

# Does Combining Emotional Freedom Techniques and Hypnosis Have an Effect on Sexual Assault–Specific Posttraumatic Stress Disorder Symptoms?

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## Abstract

**Objectives:** Posttraumatic stress disorder (PTSD) affects approximately eight million American adults per year (U.S. Department of Veterans Affairs, 2019). Nearly 70% of rape and sexual assault survivors will experience PTSD or symptoms of severe distress (U.S. Department of Justice, 2016). Sexual assault–specific PTSD has unique components due to the personal and invasive nature of the attack. Though effective for some, traditional approaches to the treatment of PTSD often fail due to the unwanted side effects of the medication, cost of treatment, and the potential for overwhelming the survivor by asking them to talk about their experience. The purpose of this study was to explore the effect of a combined treatment modality of Emotional Freedom Techniques (EFT) and hypnosis on sexual assault–specific PTSD symptoms.

**Design:** This study utilized an explanatory sequential mixed method design.

**Setting:** This study was conducted in a private psychotherapy office.

**Subjects:** 30 individuals with self-identified sexual assault–specific PTSD were recruited and participated in this study.

**Interventions:** EFT and hypnosis combined.

**Outcome measures:** A paired samples *t*-test analysis between the PCL-5 (PTSD Checklist for DSM-5 [*Diagnostic and Statistical Manual of Mental Disorders, 5th Edition*]) baseline and post-intervention scores as well as an open-ended question was utilized.

**Results:**  $t(29) = 12.198, p < .001$ , indicating that overall the change in self-reported symptom ratings was statistically different between the two time points. The open-ended qualitative question pointed to a relationship between experience in session and PCL-5 score.

**Conclusion:** This study found an overall decrease of 34.3% on PTSD symptom severity based on PCL-5 assessment scores, after four sessions of the combined EFT and hypnosis treatment.

**Keywords:** EFT, hypnosis, PTSD, sexual assault, trauma, mind-body interventions

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## A Brief Overview of PTSD

Witnessing or surviving an incident that is perceived to be dangerous or life threatening can result in psychological trauma (Sherin & Nemeroff, 2011). These experiences, typically accompanied by horror and helplessness, may lead to the development of posttraumatic stress

disorder (PTSD; Sherin & Nemeroff, 2011). Approximately eight million American adults per year have PTSD (U.S. Department of Veterans Affairs, 2019).

A diagnosis of PTSD can be made when an individual has been exposed to a life threatening, or perceived life-threatening event, and exhibits specific symptoms for a period longer than one month. PTSD is defined as having three main areas: (a) reexperiencing such as flashbacks, nightmares, and intrusive thoughts; (b) sympathetic nervous system activation including agitation, impulsivity, hyperarousal, insomnia, and anger; and (c) parasympathetic overactivation, which includes avoidance, numbing, withdrawal, derealization, depression, and dissociation (Sherin & Nemeroff, 2011). These symptoms must be present for a period extending beyond one month and can occur immediately after the event or long after it has occurred. An individual carrying the effects of trauma may exhibit an exaggerated startle response, hypervigilance, hyperarousal, dissociation, and many other responses (Van der Kolk, 2014).

The autonomic nervous system (regulating heart rate and respiration, among other functions) is connected to the limbic system (consisting of the thalamus, amygdala, hippocampus, and hypothalamus, and regulating emotional responsiveness) and the hindbrain, which is involved in respiration, motor activity, sleep, and wakefulness (Van der Kolk, 2014). Within the autonomic nervous system are the sympathetic nervous system, which is in charge of the fight-or-flight response, and parasympathetic nervous system, which is the calming nervous system and may play some role in the freeze part of the fight-flight-freeze response to trauma (Van der Kolk, 2014). When the system is triggered, the amygdala detects danger, which then sets off the fight-or-flight response via the hypothalamus. This activation prompts the release of epinephrine (adrenaline), norepinephrine, and cortisol to mobilize the body for response to the stressor (Van der Kolk, 2014). The prefrontal cortex becomes temporarily unavailable in an effort to aid the survival response of the body. This disconnection between the prefrontal cortex, which is responsible for meaning-making, and the more primal brain structures responsible for acute survival make hindsight processing and meaning-making after the traumatic event has ended very difficult.

## **Sexual Assault–Specific PTSD**

This study used the 2016 definition of sexual assault from the U.S. Department of Justice in which sexual assault was defined as “any sexual contact or behavior that occurs without the explicit consent of the recipient. Falling under the definition of sexual assault are sexual activities as forced sexual intercourse, forcible sodomy, child molestation, incest, fondling, and attempted rape.” This definition has recently been replaced by: “The term ‘sexual assault’ means any nonconsensual sexual act proscribed by Federal, tribal, or State law, including when the victim lacks capacity to consent” (U.S. Department of Justice, 2018).

