the rise, capturing the interest of trauma survivors. According to National Center for Complementary and Alternative Medicine (NCCIH) (2016), there has been an agreeable consensus on appropriate acceptance and feasibility for PTSD treatment with some mind and body practices such as meditation, acupuncture, yoga, massage, and relaxation techniques. Evidence-based treatments integrating mind and body practices, such as yoga and chiropractic interventions for trauma treatment, are gaining more visibility recently (Haller et al., 2019). Holistic, integrated, evidence-based treatments are vital for trauma resolution and healing. Therefore, the current research study understood the importance of an integrated intervention of psychotherapy and CAM for trauma survivors (Briere & Scott, 2015).

Problem Statement

The problem was that there was not enough research on evidence-based treatments that included and integrated with TICY and CM, although there was existing evidence and research

on trauma and PTSD symptoms, which are debilitating for trauma survivors in their daily lives (Geier et al., 2019; Guo et al., 2017; Hebert et al., 2016). Research studies have included yoga and meditation as integrated approaches and evidence-based treatment for trauma to reduce PTSD symptoms in survivors (Geier et al., 2019; Guo et al., 2017; Hebert et al., 2016). According to the study by Nguyen-Feng et al. (2019) yoga could potentially alleviate general distress and might be a trauma treatment sequel. Trauma-informed yoga has shown to result in reduced psychiatric symptoms, reduced negative affect and shame, and improved affect regulation (Braun et al., 2021; Justice et al., 2018). According to the study by Krishnan et al. (2018) yoga and mindful meditation have proved to be effective CAM treatments for chronic pain management. Yoga has been a preventive and complementary treatment for eating and sleep disorders and victims of trauma (Shaw & Kaytaz, 2021). A study by Cahn et al. (2017) showed that participants improved their anxiety and depression after practicing yoga. Yoga has proven to be an adjunctive therapy for other body-related ailments such as rheumatoid arthritis (Gautam et al., 2020). Also, yoga has been integrated with mindfulness as a potential intervention for attention deficit hyperactivity disorder (ADHD) (Agarwal & Sarthi, 2020) and could be considered for treatment of PTSD. Furthermore, yoga has been an accepted treatment for General Anxiety Disorder (GAD) (More et al., 2021). Though the previously mentioned studies have tested the effects of yoga and mindfulness on trauma survivors, those interventions have not been studied as a combination or an integrated approach with CAM such as TICY and CM along with evidence-based trauma treatment EMDR.

The present multiple-baseline research study proposed to understand the TICY and CM as forms of CAM along with evidence-based trauma treatment EMDR to reduce PTSD symptoms in a trauma survivor within a shorter therapy treatment period. The current study

addressed the literature gap by exploring the integrated approach of TICY and CM through prayer or mindfulness meditation on God's Word with trauma survivors (Costa & Moreira-Almeida, 2022; Timbers & Hollenberger, 2022). The study also addressed the research gap created by a lack of studies examining yoga, mindfulness, and the evidence-based trauma treatment of EMDR with trauma survivors (Maddock et al., 2021; Seng et al., 2021). The adult civilian population with trauma in any one of the forms of traumatic experiences and the PTSD symptoms that came with them were included in the study to address the research gaps (Voorendonk et al., 2022).

Purpose Statement

This multiple-baseline experimental design study aimed to understand the integrated CAM treatments of TICY and CM along with evidence-based trauma treatment EMDR for adult trauma survivors of childhood trauma with PTSD symptoms at Lifepath Counseling. An individual's internal resources can be overwhelmed with feelings of pain and faulty logic of self during abuse and neglect in childhood years, which can result in trauma (Briere & Scott, 2015; Seligman & Reichenberg, 2014). TICY was generally assumed to have a significant impact in reducing the blood pressure of trauma survivors leading to alleviation of PTSD symptoms. The theories guiding this study were Adler's Individual Psychology in unity and uniqueness of everyone, along with handling feelings of inferiority and trauma theory on traumatic events leading to development of PTSD symptoms (APA, 2013; Seligman & Reichenberg, 2014).

This multiple-baseline experimental design with AB variation observed CAM interventions of TICY and CM along with EMDR. The experimental study was conducted with adults with PTSD symptoms using convenience sample from Lifepath Counseling. The cardiovascular measures, blood pressure and heart rate were the dependent baseline variables

before the treatment and were the baseline markers in phase A. When the treatment intervention the independent variable of TICY and CM, integrated with evidence based EMDR was introduced in intervention phase B, the dependent variables of blood pressure and heart rate were measured repeatedly over days and weeks, and were observed for any changes. The sample of the PTSD clients from Lifepath Counseling consisted of 6 to 10 adult participants.

Significance of the Study

The significance of the proposed study was that studying TICY and CM were added to the current body of literature on CAM for trauma treatments for PTSD symptoms. Connected mind-body therapy modalities have been gaining momentum in the healing process of complex trauma and PTSD symptoms (Haller et al., 2019; Liu et al., 2018). Integrative approaches for trauma treatments include neuroscience and neuroeducation (Miller & Taylor, 2016); the practice of yoga could be of benefit to trauma clients, as all types of yoga pay attention to breath involving the autonomic nervous system (ANS) and parasympathetic nervous system (PNS), through quieting and calming the mind (Uhernik, 2017). The adult trauma survivors under study at Lifepath counseling benefitted from yoga breath work, stimulating neural networks for improved mood states and positive cognitions about self (APA, 2013; Frank et al., 2020).

The study by Ivaki et al. (2021) on heart rate variability (HRV) was essential, as yoga involves breathwork related to the ANS and PNS. HRV measures fluctuations in time between heartbeats and has gained attention in predicting mental disorders of depression and anxiety and physical disorders of inflammation, chronic pain, insomnia, asthma, and fatigue (Ivaki et al., 2021). The study explained the function and impact of the ANS, that the heart was interconnected with the ANS and the PNS to regulate restorative and vegetative functions for maintaining homeostasis and physiological stability and the sympathetic nervous system (SNS)

to regulate blood pressure and energy mobilization (Ivaki et al., 2021). The current study lent itself to understanding the integrated approaches of TICY and CM to alleviate the PTSD symptoms of depression and anxiety in adult trauma survivors by utilizing yoga breath work and monitoring blood pressure (APA, 2013; Briere & Scott, 2015; Ivaki et al., 2021).

Trauma survivors could be impacted heavily by the intrusion of PTSD symptom clusters, especially the reexperiencing of trauma exhibited in 16 different forms, some of which include intrusive thoughts, dreams, increased psychological distress, hallucinations, anxiety, sadness, terror, negative affect, increased physiological reactivity, and somatic manifestations of sweating and heart palpitations (Wilson, 2004). Wilson (2004) described the avoidance and numbing cluster of symptoms such as loss of memory, diminished interest in usual activities of daily living, severe depression, and social detachments. The Wilson (2004) author continued to share that the increased arousal cluster of symptoms affected physiological functions such as the sleep cycle and cognition, and could cause mood dysregulation of anger, irritability, and hostility; thus, the PTSD symptom clusters, can affect the trauma survivor psychosocially, physically, academically, and occupationally. An article on chronic pain written by Krishnan et al. (2018) mentioned that unmanaged pain could lead to mental health disorders such as depression and pain medication addiction disorders. The current study was conducted with adult trauma survivors from Lifepath Counseling and explored the use of TICY and CM along with EMDR to reduce the PTSD symptoms clusters of depression, relieve the survivors of pain, and increase their participation in everyday activities of daily living (APA, 2013; Krishnan et al., 2018; Wilson, 2004).

CAM has assisted patients in coping with pain and reducing the side effects of medications, as Krishnan et al. (2018) researched. Their research article explained that the most

common causes of pain are back pain, arthritis, and headaches, which CAM methods certainly can help and can be made available in drugstores, supermarkets, health spas, gyms, and private clinics. Some CAM approaches explained by the researchers are acupuncture, biofeedback, massage, yoga, tai chi, and mindfulness. The current research study with adult trauma survivors from Lifepath Counseling, which involved body-mind connection exploration with evidence-based treatments, added to the repertoire of PTSD interventions to address childhood trauma, faulty logic, harmful lifestyles leading to mood, anxiety, and personality disorders, and dysfunctional relations with society and low self-esteem as per the Adlerian theory (Seligman & Reichenberg, 2014; Van De Kamp et al., 2019). The current study was highly significant in exploring the mind-body connectedness in adult trauma survivors to reduce PTSD symptoms, with integrated CAM approaches of TICY, CM, and EMDR as trauma treatments involving neuroscience, mind and body movements, and spiritual mindfulness for high efficacy (Emmerich, 2022; Johnson, 2018; Khusid & Vythilingam, 2021; Wilder et al., 2020).

Research Questions

Research Question 1

Will trauma-informed Christian yoga and Christian meditation as complementary and alternative interventions integrated with EMDR reduce blood pressure, a PTSD symptom of anxiety?

Research Question 2

Will trauma-informed Christian yoga and Christian meditation as complementary and alternative interventions integrated with EMDR decrease the heart rate, a PTSD symptom of an elevated heart rate?

Definitions

Definitions used in this study for clinical and psychological terms related to PTSD and posttraumatic growth in a trauma survivor were as follows:

- Trauma: Trauma is a significant event in a person's life caused by a natural disaster, war, childhood physical, emotional, or sexual abuse or neglect, adulthood physical, emotional, or sexual abuse or traumatic medical injury leading to a debilitating impact on physical, emotional, psychological, and social functions of his or her life (Braun et al., 2021; Geier et al., 2019; Guo et al., 2017; Hebert et al., 2016; Nguyen-Feng et al., 2019; Trentini et al., 2015).
- Physical Resilience: Physical resilience is the physical ability of the body to bounce back from excessive body demands with stamina and strength (Grabbe & Miller-Karas, 2018).
- Psychological Resilience: Psychological resilience is the ability to withstand interpersonal, financial, work, or health-related challenges with support from social skills and flexibility (Grabbe & Miller-Karas, 2018).
- Posttraumatic Growth (PTG): PTG is the positive personal change that can occur after a traumatic exposure without discounting the negative psychological experience to enhance a person’s sense of meaning and purpose in life (Levers, 2012).

Summary

A traumatic experience in any form could limit a survivor to being entangled in ineffectual and unrewarding thoughts and behaviors and could prevent him or her from living a healthy life (Seligman & Reichenberg, 2014). The field of research in psychology has endured over the years and sought to provide affordable and evidence-based treatments for trauma survivors. Along with already available trauma treatments for PTSD symptoms (Ford, 2021), it

was essential to continue providing cutting-edge interventions with high accessibility. Hence, this study proposed to understand the effect of integrating TICY and CM along with evidence-based treatment EMDR in PTSD symptom reduction so that the survivors could recover and heal for purposeful living with resiliency.

Chapter Two: Literature Review

Overview

Trauma and complex trauma survivors could develop neurobiological, physiological, and painful responses to addictions and maladaptive behaviors to distract from pain (Sanderson, 2013). This chapter explains the available literature and trauma work on the theoretical framework of Adlerian theory and trauma theory concerning the development of PTSD symptoms. This chapter's related literature section explains trauma etiology, neuroscience and trauma, trauma assessments, and posttraumatic growth. This chapter also explains the evidence-based trauma treatments of EMDR, CBT, and DBT. The available literature in the field of CAM that includes mind-body practices of yoga and Christian mindfulness are explained in this chapter. The summary section concludes with the proposed study of evidence-based treatment of EMDR with CAM of TICY and CM for PTSD symptom reduction.

Theoretical Framework

The body of literature on Adlerian humanistic psychology shows that healing and redemption work through the neuroscience of personal growth, social constructs, and communal belonging (Seligman & Reichenberg, 2014). Trauma theory explains the available research work on trauma affects the mind and body through physiological bodily reactions. Some of the effective trauma-informed treatments include EMDR, CBT, PE Therapy, and DBT to facilitate PTSD symptom reduction (Dominguez et al., 2021; Karatzias et al., 2019; Perroud et al., 2012; Phillips et al., 2022; Voorendonk et al., 2022) but not treatments that focus on the somatic experiences and body sensations. Adlerian theory validates faulty logic and body sensations as triggers that could occur after a traumatic event. However, a holistic treatment for trauma that is effective, trauma-informed, and culturally sensitive, that connects the mind and body experiences

in integration toward PTSD symptom alleviation and healing, has not been researched; this research is necessary so that survivors can have access to it, can enrich their quality of life, and can increase their lifespan (Seligman & Reichenberg, 2014).

Adlerian Theory and Psychiatric Disorders

The modern psychotherapies were revisited by famous theorists Albert Ellis, Abraham Maslow, and Victor Frankl in the special edition of the Journal of Individual Psychology on the 150th birthday anniversary of Alfred Adler and emphasized the influence of the Adlerian theory (Watts & Bluvshtein, 2020). The Adlerian principle of the family's role in the early development of personality and relationships in an individual was then translated to society's crucial constructs, emphasizing the importance of meaning-making in one's lifestyle, social construction, and communal sense of belonging (Seligman & Reichenberg, 2014; Watts & Bluvshtein, 2020). Watts and Bluvshtein's (2020) report mentioned that the Adlerian theory of social equality and social justice spurred the woman's movement in America and the civil rights movement by Martin Luther King Jr. and highlighted the importance of positive change in groups and communities through the individual personality development. Adlerian theory's reparative work in an individual is socially embedded and relationally distributed through the idea of meaning-making in the psyche of the individual who is creative, proactive, and capable of modifying any repetitive self-defeating behaviors (Seligman & Reichenberg, 2014; Watts & Bluvshtein, 2020).

The Adlerian theory has facilitated treatments for psychiatric disorders in a group setting and thus was a robust theory for studying the phenomenon of CAM for trauma treatment (Khusid & Vythilingam, 2021; Paquin et al., 2021). Khusid and Vythilingam (2021) reported that there has been a recent increase in that posttraumatic stress disorder (PTSD) after U. S. service

members returned from Operation Enduring Freedom and Operation Iraqi Freedom. The U.S. Department of Health and Human Services (2022) reported validating the previously mentioned study's results that PTSD is an actual mental health illness which can occur after seeing or experiencing a traumatic event such as war, hurricanes, rape, physical abuse, or a bad accident, and Adlerian theory tenets are viable for treating trauma, PTSD, and psychiatric disorders.

Paquin et al. (2021) reported the positive effects of Adlerian-based group psychotherapy for relational trauma and PTSD. Their research explained that World War II strengthened the need for psychological services in a group format, wherein Adler's 'Theater of Spontaneity' coined the term 'collective counseling' (Paquin et al., 2021, p. 17). During that wartime, Adlerian principles facilitated group counseling that addressed relational trauma, depression, anxiety, personality disorders, and substance addictions, with therapeutic targets of physical health, increased the life span, family roles, social identities, and social justice.

Adlerian theory is a phenomenological and relationship-oriented humanistic theory that pioneered person-centered, existential, cognitive, and systems counseling approaches (Miller & Taylor, 2016). The main Adlerian principles involve understating the person through lifestyle assessment, family constellation and birth order, dreams, earliest recollections, priorities, and ways of behaving (Seligman & Reichenberg, 2014). Adler's phenomenological principles of conscious affect experiences facilitate increased awareness, thus creating more choices for change (Miller & Taylor, 2016). Neuroscientists' research complements the humanistic tenets of the Adlerian vital principles of social embeddedness, the purposefulness of behavior, and holism (Miller & Taylor, 2016). The strategic Adlerian interventions that can address trauma and PTSD are: (a) catching oneself using body sensation cues of physical tension and diffusing them through deep breathing and viewing with stop signs; (b) pushing the button to become aware of

one's control over emotions; (c) a counselor "spitting in the client's soup" to identify the underlying motivation of self-defeating behaviors; (d) immediacy to focus interaction dynamics in the session; (e) prescribing the symptom to magnify the problem behavior; (f) confrontation to point out discrepancies with therapy goals; (g) task assignments to promote feelings of competence and responsibility; and (h) humor, silence, advice, and reflection of feelings to promote insight, heightened self-awareness in the body sensations connected with emotions and behaviors, and encouraged positive adaptive thought and behavior change (Seligman & Reichenberg, 2014).

Adlerian Theory and Dreamwork

The Adlerian theory focuses on dreamwork to understand the individuals' emotional awareness and psychological meaning toward an improved lifestyle (Kramer, 2017; Seligman & Reichenberg, 2014). Kramer (2017) undertook a research study to understand dreams. He reported that the dreams were orderly, had meaning, and were responsive to the emotional concerns of the dreamer. Moreover, he explained that the psychological meaning-making systems such as Freudian, Adlerian, and Jungian theories can be applied to dreams to examine psychological meaning and emotional concerns of the emotionally disturbed trauma survivor. According to Adler dreams provide essential information on lifestyle and current concerns and are viewed as a vehicle for promoting self-awareness by relating emotions (Seligman & Reichenberg, 2014).

Adlerian Theory and Neuropsychoeducation

The Adlerian theory allows for neuropsychoeducation on neuroscience, emotional education, and breath-awareness practices, which could be applied to trauma treatments (Kent & Buechner, 2021; Miller & Taylor, 2016). Neuroscience is shedding light and new appreciation on

humanistic-based Adlerian psychology, and has allowed other scholars of person-centered, narrative, and cognitive behavior theories to examine neuroscience and human behaviors (Miller & Taylor, 2016). Based on the research by Miller and Taylor (2016), findings on neuroeducation, a type of psychoeducation on brain development and functioning, included in the therapeutic process for clients reduced feelings of shame, increased self-compassion, and increased empathy for self and others. The research report mentioned that neuroeducation included information on the social brain and the impact of early interpersonal trauma on neural circuity, allowing the clients to consider adaptive survival with new ways of thinking, feeling, and behaving. Finally, the report added that mindsight skills training, based on the Adlerian principle of self-awareness of private logic, fostered consciousness and mindfulness to attune to body cues and improved emotional regulation, attention, cognition, and breath-awareness practices (Miller & Taylor, 2016).

Adlerian Theory and Suicide Prevention

Suicide, a possible PTSD outcome, was the leading cause of death in the United States (Guo et al., 2017; Substance Abuse and Mental Health Services Administration [SAMHSA], 2022). At the same time, one in five American adults have experienced mental health issues, one in six young people have experienced a major depressive episode, and one in 20 Americans had lived with serious mental illness such as schizophrenia, bipolar disorder, or major depression (Guo et al., 2017; Koenig & Al Zaben, 2021; McGeorge et al., 2021; Sanderson, 2013; SAMHSA, 2022). According to Adler, suicide is a precursor to list a of failures such as lack of social interest in eliminating cultural ethos and prescriptions and solving life challenges (Bluvshtein et al., 2019). Traumatic experiences like suicide lead to secondary responses in surviving families to cope, distract from painful memories, and deal with potential PTSD

outcomes such as self-harm, eating disorders, addictions, and obsessive-compulsive disorders (Sanderson, 2013). In the Adlerian principle, the suicide attempt is an attempt to avoid the risks and frustrations of communal feelings fueled by the disintegration of the communal fabric of the individual (Bluvshtein et al., 2019). The remedy for suicidal behaviors could be rendered with an Adlerian modality by effective strategies that promote cross-cultural reality and address the impaired sense of belonging, any stored historical communal trauma, and self-harm behaviors of PTSD (Bluvshtein et al., 2019; Guo et al., 2017; Sanderson, 2013).

Adlerian Theory and Mind-Body Practices

A research study by Kent and Buechner (2021) identified that Adlerian theory incorporates adult model learning by combining personal growth and social transformation. Their research describe that adult model learning is possible in Adlerian psychology since the core construct of the theory is that social factors such as communication, relationships, emotions, and self-efficacy are primary forces in the individual's mental health. For example, the study conducted by Ghasemi (2022) explored the Adlerian-based intervention program to empower burned-out teachers, refreshing their minds and bodies. According to the research by by Ghasemi (2022), feelings associated with burnout are anxiety, chronic stress, depression, emotional exhaustion, and lack of competence. However, an individual undermined physically and psychologically because of burnout could be set on a path to recovery through Adlerian psychology using social activities with low effort and other individual coping strategies. Moreover, 'Catching Oneself,' one of the Adlerian interventions, incorporates the mind and body connection by picking up the body cues expressed during physical tension and using diffusion through deep breathing, with the mind association of visualizing a stop sign during emotional dysregulation (Seligman & Reichenberg, 2014, p. 75). Kent and Buechner (2021) recognized

some mind-body therapies to cope with transition stress and PTSD and addressed physical and psychological health. The previously discussed study mentioned some mind-body and somatic modalities, including massage therapy, acupuncture, chiropractic services, yoga, tai chi, diet, and natural medicine.

Adlerian Theory and Cultural Competence

Kent and Buechner (2021) reported that the Adlerian theory is culturally sensitive and socially responsible as the theory interacts productively with social systems, examining human behavior in highly values-based cultures; thereby it is helpful in searching for interdisciplinary solutions as trauma treatments. Research work conducted by Irvine et al. (2021) brought out the Adlerian theory's phenomenological framework of multicultural relational components, such that one's lifestyle and cognitive worldview influence the relational interaction in an individual. The research report mentioned that the Adlerian framework relies on the core principles that behavior is purposeful (teleological) and satisfies the need for a sense of belonging, human beings are innately creative and unique, and human beings prospered through social interest with a community feeling. The report explained that the ongoing self-reflection in an individual strengthens the core of the multicultural perspective view with cultural humility, authenticity, and social justice competence. The report suggested that self-efficacy could be promoted with active engagement through questions and writing in multicultural education.

Trauma Theory

Trauma theory states that traumatic events could lead to the development of PTSD symptoms with strain on emotional states, cognitive limitations, and behavioral abnormalities that occur to handle the pain (APA, 2013). Single-event and complex trauma could lead to PTSD with symptoms of intrusive thoughts, flashbacks, avoidance, numbness, and hyperarousal

(Karatzias et al., 2019). People who have experienced threats to their physical life or psychological integrity could suffer extremely troublesome physical and psychological symptoms that overwhelm the individual's internal resources and produced long-lasting psychological symptoms, making up the core of traumatic events (Briere & Scott, 2015). Response to traumatic events often involves dysregulated emotions of fear and horror, learned behavior of helplessness, and cognitive alterations and ego defenses that suppressed the memory of the traumatic event (Wilson, 2004). PTSD symptoms could heavily impact the daily life activities of a trauma survivor and reduce the efficiency of outcomes (Kim et al., 2013).

Trauma theory states that a traumatic event could affect the self-esteem and sense of personal identity of the trauma survivor, which impacts the complex intrapsychic phenomenon in the ego categories of coherency, connection, continuity, energy, autonomy, and vitality (APA, 2013; Briere & Scott, 2015; Wilson, 2004). Research studies conducted by Grabbe and Miller-Karas (2018) and Wilson (2004) pointed out the impact of chronic stress from trauma that could derail the ability to live life resiliently, which manifests as PTSD symptom clusters with traumatic injury to self-structure, ego-processes, personal identity, and personality processes. Trauma, in effect, severely impacts the trauma survivor through the disorganization of daily activities, lowered self-esteem, distorted personal identity, and derailed life resiliency (Wilson, 2004). Complex PTSD occurs with long-term exposure to traumatic stress and presents symptoms of cognitive distortions, emotional distress, disturbing somatic sensations, disorientation, hypervigilance, avoidance, and dissociation affecting the mind and body (Schwartz, 2016).

Trauma and Physiological Reactions

The physiological reactions resulting from trauma are experienced in the body by the trauma survivor (Briere & Scott, 2015; Schwartz, 2016). The research review conducted by Meinhausen et al. (2022) on PTSD, sleep, and cardiovascular risk found that sleep is a critical behavior, and lack of it could lead to cardiovascular disease and global mortality with high relevance to PTSD. Moreover, the study reported that PTSD has been related to cardiovascular risk and dysregulated physiological stress response. Depression presents with feelings of worthlessness, excessive guilt, loss of interest in pleasurable activities, loss of energy, and sleep disturbances (Briere & Scott, 2015). The study conducted by Kibler (2018) on physiological reactions to PTSD severity reported that the greater the PTSD severity, the greater the perceived threat in association with less cardiovascular recovery. Furthermore, Kibler (2018) reported that heightened cognitive threat appraisals were associated with delayed cardiovascular recovery. Thus, the studies revealed a vital understanding that trauma could lead to significant physiological and psychological symptoms of depression, anxiety-related disorders, and stress-related disorders such as PTSD (Briere & Scott, 2015; Kibler, 2018; Schwartz, 2016).

Another critical physiological effect of trauma apart from PTSD is the bodily reaction from chronic stress (Schwartz, 2016; Tavernier et al., 2019). Stress could cause anxiety and produce adverse bodily reactions like nausea, vomiting, diarrhea, and panic attacks (Johnson, 2018). Panic attacks, a possible symptom of anxiety disorders, could be terrifying and overwhelming for a trauma survivor; they usually might last from 10 minutes to an hour, with symptoms of palpitations, shortness of breath, sweating, cold extremities, and feelings of impending doom (Briere & Scott, 2015). The study conducted by Schwartz (2016) reported similar bodily reactions from chronic stress and trauma that could lead to health issues of high

blood pressure, blood sugar imbalance, food cravings, addictions, sluggish digestion, suppressed immunity, digestive disturbances, sleep disturbances, and autoimmune disorders. Therefore, it is essential to consider integrative, practical, and accessible trauma treatments that reduce PTSD symptoms.

Trauma and Psychological Reactions

Trauma and PTSD symptoms have serious life-threatening consequences and cognitive debilitation, as well as had the ability to reduce the life satisfaction of a survivor (Briere & Scott, 2015; Wilson, 2004). According to the research study by Bhuptani and Messman (2021) PTSD symptom severity is pronounced in trauma-exposed individuals and includes symptoms of re-experiencing, hyperarousal, avoidance, and negative cognition. A research study by Pringer and Wagner (2020) suggested trauma-informed care incorporating Adlerian theory, CBT, and DBT reduces PTSD symptoms, since remembering past trauma activates the brain's limbic area responsible for the emotions that lead to maladaptive self-destructive behaviors. Similarly, a Kibler (2018) study reported an association between PTSD severity and presented heightened cognitive appraisal as a confirmed PTSD symptom. Along similar lines of the impact of PTSD symptoms, Wilson (2004) reported that the behavioral maladaptations observed are dysregulated affects, personality alterations, alerted interpersonal processes in detachment, loss of intimacy, alienation, psychosocial impact at work and school, comorbid disorders of depression, anxiety, and substance use, changes in life-course developmental patterns, and lack of recovery and healing. Moreover, Guo et al. (2017) reported that PTSD and depressive symptoms increase the risk of suicidality after a traumatic disaster. The effects of PTSD symptoms in the life of a trauma survivor could be severe, pronounced with heightened cognitive appraisal, debilitating

behavioral maladaptation, and increased risk for suicidality (Bhuptani & Messman, 2021; Guo et al., 2017; Pringer & Wagner, 2020; Wortmann et al., 2021).

Related Literature

Trauma Etiology and Assessments

The trauma from human interpersonal violence began in the offspring of Adam and Eve, which involved Cain murdering Abel (Levers, 2012). The psychological trauma was to come to terms with human vulnerability to natural world disasters or "acts of God" and with the capacity for evil in human nature (Herman, 1997, p. 7). The conceptualization of trauma began with life experiences of sexual assaults, poverty, violence, hysteria, and neurosis, which included the works of Jean-Martin Charcot, Sigmond Freud, Joseph Breuer, and Pierre Janet, leading to modern psychiatry (Levers, 2012). There were three primary forms of psychological trauma identified: hysteria, shell shock or combat neurosis, and sexual and domestic violence that left residue symptoms on the trauma survivors, which included neurological damage, motor paralysis, sensory losses, convulsions, and amnesia (Herman, 1997, p. 7). The veterans from World War I and World II who experienced combat-related disorders and psychological trauma were treated in veterans' hospitals. They dealt with the new reality of trauma-related mental health conditions, often guilt-ridden, angry, and emotionally volatile (Levers, 2012). The APA released its trauma diagnosis in its first DSM edition in 1952 as Transient Situational Personality Disturbance. In the second edition of the DSM in 1968, APA classified trauma-related experiences as an Adjustment Reaction of Adult Life. The new diagnosis PTSD, which categorize combat neurosis, rape trauma syndrome, and battered women syndrome as trauma-related syndromes was published in the third edition of the DSM in 1980 by the APA (Levers, 2012). Recognizing PTSD as an official diagnosis gave birth to rigorous and scientific pursuits to

understand the consequences of trauma in the brain, nervous system, and hormonal systems that impact the psychobiological responses of cognition, emotion, motivation, perception, and behavioral expressions (Wilson, 2004).

Neuroscience and Trauma

PTSD from trauma affects the neurobiology of the brain and the vitality of the survivor, as the memory systems are layered (Weisfeld & Dunleavy, 2021). PTSD is a psychobiological syndrome in which the human-stress response system is affected by trauma encoded in the brain as a trauma survivor appraises or perceives a threat (Wilson, 2004). PTSD symptoms of re-experiencing trauma, hyperarousal, avoidance, and negative cognition affect human behavior because of the interconnected neural pathways of major brain systems in the limbic system, basal ganglia, and prefrontal cortex (Amen, 1998; Bhuptani & Messman, 2021). Early-life traumas could leave functional scars in the emotional and learning parts of the brain, resulting in a residue of dysfunctional neural networks, behavioral dysfunction, and mental disorders (Groger et al., 2016). The brain's command response to a threat activates the central nervous system, which then activates the hypothalamic-pituitary-adrenal axis (HPA) to release cortisol in response to stress (Wilson, 2004). PTSD symptom responses are cardiovascular risk and dysregulated physiological stress associated with the neurobiological HPA axis (Meinhausen et al., 2022), for the SNS regulates heart rate, blood vessels, and nerve conduction. Anxiety is the overactivation of the HPA and the SNS (Zoogman et al., 2019). However, the HPA and SNS trigger increases the blood sugar levels for metabolic energy to counteract stress so that the muscular and nervous systems can respond to the stress or threat (Wilson, 2004).

Wilson (2004) mentioned that under normal conditions in the body of a person who has not experienced trauma, the hyperarousal state activated by the threat would quickly cease and

return to a normal baseline. However, for the trauma survivor with PTSD symptoms, the stress response might not be switched off but continue to work, acting as if the threat is active, utilizing the anxiety or fear network (Wilson, 2004). A research essay by Helsel (2015) highlighted an important phenomenon in the nervous system activation after trauma in the survivors of intimate partner violence and sexual assault against women. The essay described that the resistance in the survivor must be considered by caregivers to the phenomena of survivors' bodies communicating trauma triggers. Thus, caregivers should be ready to read and learn the body language of the survivors. Therefore, Schwartz (2016) brought out that CAM such as relaxation, mindfulness, and yoga, which have been integrated into mental health centers and hospitals as supportive PTSD treatments. The CAM interventions that work by regulating the ANS, consisting of the SNS and the PNS and reclaiming balance in the body, are becoming clear and evident in current research.

Trauma and complex trauma survivors develop neurobiological and physiological responses divided into four categories of PTSD intrusive symptoms, avoidance symptoms, alterations in cognitions and mood, and alterations in arousal and reactivity (Aron et al., 2019; Sanderson, 2013). Trauma survivors could be treated for PTSD with the help of Adlerian theory tenets of 'pushing the button' to think of a positive memory instead of a negative memory and thus control emotions, which empowers them with choices to address trauma triggers (Pringer & Wagner, 2020), and meaning making that leads to PTG (Zeligman et al., 2018).

Trauma Assessments

Traumatic experiences are broad, as they can involve around military combat, sexual assault, automotive accidents, or natural disaster (Briere & Scott, 2015). Trauma must be assessed clinically for accuracy and comprehensiveness, as the chances of getting diagnostic help

from a trauma survivor might be low (Briere & Scott, 2015; Levers, 2012). Diagnostic and psychological trauma assessment mainly uses psychological tests and interviews that measure personality traits, cognitive symptoms, inner person experiences, and interpersonal behaviors (Levers, 2012). Since the trauma survivor has recently experienced a traumatic experience, he or she might express extreme distress, high anxiety, intrusive posttraumatic symptoms, and outbursts of anger, and therefore during assessments it is essential to provide for their immediate safety, psychological stability, and capacity to discuss the traumatic material (Briere & Scott, 2015). The Clinically Administered PTSD Scale (CAPS) in the DSM-5, CAPS-5, has a total severity score that has positive correlations with measures of constructs related to PTSD, anxiety, depression, and somatization (Weathers et al., 2018). The research study by Geier et al. (2019) with the PTSD Checklist for DSM-5 (PCL-5) reported that the PCL-5 produced satisfactory diagnostic accuracy with adequate sensitivity and positivity, supporting the integration of routine assessment for posttraumatic mental health after trauma center discharge. Thus, the research studies evidenced the CAPS-5 and the PCL-5 are suitable measures for PTSD assessment (Geier et al., 2019; Weathers et al., 2018).

Posttraumatic Growth

Though trauma impacts the survivor significantly in all forms, neurobiologically, psychologically, physiologically, and spiritually, PTG after the traumatic experience cannot be ignored as it provides a greater appreciation for life, a renewed sense of priorities, and insights about the situation to self (Dickinson, 2021; McMartin & Hall, 2021). Most recently, the concept of positive change in personality through a life crisis or traumatic experience called PTG has been observed and widely discussed (Levers, 2012). Experience of trauma is painful and least expected, but when endured, the process of recovering through trauma can change a person and

facilitate benevolent purposes (McMartin & Hall, 2021). The recovery from a traumatic experience, or PTG, involves healthy choices for physical and emotional well-being, a self-directed life, and striving to achieve full potential (SAMHSA, 2022). The significant domains of PTG are: (a) perception of self-concerning strength; (b) new possibilities for the future; (c) improvement in human relationships; (d) appreciation of life by the survivor; and (e) strengthened sense of spiritual beliefs (Dickinson, 2021; Levers, 2012; McMartin & Hall, 2021). The study by Florez et al. (2018) showed that existential well-being was more robust than spiritual well-being in addressing psychological difficulties, hopelessness, and suicidal ideation, and thus strengthening the meaning of life through traumatic experiences. Encouraged and supported through personal growth and resilience, the trauma survivor could cultivate compassion, forgiveness, courage, gratitude, and creativity (Schwartz, 2016). Trauma is not a welcomed life experience, but it could allow the survivor to grow through it regarding personality change, relationships, and social behaviors (Florez et al., 2018; Levers, 2012; McMartin & Hall, 2021). According to Briere and Scott (2015) integrative and eclectic trauma treatment approaches promote PTG with new psychological resilience, additional survival skills, and greater self-knowledge and acceptance.

Importance of Trauma Treatments

Psychological stress impacts one's ability to think, feel, and behave, possibly decreasing the quality of daily functions and weakening physical, mental, and emotional well-being over time (Laliotis, 2020). People who developed PTSD need assistance in handling disturbing trauma responses of suicidal thoughts, flashbacks, irritability, social avoidance, and decreased life satisfaction and functioning (Hollis Martin & Reid, 2022; Ripley et al., 2019). One's capacity to respond to life's stressful events is diminished by mental disorders such as acute stress disorder,

PTSD, anxiety, and depression (Laliotis, 2020). Evidence-based EMDR treatment and physical activities such as yoga, aerobic resistance, or stationary cycling were associated with decreased PTSD symptoms (Voorendonk et al., 2022). Though pharmacologically assisted treatments such as fluoxetine, paroxetine, sertraline, and venlafaxine showed PTSD symptom reduction, psychological treatments such as EMDR, CBT, and PE had better evidence for symptom reduction (Bisson & Olff, 2021). Trauma-focused psychological treatments, such as EMDR, CBT, and PE, relieved trauma and PTSD symptoms from civilian, military, and childhood trauma and imparted psychological and social resources that improved daily life (Karatzias et al., 2019).

Versatility in Trauma Treatment

Individuals who have gone through one or many traumatic experiences in their lives can benefit from a variety of trauma treatments that related to their age, type of trauma, phase of life, and consider cost-effectiveness (Klawetter et al., 2021; McMartin & Hall, 2021; Oakley et al., 2021). Individuals with a more significant trauma history exhibit more suppression-induced forgetting of negative and neutral memories (Hulbert & Anderson, 2018). Prolonged grief disorder is associated with PTSD symptoms and suicidal ideation (Boelen & Lenferick, 2020). Neglected traumatic wounds persist and fester as they are passed from generation to generation (Abrams, 2021). People with mental health needs from the trauma of their past, biological history, or brain chemistry could function more effectively in their families, workplace, and community with proper treatment (Abrams, 2021; Boelen & Lenferick, 2020; Hebert et al., 2016;). It is estimated that the prevalence of PTSD symptoms in a civilian trauma survivor is 3.4% to 8% (Lehavot et al., 2018). Some of the effective treatments for trauma include EMDR, CBT, PE Therapy, and DBT that facilitate PTSD symptom reduction (Dominguez et al., 2021;

Karatzias et al., 2019; Perroud et al., 2012; Phillips et al., 2022; Voorendonk et al., 2022). A research study by Pringer and Wagner (2020) suggested trauma-informed care that incorporates Adlerian theory, CBT, and DBT reduces PTSD symptoms. It is crucial to utilize trauma treatments that are effective, culturally sensitive, and cost-effective so that survivors have access to them; such treatments could enrich their quality of life and increase their lifespan (McGowan, 2019; Oakley et al., 2021). The Substance Abuse and Mental Health Services Administration (SAMHSA, 2022) mentioned that promoting trauma treatment could result in (a) higher overall productivity; (b) better educational outcomes; (c) healthy motivation and productivity at work; (d) lower crime rates; (e) stronger economies; (f) lower health care costs; (g) improved quality of life; (h) increased lifespan; and (i) improved family life.

Evidence Based Trauma Treatments

Eye Movement Desensitization and Reprocessing (EMDR). EMDR is a comprehensive approach that integrates several therapies to treat PTSD by identifying triggering memories, emotions, beliefs, and sensations (Schwartz, 2016). EMDR allows trauma memory processing with intentional retrieval and self-reflective re-experiencing of trauma memories to contextualize and reconsolidate for accurate and complete encoding of trauma (Ford, 2021). EMDR is a trauma-focused psychotherapy for PTSD symptoms and has strong evidence for symptom reduction in an inpatient hospital setting (Phillips et al., 2022). Shapiro (2018) brought out that EMDR using an adaptive information processing (AIP) model of maladaptive neural networks. This concept is in consistent with Freud's (1919/1955) and Pavlov's (1927) early understanding of information processing to an adaptive resolution of memory networks integrated with positive emotions and cognitive schema for future use, that results in reducing

PTSD symptoms. Thus, EMDR allows trauma processing with self-reflection and adaptive self-soothing (Ford, 2021).

Karatzias et al. (2019) conducted a study comparing PTSD treatments and noted that EMDR had an advantage over CBT. The study validated PTSD symptom alleviation in civilian, military, and childhood trauma. The study also explained that EMDR, CBT, and PE are trauma-focused psychological treatments which are a phenomenal contribution to the further exploration of trauma treatments. Similarly, another study by Voorendonk et al. (2022) explored integrating physical activity with trauma-focused treatments of EMDR and PE, which reduced PTSD symptoms significantly. In summary, in their research EMDR was effective as a stand-alone treatment or in integration with other evidence-based treatments (Phillips et al., 2022; Voorendonk et al., 2022).

A systematic review by Phillips et al. (2022) with databases from PsycINFO, MEDLINE/PubMed, CINAHL, EMBASE, Web of Science, and Cochrane Library, reported that EMDR is a trauma-focused psychotherapy that alleviates PTSD symptoms from combat. The study reported that EMDR is safe for trauma survivors who struggled with psychosis, bipolar disorder, and complex PTSD. Similarly, a study by Laliotis (2020) did also support EMDR treatment for mental health disorders of PTSD, depression, and anxiety. Weisfeld and Dunleavy (2021) shared that for patients with chronic back pain and PTSD related to sexual trauma experienced as a young adult, EMDR was an effective treatment that reduced PTSD symptoms and subsequently alleviated chronic back pain. A study conducted by Hollis Martin and Reid (2022) reported that 39% of women who developed PTSD symptoms after pre-natal bereavement found that clinically tested EMDR treatment they were better able to handle disturbing trauma responses of suicidal thoughts, flashbacks, irritability, and social avoidance, and experienced

improvement in life satisfaction and functioning. Trauma-focused and evidence-based treatment of EMDR was more effective in alleviating PTSD symptoms in trauma survivors than any other therapy (Lee & Bowles, 2020).

EMDR therapy involves the bilateral stimulation technique that allows the traumatic memories to be reprocessed (Phillips et al., 2022). The bilateral stimulation of EMDR alters brain states, similar to rapid eye movement (REM) sleep, which promotes mood regulation and depression reduction (Van Der Kolk, 2014). The therapy facilitates the trauma survivors to identify the triggering memories, and beliefs and track present-moment somatic sensations, and thus allowing them to let go of self-critical beliefs and painful emotions (Schwartz, 2016). The inadequately processed trauma memories of the past are stored adaptively in the present, promoting new learning to occur, and facilitating a better outlook on mental health (Phillips et al., 2022). According to Shapiro (2018), the AIP model regards that most psychological pathologies originated from earlier disturbing life experiences and insufficiently processed information stored in the neural network. However, the dysfunctional information, which are stored physiologically in the neural network, could be accessed with bilateral stimulation toward positive adaptive resolution of the information (Shapiro, 2018). The AIP model of the EMDR therapy increases the trauma survivors' coping capacity and positive responsiveness during current life crises, thus reducing psychological stress and other manifestations of stress that include somatic complaints, digestive issues, headaches, stomach aches, muscle tension, and changes in heart rate and blood pressure (Laliotis, 2020).

EMDR is a neurobiological modality that has positive outcomes in a trauma survivor, that producing a desensitizing effect on trauma memory, increasing the parasympathetic activity, and decreasing psychophysiological arousal (Uhernik, 2017). EMDR involves a three-pronged

protocol which included addressing past memories, present disturbance, and future actions for complete treatment; each trauma memory is treated with eight phases (Levers, 2012). Phase One involves taking a client history that includes the client's dysfunctional behaviors, symptoms, and characteristics that needed to be addressed and planning the treatment with the assessment of personal safety and current life constraints (Shapiro, 2018). In this phase, positive resource imagery, visualization, and mindful awareness are valuable to the clients as they promote stress reduction, proactive management, and regulation of emotions (Uhernik, 2017). Phase Two addresses the explanation of the EMDR process and its effects on the client and includes practicing relaxation and visualization techniques with the client (Shapiro, 2018). Clients are assessed for any dissociative disorders using the Dissociative Experiences Scale (DES) for advanced protocols of EMDR (Shapiro, 2018). Clients received coping skills of "container" imagery exercises to store negative memories and "safe place" for increased visualization and stabilization (Shapiro, 2018). The trauma memories are collected and recorded using the "affect bridge" technique (Shapiro, 2018). In Phase Three the client's trauma memory is selected as the target memory and the baseline response to that memory is assessed with subjective units of distress, the negative belief of self, and the validity of the positive cognition (Uhernik, 2017).

EMDR is related to REM sleep since deep sleep and REM sleep play important roles in how memories changes over time; REM sleep facilitates the reshaping of the memory by increasing imprint of the emotionally relevant information, while helping the irrelevant information fade away (Van Der Kolk, 2014). In Phase Four, which is Desensitization, the client's target memory is desensitized using bilateral stimulations (side-to-side eye movements, bilateral auditory tones, or tactile pulses), encompassing all responses, including new insights and associations (Shapiro, 2018; Uhernik, 2017). Intense research in EMDR has proved that the

vividness and emotionality of the trauma memory are decreased while performing eye movements (Trentini et al., 2015). During the Installation Phase, which is the fifth phase, the client's chosen positive belief is the strongest at the gut level as he or she feels related to the trauma memory during the processing time, and the focus is on cognitive reorganization (Shapiro, 2018). In Phase Six, the body scan is completed with the newly neutralized memory that is linked to the emotion, the target memory, and a strong positive cognition with no distressing somatic sensations (Laliotis, 2020). In Closure, which is Phase Seven, the client returns to the emotional equilibrium by the end of each session and is instructed to keep a log of disturbing images, negative thoughts, situations, dreams, and memories that might occur between sessions (Shapiro, 2018). In Phase Eight, which is the reevaluation phase where the recently activated trauma memory is assessed for complete desensitization and the clinician might decide to move forward to target the new trauma material (Shapiro, 2018; Trentini et al., 2015).

EMDR is structured to facilitate the rapid assimilation of new information, behaviors, and coping skills, as trauma memories were desensitized, and self-blame was alleviated for the trauma survivor (Shapiro, 2018). EMDR techniques require extensive training and an experienced therapist to administer the therapy to trauma survivors (Levers, 2012). The therapy not only allows the survivor to process the past events but to integrate the new positive belief that affirms dignity and facilitates greater choice in the present (Schwartz, 2016). EMDR has been proven to be a powerful treatment for PTSD, more effective than medications in many cases, allowing the survivor to have hope for their choices by letting go of the past (Van Der Kolk, 2014).

Dialectical Behavior Therapy (DBT). DBT is an evidence-based PTSD treatment incorporating cognitive principles, Zen principles, and mindfulness as tenets (Levers, 2012;

Perroud et al., 2012). The term “dialectical” in DBT represents a synthesis of opposites, a core aspect of Zen. It encourages the trauma survivor to consider the opposite polarities between acceptance and change in radical acceptance of who they are, a necessary condition for change and growth (Shapiro, 2018). Levers (2012) wrote about the four skillset modules of DBT as mindfulness, emotion regulation, distress tolerance, and interpersonal effectiveness, which could assist trauma survivors in increasing skills with emotional regulation and identifying maladaptive behaviors that relieved pain temporarily, empowering them with interpersonal strategies to retake control of their lives. Mindfulness helps the trauma survivor to accept the uncomfortable experiences without resorting to maladaptive behaviors such as cutting, substance abuse, eating disorders, and other para-suicidal behaviors (Levers, 2012; Shapiro, 2018). The emotional regulation in DBT assists the trauma survivors in evaluating how their complicated feelings can be experienced without being destructive and in differentiating their urges and feelings (Shapiro, 2018). In the distress tolerance module, the survivors are taught to handle painful emotions in a difficult situation, cope, persevere through it in mindfulness, and accept the situation without judging whether it is fair or unfair (Levers, 2012; Shapiro, 2018). In the interpersonal effectiveness module, the skills of the trauma survivor are increased to manage emotions with assertiveness and conflict resolution, and they are empowered to live their lives in more self-affirming ways (Levers, 2012).

Cognitive Behavioral Therapy (CBT). CBT is a treatment identified in integration with EMDR and DBT to treat PTSD and reduce depression and anxiety symptoms (Bisson & Olff, 2021; Dominguez et al., 2021; Karatzias et al., 2019; Levers, 2012). CBT facilitates uncovering and recognizing the relationships among thoughts, emotions, and behaviors for PTSD symptom reduction (Schwartz, 2016). Levers (2012) stated that through CBT, trauma survivors could

identify negative thoughts about themselves and the world and replace them with more accurate and less distressing thoughts. The trauma survivor is facilitated to identify thoughts related to the traumatic event that might intensify PTSD symptoms (Levers, 2012). The distressing and distorted thoughts are replaced with affirming positive beliefs to promote self-esteem (Schwartz, 2016).

Purpose of Evidence-Based Treatments. EMDR, DBT, and CBT are rugged and noteworthy trauma treatments that have been researched extensively for their efficacy and efficiency, both currently and in the past (Bisson & Olff, 2021; Karatzias et al., 2019; Laliotis, 2020; Perroud et al., 2012; Phillips et al., 2022). The study by Phillips et al. (2022) confirmed significant PTSD symptom reduction with EMDR treatment. A study that used the Kentucky Inventory of Mindfulness Skills (KIMS), which described DBT mindfulness in four dimensions of observing, describing, acting with awareness, and accepting without judgment, reported that DBT was associated with increased mindfulness skills (Perroud et al., 2012). Acceptance and Commitment Therapy (ACT), developed by Dr. Steven Hayes, has assisted in improving and strengthening psychological flexibility for those who struggled with PTSD symptoms (Schwartz, 2016). ACT and DBT, evidence-based treatments for PTSD symptoms, also have roots in spiritual traditions or Eastern spiritual practices of mindfulness and transcendence for treating trauma (Fleming, 2021). Schwartz (2016) mentioned that ACT uses CBT's acceptance and mindfulness strategies to increase psychological flexibility. The availability of few specific trauma treatments has allowed the opportunity to study and explore the further integration of these treatments for improving efficacy and decreasing treatment duration, so that trauma survivors can live their lives without much interruption (Braun et al., 2021; Briere & Scott, 2015; Hollis Martin & Reid, 2022; Karatzias et al., 2019; Lee & Bowles, 2020; Levers, 2012).

Complementary and Alternative Medicines for Trauma Treatment

There has been rapid growth in research and clinical practices to integrate mindfulness-based approaches along with cognitive-behavioral and psychodynamic therapies for trauma-informed treatment (Briere & Scott, 2015). Mind-body practices positively impact PTSD symptoms (Kim et al., 2013; Van De Kamp et al., 2019). A research study by Smith and Hartelius (2020) concluded that a mindfulness-based approach alleviates PTSD symptoms by the focused deactivation of dissociated ego states. Briere and Scott (2015) pointed out that mindfulness meditation includes interventions that assisted trauma survivors to focus on specific sitting or lying positions, single attentional focus on the body, breath, or sensations, focus on thoughts, emotions, or sensations when the mind is distracted, and the utilization of guided body scans.

Mind-body practices are a viable intervention that reduce PTSD symptoms of intrusive memories, avoidance, and increased arousal (Kim et al., 2013). Trauma-informed care with mind-body models assists the trauma survivors in feeling physically safe and psychologically not retraumatized, and in choosing corroboration of new interventions with clinicians that enhance autonomy and satisfaction (Levers, 2012). The mind-body intervention modalities such as yoga, tai chi, qigong, mindfulness-based stress reduction, meditation, and deep breathing, incorporate therapeutic effects on stress responses, reductions in anxiety, depression, and anger, and increases in pain tolerance, self-esteem, energy levels, ability to relax, and ability to cope with stressful situations (Kim et al., 2013; Van De Kamp et al., 2019). CAM and body-oriented or bottom-up approaches have gained attention for trauma treatment and symptom alleviation for psychiatric disorders of depression, including cost-effectiveness and patient preferences (Avino, 2020; Haller et al., 2019; Khusid & Vythilingam, 2021; Ong, 2021). Schwartz (2016) pointed out

that CAM assists in reclaiming balance in the body and mind when a person is anxious, promoting rest and nurturance that calms the SNS and PNS of the brain.

Christian Mindfulness in Trauma Treatment

The study on mindfulness-based spiritual practices in Judeo-Christian roots, with "centering prayer" as a focus, has shown evidence for healing and growth (Emmerich, 2022). Mindfulness meditation was shown to be beneficial in addressing PTSD neural pathology (Khusid & Vythilingam, 2021). There was improved emotional regulation with mindfulness mediation, as it activated the prefrontal cortex and reduced bilateral amygdala activity (Khusid & Vythilingam, 2021). Relational brain skills involve attachment-enhancing, neuroscience-based, inner healing through prayer and healthy interpersonal skills (Wilder et al., 2020). Prayer has shown to be essential for a person's physiological and psychological welfare, reducing stress (Johnson, 2018). During a potential relapse in a survivor, mindfulness practices promote the capacity to recognize and disengage their mind from states characterized by self-perpetuating patterns of ruminative, negative thought (Johnson, 2018). Meditation influences pain, stress, anxiety, depression, substance use, and trauma (Gutierrez et al., 2019). Meditation also improves negative moods, increases neural activity responsible for attention and processing emotions, and reduces stress (Gutierrez et al., 2019). However, there has been a significant lack of research concerning CAM such as mindfulness meditation for PTSD treatment (Hawkins & Clinton, 2015; Johnson, 2018; Wilder et al., 2020).

Many research studies have highlighted the importance of trauma healing and growth through spiritual practices, positive psychological states, and mindfulness (Emmerich, 2022; Hinton & Kirmayer, 2017; Wilder et al., 2020). Biblical truths on the origin of pain and suffering offer trauma survivors culturally competent, interactive, collaborative interventions that can

explore and resolve their PTSD symptoms (Hawkins & Clinton, 2015). The laws of human creation are governed by laws of sociology, logic, psychology, and theology, which were disrupted by the disobedience of the first created human beings, Adam, and Eve, that leading to distorted relationships with PTSD symptoms of anxiety, anger, guilt, and depression (Kirwan, 1984; *New American Standard Bible*, 1971/1995, Genesis 2-3). A study by Wilder et al. (2020) suggested improving relational brain skills through attachment love conceptualized as the secure, caring, mutual relationship with triune God and others in the community. The Christian concept of seeing the trauma survivor as created in the image of God allows caregivers to focus on the trauma triggers communicated in the body by the survivor (Helsel, 2015). Medical and psychological provisions are made available to humankind that can alleviate pain with spiritual practices (Emmerich, 2022; Hinton & Kirmayer, 2017; *New American Standard Bible*, 1971/1995, Romans 1:19-20) until God makes all things anew (*New American Standard Bible*, 1971/1995, Isaiah 43:19; Revelation 21:5).

Spirituality is defined as a unifying force or integrative energy, meaning and purpose, or connection or relationship to God that indirectly provides a trauma survivor hope or will to live (Kira et al., 2021). Spirituality and positive religious coping are nurturing rather than condemning, affecting good mental health outcomes (Hong et al., 2019). Hirono (2019) researched a study emphasizing the bio-psycho-social-spiritual model by the DSM-5, which treated PTSD and provided military veterans with religious interventions that removed moral injury, empowered, and provided hope. Sneed and Teike (2020) shared in their research study that spirituality-based guiding principles of recovery were achieved by: (a) hope; (b) person-centered; (c) many pathways; (d) holistic; (e) supported by peers; (f) relationships and social networks; and (g) addressing trauma. Spiritual well-being at high levels has been a protective

factor against suicidal ideation and feelings of isolation among trauma survivors who have struggled with PTSD (Florez et al., 2018). Spiritual practices have allowed forgiveness and self-compassion as antidotes for trauma, guilt, and shame, promoting restoration (Emmerich, 2022).

The psychospiritual therapeutic model of Internal Family Systems is used in overcoming addictions, eating disorders, depression, and anxiety (Verrier, 2021). A study by Costa and Moreira-Almeida (2022) reported that cognitive restructuring using religious values, meditation, prayer, and coping strategies promotes behavioral activation for depression. Spiritual practices like religious coping reduce psychological distress and promoted good sleep hygiene (Tavernier et al., 2019). Koenig and Al Zaben (2021) explained the similarities between PTSD and moral injury and provided secular treatments, spiritual/religious treatments, and pastoral care interventions that reduce psychological distress. A study by Fleming (2021) concluded that self-reported veteran stories with spiritual interventions promote life meaning, hope, and well-being for positive effect. Spiritually oriented treatments addressed PTSD symptoms of avoidance and reexperiencing of trauma, accompanied by shame, guilt, anger, demoralization, and social withdrawal, helping individuals to find meaning and purpose and explore existential issues (Coady et al., 2021).

Yoga in Trauma Treatment

The ontological domains promote shifting and flexibility through human expressive capabilities such as somatic state, self-image, appraisal of sensations, actions, events, memory, social interaction, and interpersonal schemas (Hinton & Kirmayer, 2017). Yoga helps to shift from the HPA and SNS to PNS, and decreases cortisol levels (Zoogman et al., 2019). Practicing yoga poses with an extended heartbeat-to-heartbeat interval has been shown to relieve stress-related problems (Bernotiene et al., 2020). The research conducted by Frank et al. (2020) on

yoga poses focused on deep relaxation, breathing, and meditation, revealing that they promoted awareness of one's own body, improved physical fitness, and increased emotional wellness. The specific yoga physical postures allow circulation of the spinal fluid and blood, decompression of the nerves, and oxygen circulation, promoting decreased depression, anxiety, apathy, and aggression (Bernotiene et al., 2020). A study by Saper et al. (2017) concluded that manualized yoga is as effective as physical therapy for chronic lower back pain, and people could access it more easily for reasons of preference, availability, and cost. The study explained that yoga helps to reduce pain in those who struggle with high impairment by improving their physical function. Moreover, the study mentioned that yoga is considered on par with physical therapy for lower back pain among people with lower economic status and is more cost-effective. Yoga positively affects the central nervous system, blood pressure, and heart rate and thus leads to PTSD symptom reduction with cost-effective treatment (Bernotiene et al., 2020; Saper et al., 2017).

Yoga as an Eastern Religion. Yoga is an Eastern religion that teaches people to turn inward to find their divine (Blee, 2022; Brown, 2018; Scholz, 2005), which is controversial to the sinful nature within every human, for all have sinned and fallen short of the glory of God (*New American Standard Bible*, 1971/1995, Romans 3:23). Scholz (2005) continued to mention about his study on yoga that it taught to be still in some yoga postures. According to the article by Neumann (2019), the scholarly portrayal of yoga is a modern, syncretic bodily practice focused on mindfulness and physical well-being with practical goals like stress management and weight loss. The writer described the origin of yoga in the Western world by Yogananda, the principal yoga teacher, who used Christian language to present a faith in which a person can know God by knowing themselves. Yogananda moved into the Western community and drescribed that knowing self as spirit, the essence of bliss or the highest spiritual state, which was

separate from body and mind. He used the opportunity with liberal Christianity and oriental faith to present yoga as a science of religion. The article described that Yogananda focused on personal development through physical, mental, and spiritual practices through distance education of learning. Yogananda's yoga instruction course focused more on theological instruction than techniques for concentration and meditation. A study by Boyd (2011) described yoga as the process of experiencing self in a desire to connect with Jesus Christ. Going back to the authority of the Scriptures, one could understand that there is nothing good within oneself (*New American Standard Bible*, 1971/1995, Romans 7:18) as opposed to Yogananda's idea that one could know God by knowing self.

Moreover, it further proves that all humans need a Savior outside of self to know and be with God. Only Christianity has the answer for knowing the Holy God, which is believing and accepting Jesus Christ as one's Savior, who has paid for his or her sin's penalty of death, and receiving the gift of eternal life with God (*New American Standard Bible*, 1971/1995, Romans 5:12-19). Research participants who did not share the religious and cultural context of Hinduism found it unrelatable when the meditation or mantra pointed to Hindu gods in an unknown language; in this scenario, it was Sanskrit (Blee, 2022; Brown, 2018; Neumann, 2019; Scholz, 2005). To make TICY available to research participants, who might share a different culture or religion, but wanted to try TICY and benefit from it, the mantras could be substituted with CM for research study purposes (*New American Standard Bible*, 1971/1995, Joshua 1:8; Philippians 4:8; Tellhed et al., 2019).

Shaw and Kaytaz (2021) gave an open and contemporary perspective on yoga other than viewing it through its Eastern religious lens; they went on to mention that today's yoga practitioners offer a combination of postural work, breathing, and meditative techniques with the

overall aim of improving health, strength, fitness, and a sense of well-being. The authors of the study described the origin of yoga as like how Swami Vivekananda brought about the renaissance in the West in the nineteenth century. Europe focused on cultivating the physical body through athletics, gymnastics, bodybuilding, and other sports, thus influencing physical fitness, character building, and a system of moral education that maintained discipline in adolescent boys. The article explained that the Indian male community at that time wanted to break the stereotype of 'weak, effeminate Indian male bodies' and medicalized yoga promoted physical education to strengthen and reform Indian male bodies. In contrast, the elite Indian men also joined the Young Men's Christian Association (YMCA) for physical training, cricket, and football. Similarly, a study by Tillin et al. (2019) promoted the practice of yoga originating in India, which included breath control, the adoption of bodily postures, and meditation that increased strength and flexibility, along with physical and mental well-being. Shaw and Kaytaz (2021) then pivoted their study to understand the yoga teachers, who reformed medicalization of yoga as science by Sri Yogendra and Swami Kuvalayananda, and casted yoga as a natural cure in modern times. The authors noted that postural yoga was greatly influenced by the human body's ability to heal naturally, and the counter-culture philosophy of German Nature Cure, and yoga became an indigenous form of naturopathy. The study pointed out that yoga's efficacy is validated by the physiology and psychology of human nature, as yoga allegedly is good for toning the body and psychologically reducing stress, anxiety, and depression, thus containing a medical science component.

Yoga and Clinical Literature. Shaw and Kaytaz's (2021) research contributed to yoga as complementary and preventive clinical care in assisting with de-stressing relaxation for people who struggle with body image, eating and sleep disorders, and trauma victims. Yoga has been

clinically researched from a neurological perspective, examining mind-body therapy, pain, anxiety, and recalibration of the SNS through breath work (Cramer, 2018). The study by Cramer (2018) summarized that the clinical and para-clinical literature has sought to validate yoga scientifically, noting that it is beneficial to health. Nevertheless, medical science has supported the widespread belief that yoga is good for physical and emotional well-being (Cramer, 2018; Shaw and Kaytaz, 2021). Research findings have suggested that yoga and mindfulness can help to reduce the symptoms of ADHD and improved sleep and anxiety (Agarwal & Sarthi, 2020). A research study conducted on woman participants reported decreased PTSD symptom severity, improvement in diet, exercise, and sleep, reduced alcohol use, and sleep, reduced medication usage, and improved stress reduction, mindfulness, and compassion (Braun et al., 2021).

Similarly, a study by Cahn et al. (2017) reported that 38 individual adults who participated in a 3-month yoga program demonstrated reduced anxiety and depression and increased mindfulness. A study conducted by Gautam et al. (2020) with 66 patients showed that yoga improved clinical outcomes which reduced inflammation on a psycho-neuro-immune axis; thus, yoga could be an adjunctive therapy. Finally, Tellhed et al. (2019) scientifically provided claims that yoga positively impacted physiological and psychological health, with yoga breathing and yoga meditation as helpful stress coping mechanisms. In conclusion, with scientific research methods, yoga slowly but steadily found its clinical footing and has been shown to impact an individual's physiological and psychological well-being (Cramer, 2018; Shaw & Kaytaz, 2021).

Yoga and the Nervous System. In the 21st century proponents of integrated health, comprised of elements such as diet, exercise, sleep, substance control, cultivating healthy relationships, and purpose in life, have recommended cost-effective CAM interventions such as yoga and meditation, culinary approaches of psychobiotics, prebiotics, and an anti-inflammatory

diet, which could help re-establish homeostasis in the body and prevent disease (Dunne & Schubert, 2021). The previously mentioned study suggested that the neuroinflammation affected by the disturbed serotonin levels might lead to eating disorders, stress, and negative thinking cycles, which could be corrected by CAM of yoga or Pilates, and supplementing diets with vitamin D and zinc. Frank et al. (2020) conducted a research study on young adults in school who participated in conventional school sports. The study found that yoga, compared with regular school sports, demonstrated improved self-regulation of the ANS. According to the study, the ANS and autonomic regulation of HRV were improved by a 10-week yoga course. Similarly, another study by Ivaki et al. (2021) reported that a yoga group program facilitates ANS parameters for enhanced self-regulation. Yoga increases brain-derived neurotrophic factors to facilitate mind-body connections, thus regulating neuroplasticity and stress reduction (Gautam et al., 2020).

Yoga as Breathwork for PTSD Symptom Reduction. The breathwork of yoga helps trauma survivors form connections between the body's inner world and the outer world of their environment, thus enhancing the functionality of the PNS (Pavey, 2022). In her study, Pavey (2022) explained that the in-breath, or inhale, in yoga allows one to accept help in the form of incoming oxygen provided by God, who sustains human life. Her research mentioned that slow breathwork allows one to navigate and manage pain. Her study described the out-breath, or exhale, the release of yoga, as a metaphor for the physical experience of letting go, thus self-emptying and making space for the new. Krishnan et al. (2018) wrote an article on the benefits of integrating CAM for chronic pain management that reduces opioid addiction. In that article, the authors emphasized the importance of the breathwork of yoga, stating that mind-body control is achieved through conscious breathing that reduces pain perception by decreasing heart rate and

anxiety. Yoga's breathwork induces a sense of well-being, thus reducing depression (Gautam et al., 2020). According to the study by More et al. (2021) yoga is an acceptable and feasible treatment for GAD. The study mentioned that patients with GAD could become poor adherents of pharmacological and psychotherapy treatment because of the adverse effects of medications and costs. Hence, yoga might be a helpful CAM along with already available treatments. The study emphasized that yoga-based interventions are evidence-based and widely used to calm the mind skillfully. In summary, the breathwork of yoga has been shown to alleviate PTSD symptoms of anxiety and depression (Cahn et al., 2017; Krishnan et al., 2018).

Yoga as Christian Suffering and Sacrifice. Yoga, composed of the physical breath work exercise and work on one's personal self, is self-mastery (Pavey, 2022). In Christianity, one's unique talents are developed to be sacrificed to meet others' needs (Boyd, 2011). Boyd mentioned that suffering could be redemptive and that sacrifice, and suffering aligned our lives with Christ's gain of spiritual graces. Scriptures validate that every Christian has been endowed with a spiritual gift or the spiritual grace for the work of service in building the body of Christ (*New American Standard Bible*, 1971/1995, Ephesians 4:7-13). Yoga has promoted cultivation of healthy relationships and purposeful living in trauma survivors with recognized strengths who reinvested in their integrated health, self-mastery, and the relational well-being of others (Dunne & Schubert, 2021; Pavey, 2022).

Yoga as Body, Mind, and Spiritual Connection. Yoga has helped people to connect with Judeo-Christian principles of the body, dignity, and value simply because God created it (Boyd, 2011). Although yoga is a controversial subject and form of physical exercise, many Christian and non-Christian members have found their rejuvenation of faith and healing through yoga (Bianchi, 2020; Boyd, 2011). Scriptures fundamentally emphasize that God created the

bodies of Adam and Eve (*New American Standard Bible*, 1971/1995, Genesis 2:7, 21-23). Moreover, in 1 Corinthians 6:19-20 (*New American Standard Bible*, 1971/1995), it is declared that the body is the residence of the Holy Spirit and, therefore is held in dignity to glorify God. Boyd (2011) wrote her personal story in the article, “Through yoga to Christianity” that the "Christian view of resurrection offered hope, as the possession of a unique and glorified body, was a glimpse of which was offered to the apostles in the person of the resurrected Christ" (p. 17). Malkovsky (2017) wrote in his article that yoga identifies with Christian ascesis and moral ideas for disciplining the body that could overcome selfishness, as yoga helps to throw off one's ego and helped to heal and overcome the fragmented nature of one's life. He mentioned that yoga facilitates a holistic approach of getting one’s body and mind under control toward spiritual ends, as it assists in orienting one's mind toward virtue, selflessness, and inner silence.

On the contrary, Brown (2018) argued that certain evangelicals and pentecostals view yoga as idolatry or an opening to demonic spirits. She continued and mentioned that many practitioners view yoga as purely a physical activity for bodily health and beauty, and spiritual virtues have been associated with the development of Christian yoga, a subgenre of yoga that involves a Christian approach to diet, fitness, and therapeutic help. She concluded that evangelicals' futile resistance might lead to mandatory yoga and mindfulness programs in public schools and Christians becoming vulnerable to cultural appropriation and cultural imperialism.

Blee (2022) shared the philosophy of postural yoga, which consists of bodily exercises purposed with breathing for physical and mental well-being, distinguishing it from the yoga that aims at mastery of the mind for spiritual awakening. He explained that postural yoga is detached from its Hindu context, being neutral and open to all. He summarized that some Christians believe practicing yoga as a form of religious gymnastics is possible, leading to awareness of

prayer and devotion to God. Similarly, Bianchi (2020) explained the idea that yoga practices are viewed by Hindu and Jewish-Christian cultures as different ways and languages for the same purpose. He explained the commonality of the two cultures in breath and speech, referring to the functional concepts of giving life, blotting out sins, and removing demons. However, he mentioned the significant difference in the practicality of application that the Hindu culture sees yoga as recovering knowledge relating to the mind, while Judeo-Christian sees yoga as simply a sporting practice relating to the body.

Yoga as Body Work for Healing. The connected mind-body therapy modalities have been gaining momentum in the healing process of complex trauma and PTSD symptoms (Briere & Scott, 2015; Van Der Kolk, 2014). Uhernik (2017) explored the integrative approaches and neuroscience used to treat trauma; yoga could be of efficient benefit for trauma clients, as all types of yoga pay attention to the breath that involves the ANS and PNS, quieting and calming the mind. A study by Frank et al. (2020) highlighted the importance of yoga as it improves physical fitness by awareness of the body and calming of the mind, thus handling emotional reactions to stress. The research emphasized a need for promoting good health through integrative mind and body methods like yoga that respond to psychological and social stress challenges. The study demonstrated that using yoga as a support for sports in young adults assisted in reduction of stress perceptions in the form of anxiety and depression.

Similarly, an article by Krishnan et al. (2018) explained the benefits of practicing yoga. It helps the body and restores strength and flexibility. The article described that people with high blood pressure, chronic pain, or movement restrictions must use modified yoga poses that are not physically demanding and thus are more helpful toward recovery and healing. The study conducted by Tellhed et al. (2019) showed that yoga's breathwork and mindfulness facilitated

managing daily stress, thereby reduced the risk of stress-related illnesses. The research was administered to 71 middle-aged adults and produced significant reductions in anxiety, depression, and sleep problems; thus, research supports yoga as a CAM and bodywork modality that includes breathwork and meditation for healing. In summary, yoga is a holistic, integrative approach to physical fitness and psychological well-being, with high potential for alleviating the PTSD symptoms of anxiety and depression (Frank et al., 2020; Krishnan et al., 2018).

Trauma-Informed Yoga in Trauma Treatment

Braun et al. (2021) research study reported that trauma-informed yoga (TIY) improved psychiatric symptoms of PTSD and other co-occurring disorders. The study was conducted with military female veterans who had suffered military sexual trauma; seven women were enrolled as participants, and five completed the TIY program. According to Braun et al. (2021) TIY was a therapeutic form of yoga that effectively regulated affect, including reduction of depression and PTSD symptoms in female trauma survivors. The study explained that "TIY integrated mindfulness training with breathing, physical activity, and relaxation and trauma-relevant features such as safety, empowerment, collaboration, and trustworthiness" (p. 2). The study described that TIY in a past clinical study (Pence et al., 2014) had shown efficacy in treating trauma survivors, producing alleviated PTSD symptoms with improved health behaviors such as seeking psychotherapy, less self-blame, improved sleep, and increased feelings of joy. Considering good efficacy outcomes, Braun et al. (2021) conducted further studies on quality improvement projects with veteran female sexual trauma survivors to understand the feasibility, acceptability, and effectiveness of TIY for psychiatric disorders. The study concluded that TIY proved its feasibility, acceptability, and effectiveness among military women, demonstrating healthy behavior change with improved sleep, reduction or cessation of anti-depressant and

alcohol use, fewer feelings of shame, improved regulation of mood and stress, decreased chronic pain from the physical activity of yoga, increased mindfulness and self-compassion, and increased healthy diet choices.

Summary

Trauma has a psychobiological impact on the survivor, possibly resulting in PTSD symptoms. Trauma treatments with pharmacology, psychotherapy, and CAM could improve the quality of life of trauma survivors. EMDR is an evidence-based treatment based on neuroscience and the AIP of maladaptive neural networks for PTSD symptom reduction. The effectiveness of CAM for trauma, such as yoga and CM for PTSD symptom reduction, has been shown in the literature to be effective and could further be studied through research (Emmerich, 2022; Krishnan et al., 2018; Tellhed et al., 2019). The research study on CM of prayer proposed that God's awareness, the value of enhancing attachment, and relational brain skills facilitates inner healing (Johnson, 2018). The literature validated the effectiveness of CAM, such as mindfulness meditation, yet not much research has been done to substantiate the efficacy of CM for PTSD symptom reduction. The research studies on the effectiveness of yoga for psychological trauma from combat and intimate partner violence, which measured the heart rates of participants to understand the impact of yoga, observed symptom reduction in physiological and psychological domains (Frank et al., 2020; Helsel, 2015; Ranney et al., 2019; Ripley et al., 2019; Smith, 2019). The research gap in the literature concerning a combination of TICY, CM, and EMDR trauma treatments could spur researchers to explore the effectiveness of combining these complementary interventions in the reduction of PTSD symptoms.

Chapter Three: Methods

Overview

This chapter explains the study's methods in the following sections concerning design, research questions, setting, participants, instrumentation, procedures, data analysis, internal and external validity aspects, and ethical considerations. The design section includes implementing a multiple-baseline experimental design that observed the research participants' blood pressure and heart rate while integrating CAM interventions of TICY and CM, along with the evidence-based treatment EMDR. The researcher was trained in EMDR. CAM, such as relaxation, mindfulness, and yoga, along with EMDR for PTSD symptom treatment with trauma survivors, has been studied in recent years, as mentioned previously (Avino, 2020; Ford, 2021; Hirono, 2019). The sections concerning the research questions, setting, and participants explain the complexity of the participants' lives as they were experiencing PTSD symptoms and examines each individual's perspective on CAM interventions. The sections concerning the procedures, instrumentation, data analysis, internal and external validity aspects, and ethical considerations explain the methods that were used to observe blood pressure and heart rate and explained the cardiovascular measures of participants with PTSD symptoms.

Design

Multiple-baseline experimental designs offer scientific rigor and validity of investigations in the pursuit of knowledge within the counseling profession (Heppner et al., 2019). The experimental design involves one or more independent variables that can be manipulated, which might influence the responses of research participants (Warner, 2013). The multiple-baseline experimental designs are more systematic than case study approaches as they consist of repeated multiple observations of affected variables with planned collection of data for comparisons of

some sort (Heppner et al., 2019). Multiple-baseline experimental study was the appropriate research for the current study exploring the impact of integrating TICY, CM, and EMDR in for research participants with PTSD in hopes of meaningfully influencing or reducing high blood pressure and heart rate. The features of the multiple-baseline with AB design included repeated measurement of the dependent variables over time - which were blood pressure and heart rate - designated baseline markers, and stable assessment of baseline data before intervention introduction, where A phase was the baseline period and B phase was the intervention period (Heppner et al., 2019). Cardiovascular risks were measured via blood pressure and heart rate related to PTSD symptoms (Hoerster et al., 2019; Tezuka et al., 2021). This research study utilized an intake survey that captured the baseline markers and a self-reported weekly check-in that captured research participants' lived experiences with the intervention. The experimental researcher used self-reported surveys to understand participants' life experiences in a better manner (Hollins Martin & Reid, 2022; Tezuka et al., 2021; Ulmer, 2020). The lived PTSD and EMDR treatment experiences of the research participants in general have been studied extensively by researchers, examining their knowledge, language, values, and worldviews with specific treatment goals (Heppner et al., 2019; Hoerster et al., 2019; Ripley et al., 2019). The current research study aimed to study, understand, and describe CAM, particularly of TICY and CM, used alongside the evidenced-based treatment of EMDR in trauma therapy for PTSD symptom reduction.

The multiple-baseline experimental design used AB variation that observed the research outcomes of blood pressure and heart rate. In a multiple-baseline AB analysis design, A represented the baseline of the measured variables before the introduction of the treatment intervention and B represented the variable measures after the intervention (Heppner et al.,

2019). The multiple-baseline design allowed the researcher to collect information about the therapeutic process, allowed participants to process their experimental worlds, and enabled the researcher to carefully scrutinize aspects of the therapeutic process for analysis of the change process (Heppner et al., 2019). In a research study by Coady et al. (2021), moral injury was described as an event akin to PTSD, a lived experiential world experience observed in the current study. A research study conducted by Ong (2021) included the PTSD treatment model and CAM treatment approach of trauma-sensitive yoga, and served as inspiration for the current study which collected more information about the therapeutic process. Research participants from Lifepath Counseling with PTSD symptoms had multicultural backgrounds. The current study was a time series (N=3-4) experimental design. The participants were clients at Lifepath Counseling and did not receive any oral medical pills but participated in a behavior treatment intervention with a combination of CAM psychotherapies of TICY and CM, along with EMDR, and reported their blood pressure and heart rate.

Research Questions

Research Question 1

Will trauma-informed Christian yoga and Christian meditation as complementary and alternative interventions integrated with EMDR reduce blood pressure, a PTSD symptom of anxiety?

Research Question 2

Will trauma-informed Christian yoga and Christian meditation as complementary and alternative interventions integrated with EMDR decrease the heart rate, a PTSD symptom of an elevated heart rate?

Setting

The research was an online study in a real-world setting with adult participants, who were the researcher's clients from Lifepath Counseling. The study informed participants that the research was online, ensuring they had internet access (Knabb et al., 2021). The communication regarding any questions or clarifications with current research participants was through email. The researcher attached the informed consent and weekly check-in for TICY and CM in the email. The informed consent communicated the purpose, benefits, and risks of the study along with limits of confidentiality in compliance with the Institutional Review Board (IRB) (Park & Sacco, 2019; Seng et al., 2021; Stevens & McLeod, 2019). During this initial information communication week, all the participants, already assessed for PTSD were instructed to measure blood pressure and heart rate with the blood pressure monitor. The YouTube video link and related instructions were emailed to the research participants for practice of TICY and CM. The self-practice instructions and guided meditation audio recordings were sent to the participants by email (Gunes et al., 2021; Mosheva et al., 2021). The EMDR therapy was offered weekly through teletherapy, as the researcher was trained in EMDR. The study included self-reported questionnaires about their experiences of TICY, CM, and EMDR and about PTSD symptoms. Self-reported questionnaires were administered to the participants to help comprehend their life experiences with the research variables and interventions (Hong et al., 2019; Matheson & Weightman, 2021).

Participants

A sample of 6-10 crucial adult participants were recruited from Lifepath Counseling. One of the criteria for research participation was being an adult (Rizkalla & Segal, 2019; Warner, 2013). The research participants were male and female adults with PTSD symptoms. The past

research have studied the trauma impact on the bodies of participants with yoga and CM as interventions (Dickinson, 2021; Hirono, 2019; Kidd, 2019; Sneed & Teike, 2020). The sampling procedure of selecting the adult participants was a convenience method as this was a small-scale study, and it was easier for the researcher to access them from Lifepath Counseling in Texas, where the researcher is employed. The convenience sampling method can be employed for small-scale studies utilizing adult participants in agencies and various organizations (Hong et al., 2019; Rizkalla & Segal, 2019). All the research participants were over 18 and were receiving EMDR treatment from the researcher. They had completed Phase One and Phase Two of EMDR therapy including the examination of their developmental history timelines, which helped them note and observe trauma memories and develop coping skills for their upcoming tasks of specific trauma memory desensitization, reprocessing, revaluation in Phases Three through Eight. They had been assessed with DES scale to gauge tolerance level and supported with coping skills of "container" and "safe place" imagery exercises for stabilization. They had been administered with "affect bridge" technique that recorded and collected the trauma memories. They also had received DBT's elemental modules of training in mindfulness, distress tolerance, emotional regulation, and interpersonal effectiveness for stabilization and coping methods. The research participants included only those who self-identified as practicing the Christian faith, so that TICY and CM could be incorporated into their PTSD treatment. Research participants were studied and observed with the Christian faith-based interventions of meditation and prayer (Ames et al., 2021; Costa & Moreira-Almeida, 2022; Sneed & Teike, 2020). Those participants who were not practicing the Christian faith but were willing to use Christian meditative practices while performing TICY and CM during research were allowed to participate of their own

volitation. The research was conducted in a non-judgmental way, irrespective of participants' religious faith (Hirono, 2019; Sneed & Teike, 2020).

Instrumentation

There are various approaches for instrumentation in experimental research, where each method of data collection has its purpose in understanding the impact of an intervention during Phase B (Curry, n.d.; Klawetter et al., 2021; Unoki et al., 2021; Willmund et al., 2021). The data for the current research study were collected in the order of: (1) blood pressure monitor, (2) weekly check-in, and (3) interviews. Curry (n.d.) explained the different approaches to data collection and their significant purpose. She shared that in an in-depth approach, individual experiences are explored, and perceptions observed are in rich detail. Curry (n.d.) described the observation approach to learning interactions and behaviors in a natural setting along with cultural aspects of the participants' setting. The interactions of TICY and CM along with EMDR and the impact on PTSD symptoms of anxiety and depression in the everyday life of the research participants were observed as participants practiced TICY and CM in the natural setting of their homes for four consecutive weeks. The blood pressure and heart rate were measured with a blood pressure monitor and self-reported by the research participants; after completing 15 minutes of TICY and 10 minutes of CM, any five days of the week they chose to practice TICY and CM in combination. Normal blood pressure is considered to be 120/80 mm Hg, and elevated blood pressure is considered to be 140/90 mm Hg (Kapur et al., 2022). The average adult heart rate ranges between 60/90/120 beats per minute (Vogl et al., 2022). The weekly check-in Appendix A was completed by each participant practicing with TICY and CM as they recorded blood pressure, sleep, appetite, energy, and motivation, which were thought to relate or impact

PTSD symptoms of anxiety and depression. The completed weekly check-in forms were then emailed to the researcher for observation and data collection.

Blood Pressure Monitor

Participants were required to measure blood pressure and heart rate after practicing yoga movements with a blood pressure monitor for the observation of cardiovascular markers. Past studies had been conducted by investigating whether first line-exposure therapy improved cardiovascular functioning (Bourassa et al., 2020). It was revealed that it led to a significant reduction in PTSD symptoms and subsequently to a reduction in heart rate, with the cardiovascular measure of blood pressure and heart rate (Bourassa et al., 2020; Hashimoto, 2018; Tillin et al., 2019). The blood pressure and the heart rate were recorded in the form given in Appendix A after the completion of the CAM intervention practices of TICY and CM, any five days a week for four consecutive weeks.

Weekly Check-In with TICY and CM

Research participants recorded their mood level, sleep hours, appetite, blood pressure, and heart rate for the entire week on a selected day of the week in the weekly check-in form. The weekly check-in form had eight questions and three of them used the Likert scale. The average hours of sleep were measured with a Likert scale that ranged from 6 to 9, or gave the option of selecting “Other.” The appetite and energy levels were measured with Likert scale in four values, Good, Average, Poor, or Other. Participants recorded the behavior activity of practicing TICY for 15 minutes. They were required to practice yoga movements using YouTube video guidance provided for them. Participants reported if they practiced CM for 10 minutes. They reported their observed mood and energy level, sleep, and appetite at the end of each week for four consecutive weeks.

Interviews

Data can be collected in a research study with survey strategies using an in-depth approach method (Curry, n.d.). A past research study interviewed the participants directly about blood pressure and cardiovascular risks (Ranney et al., 2020). Other research studies had mailed the survey questionnaires for the research participants to respond to the research variables (Hoerster et al., 2019; Ripley et al., 2019; Tezuka et al., 2021). This researcher had an informational communication week with the research participants and discussed blood pressure monitor purchase and usage, interventions of TICY and CM, and completion of the weekly checkin form listed in Appendix A. A researcher used a semi-structured survey and collected and gathered the data from the research participants (Heppner et al., 2019). The major categories of the standardized, open-ended semi-structured questions included:

- Information and questions on the blood pressure monitor
- Explanation on baseline and intervention measures for blood pressure and heart rate
- Clarifications on completing the weekly check-in listed in Appendix A
- Safety issues and abuse history relating to trauma
- Explanation on voluntary participation in TICY and CM for non-religious participants

Research studies had previously been conducted using post-surveys and interviews with the research participants to explore and understand the variables under research observation (Klawetter et al., 2021; Stevens & McLeod, 2019). The research participants in the current study were given post-survey questionnaires after the study about their experience with CAM interventions of TICY and CM. Some open-ended semi-structured survey questions included:

- How was your experience in practicing TICY?
- What was your perspective on CM?

- Describe measuring blood pressure and heart rate with the monitor.
- Would you continue to practice TICY and CM?
- How were you experiencing PTSD symptoms of anxiety and depression, if any?

Procedures

Once the proposed research study was approved by the IRB and cleared for ethical considerations, the research study was moved to the next stage and participants were recruited. All adult clients from Lifepath Counseling in counseling with the researcher were emailed, and they were informed of the opportunity to participate in a research study on PTSD symptoms that included evidence-based treatment of EMDR and CAM of TICY and CM. All the adult clients in Lifepath Counseling who wished to participate in the research study were given informed consent that expressed their desire and consent to participate through email. The adult clients were given the research's purpose, benefits, and risks in the informed consent. The research study's purpose was explained to the participants with informed consent forms and approved for study by the IRB for ethical considerations, as mentioned previously (Hong et al., 2019; Unoki et al., 2021). The informed consent: (a) explained the purpose and procedure of the research (Haider et al., 2021); (b) described any potential discomforts, risks, and power differential between the researcher and the participants (Maddock et al., 2021); (c) described any benefits or changes participants could potentially expected (Atchley & Bedford, 2021); (d) offered to answer any questions or concerns (Coventry et al., 2020; Atchley & Bedford, 2021); (e) discussed about any limitations on confidentiality (Hirono, 2019); (f) described the format and potential target audiences for dissemination of research findings (Farias et al., 2019); and (g) instructed participants that they could withdraw consent and discontinue from the study without penalty anytime (American Counseling Association (ACA), 2014; Hirono, 2019). The study

began when the informed consent was signed by all the participants and received by the researcher.

Heppner et al. (2019) described that experimental research is where the researcher guides the stages, methods, data collection, and data analysis of the study. Each adult participant was given an online informed consent to be read and signed to commit to four weeks of observation for an integrated treatment plan, which included an intervention phase, Phase B, as a part of a multiple-baseline AB research design with TICY, CM, and EMDR for PTSD symptoms. The researcher explained the CAM interventions of Christian yoga and CM to the research participants from Lifepath Counseling during the informational week of the multiple-baseline research study. In general, the researchers are involved in collecting data and analysis for purposeful interventions and collaborations, with the goal of exploring their effectiveness in the real world (Siedlecki, 2020; Waardenburg et al., 2020). The experimental research studies in the past have included weekly observations of the research variables and life experiences of the participants for up to 4-10 weeks (Atchley & Bedford, 2021; Knabb et al., 2021; Stevens & McLeod, 2019; Willmund et al., 2021). All the participants in this study were required to buy the blood pressure monitor from any local store or pharmacy. The responding adult participants were invited for an hour-long intake survey, asked about their religious preferences, given general information about the study, and had any questions clarified. Religious interventions have been studied in the past (Ames et al., 2021; Hirono, 2019).

All research participants had already met with the researcher and been evaluated for PTSD symptoms to using the CAPS-5 for EMDR therapy. Trauma survivors experiencing trauma have been assessed in other studies with CAPS-5 for PTSD symptom evaluation (Haider et al., 2021; Hong et al., 2019), and therefore is seemed an appropriate measure to use in the

current study. The researcher is a Licensed Professional Counselor trained in EMDR therapy. All research participants were in a professional counseling relationship with the researcher and were already using EMDR intervention in therapy. All the participants had completed Phase One and Phase Two of EMDR therapy which included DES scale and “affect bridge” assessments for coping skills, stabilization, and collection of trauma memories. They had been stabilized using DBT’s modules of mindfulness, distress tolerance, emotional regulation, and interpersonal effectiveness of psychoeducation and stabilization practice. The participants were confirmed through email if they were already in EMDR treatment for PTSD and continued EMDR therapy for the research study. The research participants were stabilized and ready for Phases Three through Eight with EMDR therapy. They were instructed to measure their blood pressure and heart rate in the morning of the day before noon with the blood pressure monitor they had purchased for any three days during the information communication week and to email the readings to the researcher. These measurements for blood pressure and heart rate were the baseline measures of each participant, constituting the Phase A of the multiple-baseline AB research design. The researcher guided the research participants who followed and practiced the research procedures, provided an online video clip for TICY, and gathered information for further examination in the research study. The data collected during the research study were essential for adding to the field of counseling and counseling psychology literature (Crosswell & Yun, 2022; Heppner et al., 2019). The research participants self-identified if they practiced the Christian faith or voluntarily chose to practice CM from the Bible while integrating the TICY physical postures. Religion-adapted psychotherapy for clients' progress has been utilized in past studies per the client's beliefs and adhered to cultural competence, so the same approach was

deemed appropriate for this present study as well (Ames et al., 2021; Costa & Moreira-Almeida, 2022).

The four-week intervention Phase B of the multiple-baseline experimental study then began with the selected adult research participants. Participants practiced TICY and CM on any five days they chose in each week. On the first day of any five days of the first week, the participants practiced 15 minutes of TICY with the help of the YouTube video link sent to their emails. Following that, they sat in any relaxing place in their homes and practiced 10 minutes of CM from any portion of a passage from the Bible. They chose silence or relaxation music as they meditated or reflected on the chosen biblical passages. They could also be inside their home or outside in the sun for CM practice. After that, they measured their blood pressure and rate with the monitor they had purchased earlier. Then they recorded the measures in the form listed in Appendix A. The researcher participated in practicing TICY and CM along with the participants for four consecutive weeks, five days each week, and measured the blood pressure and rate variables; but they were not included in the data tabulation. The researcher would not ask the research participants to do something that she was not willing to do herself. The study conducted by Bourassa et al. (2020) investigated how the research problem of first-line exposure therapy improved cardiovascular functioning, which led to a significant reduction in PTSD symptoms and subsequently to a reduction in heart rate. Hence the use of blood pressure and heart rate for the cardiovascular measure was supported for understanding PTSD symptoms (Bourassa et al., 2020; Hashimoto, 2018; Tillin et al., 2019). The participants emailed the completed forms listed in Appendix A to the researcher on Saturday.

Appendix Form A included other life experience parameters for the participants to record, such as emotions, hours of sleep during the week, appetite and energy level, and feelings

of motivation that were monitored and reported. The participants' informational week's parameters were the baseline markers and guide for stable assessment of the dependent variables before the intervention introduction. Participants continued to perform the first week's steps for any five days each week, such as Monday, Tuesday, Wednesday, Friday, and Saturday, or Sunday, Tuesday, Wednesday, Friday, and Saturday, and so forth. The participants emailed the form listed in Appendix A at the end of the week to the researcher on the second, third, and fourth weeks, repeating the steps explained from the first week. Each participant was also a part of EMDR treatment with the researcher each week for 30 minutes. The participants were either be in Phase Three, Phase Four, Phase Five, Phase Six, Phase Seven, or Phase Eight of EMDR. Participants in Phase Three were selecting their target memory, assessing subjective units of distress, choosing a negative cognition, and assessing the validity of a replacement positive cognition. Participants in Phase Four were processing through the desensitization of the target memory with bilateral stimulation of side-to-side eye movements. Participants in Phase Five were in the Installation Phase, processing to strengthen the positive cognition toward cognitive reorganization. Participants in Phases Six and Seven were doing body scans and engaging in the closure of a trauma memory, respectively. Participants in Phase Eight were reevaluating any of distress related to their completed work with trauma memory. The research study was completed with an hour-long post-survey questionnaire with the participants, after four weeks of practicing of TICY, CM, and EMDR. The researcher, having collected the Appendix A forms for four weeks from each participant, then calculated each participant's weekly average self-reported blood pressure and heart rate.

Data Analysis

Descriptive statistics is the data analysis method used when information is collected from research participants with multiple observations of data to summarize information of that sample only rather than make inferences about the general population (Heppner et al., 2019). The weekly averages of the blood pressure or the heart rate of a participant could only describe his or her cardiovascular measure that week and could not be used to make inferences about the general adult population with PTSD symptoms. At the end of each week, the weekly check-in forms were observed for emotions, hours of sleep, appetite, energy level, and motivation level, which were self-reported by the participants. Past studies have also observed each participant's blood pressure (Kapur et al., 2022) and heart rate (Vogl et al., 2022), which were the inspiration for using these measures in the current study. Each participant's average blood pressure and heart rate were calculated and noted after each week. For four weeks, the recorded experiences of all the adult participants were collected through self-reported weekly check-in forms. The information for each participant was analyzed to determine if there was a reduction in average blood pressure and heart rate after the four weeks during Phase B, when the CAM intervention of TICY and CM were given, compared to the baseline measure during Phase A. The researcher gathered and interpreted the data for the multiple-baseline AB design with corresponding conclusions regarding CAM interventions of TICY and CM, along with EMDR, PTSD symptoms of anxiety and depression, and the average blood pressure and heart rate. The researcher anticipated the observation from the collected data among the participants that the average blood pressure and heart rates values would be lower in the fourth week than the average blood pressure and heart rate values collected as the baseline Phase A stable measure during the information communication week. The collective averages of blood pressure and heart rate of all

the participants were also calculated for observation and study. The individual participants' data and the collective data for comparison amongst participants were analyzed using a tabular form.

Internal and External Validity Aspects

Descriptive statistics information from the weekly checkin form from all the participants in this study were used to draw information on the impact of CAM interventions of TICY and CM on their blood pressure and heart rate. The current research study had dependability and conformability as the multiple-baseline experimental AB design with independent variables of CAM interventions, which were practiced by all the research participants with rich rigor and significant contribution, providing a detailed track record of data collection for data comparisons. However, this multiple-baseline experimental AB design was expected to have low to moderate levels of internal validity, as it was conducted in a non-laboratory setting with less control. Though the EMDR interventions were provided by the same researcher/therapist, there could be a threat to internal validity in the experimenter's expectations. This was minimized by not having specific expectations on the results from the CAM interventions in Phase B. The generalizability of the results was limited as there could have been uncontrolled factors, but the correlations between the baseline phase A and intervention phase B for blood pressure and heart rate along with emotions, hours of sleep, appetite, energy level, and motivation level were able to be determined.

The overall multiple-baseline experimental study was expected to have high external validity as the experiment was conducted by an experienced EMDR trained therapist in a real clinical setting with a focus on CAM intervention, rather than in a laboratory setting with controlled conditions. The researcher executed the current study with the research participants for five weeks, including the information communication week, for baseline measures,

conducted a post research interview, and utilized four-week interventions of TICY, CM, and EMDR. Experimental designs with a focus on interventions generally have strong external validity, and thus such a result was anticipated for this study (Heppner et al., 2019). However, there may be threat to external validity as the participants measured blood pressure and heart rate five times weekly, which could have altered treatment outcomes as they might have reacted by perceiving the "desired" measures. Homogeneity of the research sample in general increases the external validity (Heppner et al., 2019). The participants in this study, however, were more heterogenous because of their types of childhood trauma, education, or socioeconomic status, which reduced the external validity; therefore, the generalizability of the study was limited.

Ethical Considerations

Ethics provide and guided moral living, facilitated virtuous character and honorable intentions for life in the researcher, and with minimal harm, preserved the dignity and welfare of the research participants (Clark & Rakestraw, 1994; Heppner et al., 2019). The research study was approved and cleared by the IRB for ethical considerations and clarification. The adult participants were provided with informed consent forms that explained the purpose of the research, a description of the procedures, potential risks and benefits for disclosure, and researcher contact information for any questions or clarifications during the study. The current study had minimal psychological risk when participants interacted with the researcher during the information communication week, as they were asked to share about uncomfortable traumatic events. The participants' names and the site name were masked to protect the identities of the participants. The researcher used the Lifepath counseling email for email correspondence with participants and collected the weekly data; thus, the confidentiality of the information was protected. The data collected with weekly checkin forms by email were stored online with

password protection. The researcher shared the results and findings of the research with all participants after completing the research project during their sessions at Lifepath Counseling.

Summary

The previous sections described in-depth the methods of the current research study on understanding CAM interventions of TICY and CM integration along with evidenced-based treatment of EMDR. The research participants were recruited from Lifepath Counseling for the research study. The study analyzed the PTSD symptoms of irritability, anxiety, and depression observed in mood, energy level, appetite, blood pressure, and heart rate. The weekly check-in forms revealed the change in the experience of PTSD symptoms by the research participants. The data collected and analyzed revealed the importance of CAM interventions of TICY and CM, along with EMDR for PTSD treatment.

Chapter Four: Findings

Overview

The purpose of the multiple-baseline experimental design was to examine blood pressure and heart rate using CAM interventions of, TICY and CM, along with evidence-based treatment EMDR, with an AB analysis approach among the adult clients at Lifepath Counseling with PTSD symptoms. The researcher aimed to understand if TICY and CM along with EMDR, facilitated reduction of PTSD symptoms of anxiety and depression by measuring blood pressure and heart rate. The weekly check-in listed in Appendix A that surveyed the participants' sleep, appetite, energy, and motivation was used to examine PTSD symptom of anxiety. Based on the blood pressure monitor results for blood pressure and heart rate and the weekly check-in, the researcher recorded the study findings using descriptive statistics. This chapter concludes with the results of the CAM interventions of, TICY and CM, along with EMDR, observed through the multiple-baseline experimental design.

Descriptive Statistics

The researcher sent recruitment emails to 12 clients, and nine of them responded and agreed to participate in the research. The youngest adult participant was 27 years old and the two oldest participants were 54 years old. There were eight female participants and one male participant in the study. The demographics of the research participants were documented below in Table 1.

Table 1

Demographics of Participants

Participant	Age	Gender	Ethnicity	Occupation
1	36	Female	Caucasian	Homemaker, In College (Applied Sciences)
2	54	Female	Hispanic	Aeronautical Engineer
3	54	Female	Caucasian	Homemaker, Lifestyle Coach
4	27	Female	Caucasian	Sports Clinic Manager
5	35	Female	Caucasian	Human Resource Director
6	53	Female	Caucasian	Homemaker, Teacher
7	29	Female	Vietnamese	Pharmacy Quality Analyst
8	30	Male	Hispanic	Truck Driver Instructor
9	52	Female	Caucasian	Homemaker, In College (Paralegal)

The research participants completed EMDR for 30 minutes each week. During the information communication week, they observed their baseline rates of blood pressure and heart rate for three days before noon, for Phase A of the AB analysis. They practiced 15 minutes of TICY and 10 minutes of CM and measured their blood pressure and heart rate for five days each week for four consecutive weeks. They documented the blood pressure and heart rate readings, evaluated their emotions, sleep hours, appetite, energy level, and motivation in the weekly check-in and emailed it to the researcher every week. The four weeks of practicing TICY, CM, EMDR, and the weekly check-in documentation completed Phase B of the AB analysis. The researcher tabulated the participants' experiences of emotions observed through the weekly check-in sheet for four weeks, as shown in Table 2. Similarly, the participants' sleep, appetite, and energy level from the weekly check-in sheet for four weeks are tabulated in Table 3. Finally, the data from the participants regarding their motivation, where there was motivation or lack of motivation and the reason for it are tabulated in Table 4.

Table 2

Participants' Weekly Emotions

Participant	Week	Emotions
1	1	Frustration, Stress, Exhaustion
	2	Sick, Helpless, Sad
	3	Sick, Frustrated, Hopeful
	4	Sad, Hopeful, Tired
2	1	Sadness, Anger, Anxiety
	2	Sad, Love, Anger
	3	Anxious
	4	Sad
3	1	Anxiety, Excitement, Frustration
	2	Frustration, Overwhelmed, Happy
	3	Anxious, Content, Sad
	4	Exhaustion, Anxiety, Worry
4	1	Irritated, Discouraged, Worried
	2	Apathetic, Irritated, Grateful
	3	Overwhelmed, Distant, Apathetic
	4	Overwhelmed, Anxious, Irritable
5	1	Nervous, Confident, Hopeful
	2	Happy, Confident, Hopeful
	3	Confident, Peace, Joy
	4	Calm, Hopeful, Confident
6	1	Sadness, Frustration, Happiness
	2	Happy, Encouraged, Concerned
	3	Happy, Tired, Optimistic
	4	Happy, Frustration, Anticipation
7	1	Proud, Creative, Tired
	2	Hopeful, Tired, Skeptical
	3	Tired, Excited, Nervous
	4	Tired, Anxious, Excited
8	1	Relaxed, Confident, Optimistic
	2	Annoyed, Excited, Satisfied
	3	Excited, Joyful, Stressed
	4	Annoyed, Content, Excited
9	1	Joy, Fear, Sadness
	2	Joy, Relief, Peace
	3	Peace, Joy, Gratitude
	4	Grief, Peace, Excitement

Table 3

Participants' Weekly Sleep, Appetite, and Energy Level

Participant	Week	Sleep (Hours)	Appetite	Energy Level
1	1	10	Good	Good
	2	9	Poor	Poor
	3	9	Good	Average
	4	9	Average	Average
2	1	7	Average	Poor
	2	7	Average	Poor
	3	7	Average	Poor
	4	7	Average	Good
3	1	7	Good	Good
	2	9	Good	Average
	3	8	Good	Good
	4	8	Good	Good
4	1	6	Average	Average
	2	8	Average	Average
	3	6	Good	Poor
	4	8	Good	Average
5	1	8	Good	Good
	2	8	Good	Good
	3	8	Good	Good
	4	9	Good	Average
6	1	7	Average	Average
	2	7	Average	Average
	3	7	Average	Average
	4	7	Average	Average
7	1	8	Good	Average
	2	8	Average	Average
	3	8	Good	Good
	4	7	Average	Average
8	1	7	Average	Good
	2	7	Good	Good
	3	7	Average	Good
	4	7	Good	Good
9	1	8	Good	Good
	2	9	Poor	Poor
	3	8	Good	Good
	4	8	Good	Good

Table 4

Participants' Lack of Motivation and Reason

Participant	Week	Lack of Motivation	Reason
1	1	Yes	
	2	Yes	Being sick made everything difficult
	3	Yes	Getting over covid was hard
	4	Yes	Struggled with feelings from schoolwork
2	1		
	2	Yes	Work related stress
	3	No	
	4	No	
3	1	No	
	2	Yes	Feeling under the weather of a procedure
	3	No	
	4	No	
4	1	Yes	Felt like everything was hard to do
	2	Yes	Feels like too much going on at work
	3	Yes	Feels like there is not time for relaxing
	4	Yes	I feel like lot is expected of me
5	1	No	
	2	No	
	3	No	
	4	No	
6	1	Yes	Task of taking Christmas tree down
	2	Yes	Sitting at home and doing very little
	3	No	
	4	No	I feel much better about things this week
7	1	No	
	2	No	
	3	No	
	4	Yes	Recovering from long weekend tasks
8	1	No	
	2	No	
	3	No	
	4	No	
9	1	No	
	2	Yes	Respiratory infection and working 9 hours a day
	3	No	
	4	No	Excited for trip with my daughters

Results

The researcher tabulated the blood pressure measures both systolic and diastolic from the information week and calculated the average baseline rates, which are found in Table 5. Similarly, the calculated average baseline rate for each participant's heart rate is found in Table 6. Finally, the participants recorded blood pressure and heart rate readings for five days in a week for four consecutive weeks. The researcher calculated the average blood pressure and heart rate for each participant for each week and documented them in Table 5 and Table 6 respectively.

Table 5

Blood Pressure Readings of Participants

Participant	Baseline BP	BP Week 1 *M*	BP Week 2 *M*	BP Week 3 *M*	BP Week 4 *M*	Week 1-4 *M*
	Phase A	Phase B				
1	129/68	134/70	133/70	133/71	129/66	132/69
2	117/72	120/85	114/81	115/81	120/85	117/83
3	108/66	104/68	103/66	102/61	105/69	103/66
4	111/80	110/75	106/72	110/73	113/72	110/73
5	114/80	117/77	116/75	116/76	115/75	116/76
6	136/78	131/82	139/80	135/79	123/74	132/79
7	125/86	124/79	119/81	124/81	122/83	122/81
8	131/90	120/79	122/75	116/78	119/79	119/78
9	115/83	119/82	122/81	119/78	112/89	118/85

Note. BP = blood pressure; M - Average of five days of BP in a week. In Phase A, BP averages for three days during the informational week.

Table 6

Heart Rate Readings of Participants

Participant	Baseline HR	HR Week 1 *M*	HR Week 2 *M*	HR Week 3 *M*	HR Week 4 *M*	Week 1-4 *M*
	Phase A	Phase B				
1	71	72	77	76	85	78
2	79	77	77	76	76	77
3	82	78	71	76	74	75
4	58	70	75	71	69	71
5	97	69	69	68	68	69
6	72	78	75	80	81	79
7	78	91	91	98	92	93
8	75	91	86	99	93	92
9	90	92	80	80	79	85

Note. HR = heart rate; M - Average of five days of HR in a week. In Phase A, HR averages for three days during the informational week.

Participant 1 was a 36-year-old female who recorded that yoga breath movement was beneficial for her to manage stress from her schoolwork and bout of covid. Yoga movements helped her to reduce her anxiety and pace her tasks towards her weekly goals. Though her faith was not in the Christian belief system, she practiced CM of Psalm 23 in a visual imagery picture in her mind that alleviated her trauma triggers. She reported in her post-survey feedback that she would continue to practice yoga breath work to calm her body sensations from anxiety.

Participant 2 was a 54-year-old female who mentioned that yoga breath work was very beneficial after her long tiring work schedule. Yoga assisted her to relax, protect her mind, and not to progress towards anxiety and depression. CM allowed her to have deeper awareness about forgiveness and move forward in her life journey in freedom. She was not experiencing anxiety or depression symptoms and said she would add TICY and CM to her daily routine.

Participant 3 was a 54-year-old female who shared that yoga helped her to start the day emotionally grounded in God's presence. CM allowed her to enjoy and set her mind on a positive perspective for the day. This participant was surprised by the low blood pressure readings over the four weeks, about which she consulted with her physician; her physician recommended adding additional exercises to help her with the low blood pressure readings. With respect to anxiety or depression symptoms, she observed that they did not occur very often and if they did were less frequent.

Participant 4 was a 27-year-old female who recorded that yoga was physically challenging, but she appreciated the perspective of focusing on the body and the gratification from it. She was not used to CM but concentrated her attention on a word paired with focused breathing. Irritability and isolation symptoms were prevalent, due to her feeling that her friends expected a lot from her.

Participant 5 was a 35-year-old female who shared that it was hard for her to change her mind to practice yoga. But she practiced every week as instructed and enjoyed yoga breath work. CM allowed her to recenter and pause her thoughts for the day. She planned to continue to practice TICY and CM in the future. She reported that her PTSD symptoms of anxiety and depression significantly reduced.

Participant 6 was a 53-year-old female who mentioned that yoga seemed harder but helped her to slow down emotionally, improved her physical flexibility, and strengthened the core of her body. The scheduled quiet time with CM allowed her new opportunity for prayer, praise, and worship with songs. She felt good about measuring and monitoring her blood pressure and heart rate. She was not experiencing symptoms of anxiety and depression.

Participant 7 was a 29-year-old female who recorded the physical aspect of yoga was harder, but it helped her to relax and alleviate stress. She reported that it was a fun experience to meditate and read the Bible, as it was not her practicing faith. Because of practicing yoga and CM, the symptoms of anxiety and depression had reduced. She felt the flow of energy stronger in her as the flow of anxiety left her body and mind with yoga and CM.

Participant 8 was a 30-year-old male who shared that though he felt challenged and sore in the beginning as he practiced yoga, he was rewarded with feelings of relaxation and flexibility. CM was soothing for him, and he lost track of time in a good way. He got more invested in the passage he was reading. He plans to practice yoga at a slower pace and CM with interest and structure in the future. He reported that he was not experiencing any anxiety and depression symptoms.

Participant 9 was a 52-year-old female who mentioned that though yoga was challenging, it was helpful to improve flexibility of her joints. CM significantly helped her to reduce anxiety and depression symptoms. Measuring the blood pressure and heart rate brought awareness for her to have good boundaries around her anxiety and stress. She shared that the EMDR intervention helped to process trauma and PTSD symptoms and planned to practice CM to reduce anxiety in the future.

The average baseline rate measure of blood pressure for each participant was recorded under Phase A of the multiple-baseline AB research design. The average systolic blood pressure readings for each participant for four weeks were calculated for Phase B of the multiple-baseline AB research design, and they were calculated for comparison. The results are tabulated in Table 7. The average baseline rate measure of heart rate for each participant was recorded under Phase A of the multiple-baseline AB research design. The average heart rate readings for each

participant for four weeks were calculated for Phase B of the multiple-baseline AB research design and were calculated for comparison. The results are tabulated in Table 8.

Table 7

Systolic BP Comparison Between Phase A and Phase B

Participant	Baseline BP *M*	BP Week 1-4 *M*	Observation
1	129	132	BP increased by 3 mm Hg
2	117	117	No change
3	108	103	BP decreased by 5 mm Hg
4	111	110	BP decreased by 1 mm Hg
5	114	116	BP increased by 2 mm Hg
6	136	132	BP decreased by 4 mm Hg
7	125	122	BP decreased by 3 mm Hg
8	131	119	BP decreased by 12 mm Hg
9	115	112	BP decreased by 3 mm Hg
Collective Average	121	119	BP decreased by 2 mm Hg

Table 8

Comparison of Heart Rate Between Phase A and Phase B

Participant	Baseline HR *M*	Week 1-4 *M*
1	71	78
2	79	77
3	82	75
4	58	71
5	97	69
6	72	79
7	78	93
8	75	92
9	90	85
Collective Average	78	80

Chapter Five: Conclusions

Overview

The researcher examined the impact of TICY and CM along with EMDR for trauma survivors who experienced PTSD symptoms using a multiple-baseline experimental research design. The measured data of blood pressure, heart rate, and depression symptoms were recorded, tabulated, and analyzed from the research data for further discussion. The discussion section examines and explains the current research study findings in comparison with a literature review from past research studies. The implications section of this chapter from the conducted research study explores the impact on the existing body of knowledge in CAM interventions for PTSD. The chapter concludes with limitations section that addresses the limitations on data findings for generalization, leading to a section on future research recommendations based on this study.

Discussion

The purpose of the study was to explore if the CAM interventions of TICY and CM along with EMDR facilitated reduction of PTSD symptoms of anxiety and depression. The research used a blood pressure monitor and a weekly check-in sheet that documented the anxiety and depression symptoms using the measures of blood pressure, heart rate, sleep hours, appetite level, energy level, and motivation. The literature review from the past studies reported that there was a positive impact on PTSD symptom reduction using mind-body interventions of yoga and meditation.

Research Question One

The research question was: will trauma-informed Christian yoga and Christian meditation as complementary and alternative interventions integrated with EMDR reduced blood pressure, a

PTSD symptom of anxiety? The current study recorded that the CAM interventions of TICY and CM along with EMDR reduced blood pressure, as reported by many of the participants. Six of the nine participants recorded reduced blood pressure. One participant recorded no change. Two participants recorded an increase in blood pressure while one of them had a low blood pressure of 114 mm Hg, less than normal blood pressure reading of 120 mm Hg; in that case TICY and CM helped to increase the blood pressure in a positive direction towards the normal blood pressure. The collective average blood pressure of participants after practicing TICY and CM along with EMDR was 119 mm Hg and the collective average baseline blood pressure of participants was 121 mm Hg. There was reduction in the blood pressure measure after the CAM interventions of TICY and CM along with EMDR.

Yoga Related to Anxiety and Depression

Past research studies have shown the mind-body intervention of yoga has facilitated a reduction in anxiety and depression, an increase in high energy levels, and an ability to cope better as trauma survivor (Kim et al., 2013; Van De Kamp et al., 2019). Yoga interventions have provided psychological safety to enhance autonomy thus promoting rest and nurturance to calm the anxious brain (Levers, 2012; Schwartz 2016). The participants in the current study reported significant reduction in experiencing anxiety in their daily lives as they filled their bodies and minds with relaxation and strong energy levels after practicing TICY. Because of reduced anxiety, the participants were able to process the trauma memories with EMDR, allowing irrelevant emotions to fade away and promoting new insights. Most of the participants' emotions, energy levels, and motivation levels progressed positively, thus reducing the depression symptoms. The research gap of using CAM interventions of TICY and CM along

with EMDR was researched in this current study. The study results added in support of the mind-body intervention of yoga practices for PTSD symptom reduction in anxiety and depression.

Christian Meditation Related to Anxiety and Depression

The reductions in stress levels, anxiety, and depression have been reported in past research studies on the CAM intervention of CM. The past studies have shown that mindfulness disrupted negative cognitive ruminations, improved moods, and reduced PTSD symptoms of anger, anxiety and depression (Gutierrez et al., 2019; Johnson, 2018; Kirwan, 1984). Spiritual and mindfulness practices have shown to alleviate psychological pain, improved relational skills with others and triune God, and promoted trauma healing and growth (Emmerich, 2022; Wilder et al., 2020). The participants in the current study reported that CM gave them a positive perspective for the day, and visual imagery served as protection from trauma triggers, allowing for deeper awareness of forgiveness. Some participants shared that it gave them an opportunity to praise and worship God and a desire for a deeper understanding for God's Word, and it was soothing for their mind and body. This study addressed the gap in the research on practices of CM along with EMDR and TICY. The results supported the previously existing knowledge on PTSD symptom reduction of anxiety and depression and the promotion of perspective, protection, and deeper awareness.

Research Question Two

The second research question was: will trauma-informed Christian yoga and Christian meditation as complementary and alternative interventions integrated with EMDR decreased the heart rate, a PTSD symptom of an elevated heart rate? Five of the participants in the current study recorded a reduction in heart rate after the interventions of TICY and CM, along with EMDR. Four of the nine participants recorded increased heart rate. All the four of them reported

in weekly discussions during therapy time that the yoga exercises with their body postures did increase their heart rate in a healthy way over time come to normal during the day. The collective average of the base heart rate of the research participants was less than the collective average heart rate of the participants after the CAM interventions of TICY and CM, along with EMDR.

PTSD Symptom Related to Anxiety and Depression

PTSD symptoms from trauma can cause anxiety and bodily reactions of nausea, diarrhea, and panic attacks (Johnson, 2018; Schwartz, 2016; Tavernier et al., 2019). Anxiety disorders, shortness of breath, digestive disturbances, high blood pressure, and sleep disturbances have been reported as a result of traumatic experiences (Briere & Scott, 2015; Schwartz, 2016). PTSD symptoms can impact heart rate and blood vessels, leading to cardiovascular risks from the overactivation of the SNS because of anxiety (Meinhausen et al., 2022; Zoogman et al., 2019). The participants in the study reported that the practice of TICY and CM helped them to focus on the body postures, allowed feelings of relaxation in their mind, and reduced their heart rate. The post-survey from the participants revealed that most of the participants reported significant reduction in their PTSD symptoms and that they planned to continue practicing yoga and CM for managing anxiety and depression in the future.

Trauma Theory and PTSD Symptoms of Anxiety and Depression

Trauma can result in PTSD symptoms with dysregulated emotions of fear, put strain on emotional states, and overwhelm a survivor's internal resources (APA, 2013; Briere & Scott, 2015; Wilson, 2004). This can lead to poor quality of daily living with lack of motivation and cognitive alterations, derailing the ability to live resiliently (APA, 2013; Grabbe & Miller-Karas, 2018; Wilson, 2004). Evidenced-based treatments like EMDR, CBT, DBT, and PE have been shown to reduce PTSD, anxiety, and depression along with medications (Bisson & Olff, 2021;

Dominguez et al., 2021; Laliotis, 2020; Voorendonk et al., 2022). CAM interventions like mindfulness and yoga have been integrated in hospital treatments that reduced PTSD symptoms and provided participants with greater appreciation for life and a renewed sense of priorities (Dickinson, 2021; McMartin & Hall, 2021; Schwartz, 2016). The current participants of this study reported less occurrence of symptoms of anxiety and depression over four weeks of practicing TICY and CM. They were able to experience positive emotions of hope, love, and peace that contributed to courage and confidence to face daily life tasks and challenges at their workplaces, physical illness of covid, medical procedures, and relationship stressors that crossed their paths. They were able to overcome the triggers and distresses without succumbing to feelings of anxiety or depression, instead experiencing motivation, encouragement, and optimism. The current study suggested that trauma triggers and PTSD symptoms, along with anxiety and depression, could be alleviated with CAM interventions of TICY and CM, resulting in experiences of good sleep, appetite, and strong energy levels.

Adlerian Theory and PTSD's Impact on Autonomy and Self-Esteem

Adlerian theory-based principles and group psychotherapies have provided positive outcomes that reduced PTSD symptoms and had a positive impact on relational growth (Khusid & Vythilingam, 2021; Paquin et al., 2021). Past research studies have reported that Adlerian theory-based psychotherapy programs have produced improvement in emotional awareness, breath-awareness practices, and improved life-style with reduced feelings of shame and increased self-compassion (Kent & Buechner, 2021; Kramer, 2017; Miller & Taylor, 2016; Seligman & Reichenberg, 2014). Adlerian-based programs have reduced feelings of anxiety and depression and empowered the trauma survivors with autonomy in emotions and relationships, promoting social skills of competence and self-efficacy (Ghasemi, 2022; Kent & Buechner,

2021). The participants in this current study reported during the EMDR treatments that they were able to explore deeply of their negative emotions and beliefs about themselves, and with self-compassion they were able to release their negative energy with body-mind awareness and relax during TICY and CM. They were able to process their grief and pain from trauma memories. They strengthened their autonomy by optimistically choosing for themselves the body postures in TICY that were comfortable for them, experiencing self-compassion and positive emotions of relief, peace, and joy throughout each day. They reported positive attitudes and mindsets for competence and thus strengthened their self-esteem which had been distorted because of their past trauma experiences. The current study supported the previous findings that the participants' PTSD symptoms of anxiety and depression were reduced with these interventions, also promoting competence, autonomy, and self-esteem (Ghasemi, 2022; Kent & Buechner, 2021; Kramer, 2017; Miller & Taylor, 2016; Seligman & Reichenberg, 2014).

Implications

This research study has implications related to counselors, psychologists, and psychiatrists concerning effective trauma treatments for mental health disorders, trauma, and specifically PTSD. The study findings showed that there was significant reduction in PTSD symptoms of anxiety and depression, as the blood pressures and heart rates were regulated with CAM interventions of TICY and CM along with EMDR. The counselors, psychologists, and psychiatrists who work with trauma survivors could educate themselves on CAM practices of TICY and CM, empowering themselves to offer complementary treatments along with EMDR, other psychotherapies, and medication management. They could consider offering holistic trauma treatments with cost-effectiveness, along with evidence-based psychotherapies, CAM interventions, and pharmacology, thus reducing treatment duration.

Counselors, psychologists, and psychiatrists can inform their patients to include practices of yoga breath work and meditation as additional coping skills for emotional regulation, improved appetite, and better sleep patterns. They can educate their patients to monitor their blood pressures and heart rates once a week, by purchasing a blood pressure monitor at the local store. If the blood pressure or heart rate reading is elevated, the trauma survivors can have meaningful and medical conversations with their primary care physicians, cardiologists, and psychiatrists for appropriate discussions on lifestyle changes and medication management. The lifestyle changes could include healthy eating habits, changing jobs to move from stressful environments, and cultivating healthy relationships with family and friends using good boundaries and assertive communication. This assists in developing healthy individuals with strong autonomy, allowing them to follow their dreams, be supportive and competent members in their families, be caring and flourishing citizens in the community with a great sense of purpose.

The study findings have deeper implications and impact for the Christian pastoral care counseling, such that God sanctifies and preserves the spirit, soul, and body without blame until the coming of the Lord Jesus Christ (*New American Standard Bible*, 1971/1995, 1 Thessalonians 5:23). The pastoral leaders can offer care to their staff members and congregation who come to them for pastoral counseling, using TICY and CM where there are only limited sessions to meet with them. After that the members could be transferred to clinical counselors to address unresolved PTSD symptoms, if any, or until the members are able to adopt a healthier quality of life after the stressor. The congregation in general could be educated through small groups or weekend conference on the importance of self-care to prevent burn out, how to do yoga breath work (*New American Standard Bible*, 1971/1995, 1 Corinthians 9:19-20), how to practice

mindfulness (*New American Standard Bible*, 1971/1995, Philippians 4:8), and prayer through CM, through small groups or weekend conferences. The study findings reported a reduction in anxiety and depression, leading to growth in positive emotions of love, contentment, relief, peace, and joy with TICY and CM. The pastoral counseling community could use the CAM interventions of yoga breath work and meditation on God's Word so that their staff and congregation members could be well equipped for good works and serve others effectively (*New American Standard Bible*, 1971/1995, 1 Corinthians 3:16; Ephesians 2:10).

Limitations

The limitation of the current study was mainly from the sample size of the participants. Since the sample was small and convenience sampling was used, the generalizations or the transferability of the results are limited (Heppner et al., 2019). Because the study was conducted with only nine participants and from a local counseling center, the results could be further tested and strengthened to add to the literature knowledge base for trauma treatments. The study was conducted for adult trauma survivors only and hence cannot be translated to treat children who are under age 18 with trauma. The study had limitations on internal validity as it was conducted in a non-laboratory setting with less control and with the threat of the researcher's expectations while administering EMDR interventions. The internal validity could be strengthened by conducting the study by recruiting clients from other counselors and psychologists who can practice EMDR interventions with them. Since the research participants were the clients of the researcher, the researcher was aware of the threats to internal validity as the participants could have reported perceived "desired" measures of blood pressure, heart rate, and weekly check-in reports. The external validity could be strengthened by the homogeneity of the type of trauma experienced by the clients. Another limitation to the research study was the meditation based on

Christian faith. There were three participants in the study who did not share the Christian faith but were willing to participate in the CM. One of the three participants had created some beautiful imagery in their mind that assisted in CM. All three of the participants, although they would not use CM for the future, but would try other form of meditation for relaxation and to reduce anxiety and depression.

Recommendations for Future Research

The current study researched the impact of TICY and CM as complementary interventions along with EMDR to alleviate PTSD symptoms in adult trauma survivors. The research findings showed a reduction in PTSD symptoms of anxiety and depression. Conducting a future research study with an increased sample size could add to the already known findings. The research design could be changed to use two groups of adult trauma survivors where one group receives CAM interventions of TICY and CM and the other group does not receive TICY and CM, but only EMDR for trauma treatment. The study could be conducted with children under age 18 who have experienced trauma, been diagnosed with PTSD and are receiving EMDR treatment.

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Appendices

Appendix A

Weekly Check-In Sheet for Yoga & Christian Mediation (Week No:)

Date:

Name of the Participant:

1. Name three emotions you felt last week?

_____

2. How many hours did you sleep on average during the week? 6 7 8 9

Other: _____

3. How was your appetite throughout the week? Good Average Poor

Other: _____

4. How was your energy level throughout the week? Good Average Poor

Other: _____

5. Did you struggle with feelings of lack of motivation? Yes No

Explain: _____

6. Did you practice 10 minutes of Christian Meditation? (Any Five Days of the week)

_____

7. Did you practice 15 minutes of Yoga? (Any Five Days of the week)

_____

8. Cardiovascular Measure (Blood Pressure and Heart Rate) by Blood Pressure Monitor:

Blood Pressure	Heart Rate
Day 1_____	Day 1_____
Day 2_____	Day 2_____
Day 3_____	Day 3_____
Day 4_____	Day 4_____
Day 5_____	Day 5_____

Appendix B

IRB Approval Letter

From: do-not-reply@cayuse.com <do-not-reply@cayuse.com>

Sent: Tuesday, December 26, 2023 4:08 PM

To: Joshua, Beulah; Pracht, Stephany D (Community Care and Counseling)

Subject: [External] IRB-FY23-24-729 - Initial: Initial - Expedited

> Some people who received this message don't often get email from do-not-reply@cayuse.com.

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

December 26, 2023

Beulah Joshua

Stephany Pracht

Re: IRB Approval - IRB-FY23-24-729 Christian Meditation and Yoga Breathwork: Complementary Interventions for PTSD

Dear Beulah Joshua, Stephany Pracht,

We are pleased to inform you that your study has been approved by the Liberty University Institutional Review Board (IRB). This approval is extended to you for one year from the following date: December 26, 2023. If you need to make changes to the methodology as it pertains to human subjects, you must submit a modification to the IRB. Modifications can be completed through your Cayuse IRB account.

Your study falls under the expedited review category (45 CFR 46.110), which is applicable to specific, minimal risk studies and minor changes to approved studies for the following reason(s):

4. Collection of data through noninvasive procedures (not involving general anesthesia or sedation) routinely employed in clinical practice, excluding procedures involving x-rays or microwaves. Where medical devices are employed, they must be cleared/approved for marketing. (Studies intended to evaluate the safety and effectiveness of the medical device are not generally eligible for expedited review, including studies of cleared medical devices for new indications.)

For a PDF of your approval letter, click on your study number in the My Studies card on your Cayuse dashboard. Next, click the Submissions bar beside the Study Details bar on the Study Details page. Finally, click Initial under Submission Type and choose the Letters tab toward the bottom of the Submission Details page. Your stamped consent form(s) and final versions of your study documents can be found on the same page under the Attachments tab. Your stamped consent form(s) should be copied and used to gain the consent of your research participants. If you plan to provide your consent information electronically, the contents of the attached consent document(s) should be made available without alteration.

Thank you for your cooperation with the IRB, and we wish you well with your research project.

Sincerely,

G. Michele Baker, PhD, CIP

Administrative Chair

Research Ethics Office

Appendix C

Informed Consent

Title of the Project: Christian Meditation and Yoga Breathwork: Complementary Interventions for PTSD

Principal Investigator: Beulah Joshua, Doctoral Candidate, School of Behavioral Sciences, Liberty University

Invitation to be Part of a Research Study

You are invited to participate in a research study. To participate, you must be 18 years of age or older, with PTSD symptoms. Taking part in this research project is voluntary.

Please take time to read this entire form and ask questions before deciding whether to take part in this research.

What is the study about and why is it being done?

The purpose of the study is to explore if Trauma informed Christian yoga (TICY), Christian meditation (CM), along with EMDR will have an impact on blood pressure and heart rate, both PTSD symptoms of anxiety.

What will happen if you take part in this study?

If you agree to be in this study, I will ask you to do the following:

1. Read recruitment email. 30 minutes.
2. Purchase blood pressure monitor. 30 minutes.
3. Intake survey questionnaire. 60 minutes
4. EMDR intervention in therapy commitment. 5 minutes.
5. Email confirmation for EMDR treatment. 5 minutes
6. Blood pressure and heart rate readings measured in the morning of the day before noon on any three days of the informational week and emailed to the researcher. 20 minutes. This measurement for blood pressure and heart rate will be the baseline measure of each participant constituting the Phase A of the multiple-baseline AB research design.
7. Practice TICY with YouTube video link for 15 minutes per day on any five days they choose in each week, for four weeks. 300 minutes.
8. Following that, practice CM from any portion of a passage from the Bible, after TICY for five days of the week, for four weeks. They can choose silence or relaxation music as they meditate or reflect on the chosen biblical passages. They can also be inside their home or outside in the sun for CM practice. 200 minutes.
9. Measure blood pressure and heart rate after TICY and CM. 200 minutes.
10. EMDR treatment with the researcher each week for 30 minutes for five weeks. 150 minutes.
11. Record the measures in the form listed in Appendix A and email the researcher each Saturday for four weeks. 20 minutes.

12. Post survey questionnaire with the participants. 60 minutes.

How could you or others benefit from this study?

Participants should not expect to receive a direct benefit from taking part in this study.

Benefits to society include alleviation of PTSD symptoms in trauma survivors, promoting physical and emotional well-being, and rebuilding shattered sense of self for a better community.

What risks might you experience from being in this study?

The expected risks from participating in this study are minimal, which means they are equal to the risks you would encounter in everyday life. The risks involved in this study include limited stretch with yoga and the likelihood of occurring is minimal. To reduce risk, I will monitor participants and provide appropriate information during the informational week and the following four weeks.

How will personal information be protected?

The records of this study will be kept private. Published reports will not include any information that will make it possible to identify a subject. Research records will be stored securely, and only the researcher will have access to the records.

- Participant responses will be kept confidential by replacing names with pseudonyms.
- Interviews will be conducted in a location where others will not easily overhear the conversation.
- Data will be stored on a password-locked computer and in a locked file cabinet. After three years, all electronic records will be deleted and all hardcopy records will be shredded.

How will you be compensated for being part of the study?

Participants will not be compensated for participating in this study.

Is study participation voluntary?

Participation in this study is voluntary. Your decision whether to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time prior to submitting the survey without affecting those relationships.

What should you do if you decide to withdraw from the study?

If you choose to withdraw from the study, please contact the researcher at the email address and phone number included in the next paragraph. Should you choose to withdraw, data collected from you will be destroyed immediately and will not be included in this study.

Whom do you contact if you have questions or concerns about the study?

The researcher conducting this study is Beulah Joshua. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at phone number is xxxxxxxxxx. You may also contact the researcher's faculty sponsor, Stephany Pracht, EdD at xxxxxxxxxx

Whom do you contact if you have questions about your rights as a research participant?

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the IRB. Our physical address is Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA, 24515; our phone number is 434-592-5530, and our email address is irb@liberty.edu.

Disclaimer: The Institutional Review Board (IRB) is tasked with ensuring that human subjects research will be conducted in an ethical manner as defined and required by federal regulations. The topics covered and viewpoints expressed or alluded to by student and faculty researchers are those of the researchers and do not necessarily reflect the official policies or positions of Liberty University.

Your Consent

By signing this document, you are agreeing to be in this study. Make sure you understand what the study is about before you sign. You will be given a copy of this document for your records. The researcher will keep a copy with the study records. If you have any questions about the study after you sign this document, you can contact the study team using the information provided above.

I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

_____
Printed Subject Name

_____
Signature & Date

Appendix D

Recruitment Email

Dear [Recipient]:

As a graduate student in the School of Behavioral Sciences at Liberty University, I am conducting research as part of the requirements for a doctoral degree. The purpose of my research is to explore if Trauma informed Christian yoga (TICY), Christian meditation (CM), along with EMDR will have an impact on blood pressure and heart rate, both PTSD symptoms of anxiety and I am writing to invite eligible participants to join my study.

Participants must be 18 years of age or older with PTSD symptoms. Participants, if willing, will be asked to:

1. Read recruitment email. 30 minutes.
2. Purchase blood pressure monitor. 30 minutes.
3. Intake survey questionnaire. 60 minutes
4. EMDR intervention in therapy commitment. 5 minutes.
5. Email confirmation for EMDR treatment. 5 minutes
6. Blood pressure and heart rate readings measured in the morning of the day before noon on any three days of the informational week and emailed to the researcher. 20 minutes. This measurement for blood pressure and heart rate will be the baseline measure of each participant constituting the Phase A of the multiple-baseline AB research design.
7. Practice TICY with YouTube video link for 15 minutes per day on any five days they choose in each week, for four weeks. 300 minutes.
8. Following that, practice CM from any portion of a passage from the Bible, after TICY for five days of the week, for four weeks. They can choose silence or relaxation music as they meditate or reflect on the chosen biblical passages. They can also be inside their home or outside in the sun for CM practice. 200 minutes.
9. Measure blood pressure and heart rate after TICY and CM. 200 minutes.
10. EMDR treatment with the researcher each week for 30 minutes for five weeks. 150 minutes.
11. Record the measures in the form listed in ‘Weekly Checkin’ and email the researcher each Saturday for four weeks. 20 minutes.
12. Post survey questionnaire with the participants. 60 minutes.

It should take approximately 5 weeks to complete the procedures listed. Names and other identifying information will be requested as part of this study, but the information will remain confidential.

To participate, please complete the attached consent form and return it by email to express your consent to the research study.

Sincerely,

Beulah Joshua
Licensed Professional Counselor
Phone No:

Appendix E

Intake Survey Questionnaire

- Information and questions on blood pressure monitor
- Explanation on baseline and intervention measures for blood pressure and heart rate
- Clarifications on completing the weekly checkin Appendix A
- Safety issues and abuse history relating to trauma
- Explanation on voluntary participation in TICY and CM for non-religious participants

Appendix F

Post Survey Questionnaire

- How was your experience in practicing TICY?
- What is your perspective on CM?
- Describe measuring blood pressure and heart rate with monitor.
- Would you continue to practice TICY and CM?
- How are you experiencing PTSD symptoms of anxiety and depression, if any?