Sexual assault can be described as a severe trauma, in that it can cause a variety of mental health issues, such as PTSD, substance abuse, and suicidality, as well as repeated sexual victimization, chronic physical health problems, and functional impairment (Campbell, 2008; Kilpatrick, Amstadter, Resnick, & Ruggiero, 2007). Although chronic psychopathology does not develop in most sexual assault victims, this form of traumatic victimization is associated with a higher prevalence of PTSD than are other types of traumatic events. In fact, it is estimated that around 70% of rape and sexual assault survivors will experience PTSD or symptoms of severe distress (U.S. Department of Justice, 2016). In addition, the National Women’s Study found the lifetime prevalence of PTSD resulting from rape and sexual assault to be 32% and 30.8%, respectively, compared with a prevalence of 9.4% caused by non-crime-related trauma (Kilpatrick et al., 2007).

Surviving a sexual assault can change the brain and body in complex and lasting ways. According to Chivers-Wilson (2006), rape survivors have been found to exhibit a dysregulation of the hypothalamic-pituitary-adrenal axis. Recent research suggests that when an individual is raped, there is a certain repatterning of their body resulting in a more easily triggered stress response and an altered neural network that may affect their response to their environment (Wolf, 2012). Some studies have explored the effect in women of pelvic nerve damage from rape and its effects on their self-report of chronic pain later in life (Wolf, 2012). Although more research is needed to solidify these connections, it seems that a healing modality that works with the body’s nervous system, as well as with the electrical energy

signals sent by nerve impulses, could be a beneficial lens through which to look when aiming to treat sexual assault-related PTSD.

## Literature

From March 1, 2016, through August 1, 2017, the first author searched the terms Emotional Freedom Techniques OR Hypnosis AND PTSD as well as Sexual Assault AND PTSD AND Treatment in the electronic databases. The initial search resulted in 1,306 articles. Titles of articles were reviewed to look for relevance related to the subject matter of the study of Emotional Freedom Techniques (EFT) and/or hypnosis in the treatment of PTSD as well as treatment for sexual assault-specific PTSD. Dawson Church, PhD, is a renowned researcher on the subject of EFT, and a search of his website yielded 15 additional records related to EFT and PTSD. After duplicates were removed, 39 records were read and screened for relevance. Of the 39 records screened, 25 were deemed eligible for this review. Studies were included if they investigated the stated intervention of interest, study methodology was not restricted to randomized controlled trials (RCTs), and qualitative studies were included. Inclusion for research participants was restricted to a diagnosis, assessment, or targeting of PTSD.

The results of this review indicate that EFT may be an effective treatment for PTSD. Although positive results are reported after just one session, around six sessions are typically administered. Nine of the studies reviewed for EFT and PTSD displayed a decrease in overall PTSD symptoms. Of the nine studies, eight of them provided quantitative analysis and synthesis of results. Despite the frequent use of hypnosis as an intervention for trauma, only two studies could be located. Both studies explored were case studies in which hypnosis was utilized as an adjunct to facilitate treatment in complex cases. Both studies concluded that after 18 to 35 sessions, hypnosis facilitated a near full recovery from complex PTSD.

There were three studies that combined hypnosis with another method as a primary treatment approach to PTSD. All three studies expressed positive outcomes and discussed the fact that hypnosis was a very useful tool in the treatment of PTSD, particularly complex PTSD. No hypnosis-EFT studies were located while conducting this systematic review.

To understand what is currently being done to address sexual assault-specific PTSD, nine studies were included in this review. Of the nine studies that focused on sexual assault-specific PTSD, five were cognitive processing models, two were EMDR studies, one was imagery rehearsal for desensitization, and another one involved Clinician-Assisted Emotional Disclosure (CAED). While the results of each study indicated a decrease in PTSD-related symptoms after the stated intervention, the studies were often limited by lack of control comparison, small sample size, and convenience sampling. Despite the acknowledgment of the complex and specific nature of sexual assault-related PTSD, none of the studies listed here combined modalities to address this issue.

The symptoms of PTSD are extremely uncomfortable and can interfere with the individual's daily functioning. Church and colleagues conducted a variety of randomized controlled trials exploring EFT as a treatment for PTSD (Church, 2010; Church & Brooks, 2014; Church, Geronilla, & Dinter, 2009; Church, Piña, Reategui, & Brooks, 2012; Church et al., 2013). Results of these and similar studies provide significant evidence for the use of EFT in the treatment of PTSD. When qualitative data are gathered on the participant's state, however, the EFT treatment is reported as effective in decreasing the emotional distress of a specific memory, but more complex psychological issues often linger after treatment (Hartung & Stein, 2012). Furthermore, much of the existing research surrounding the use of EFT in the treatment of PTSD involves combat-related PTSD. Studies conducted with individuals who have PTSD as a result of sexual trauma or childhood abuse are needed to assess EFT's capabilities further.

The use of hypnosis in the treatment of PTSD dates back to the work of Sigmund Freud (Spiegel, 2013). Despite this fact, few quality studies demonstrating its capabilities in the treatment of trauma exist. Hypnosis can be a powerful tool in inducing relaxation, strengthening suggestions, processing traumatic memory, and ultimately changing behaviors (Spiegel, 2013). These are the exact aspects of hypnosis that make it an ideal treatment approach for individuals living with PTSD.

According to Nixon et al. (2016), much of the research regarding PTSD involves mixed trauma,

that is, studies utilizing PTSD triggered by a variety of different traumatic incidents instead of studies that focus solely on sexual assault-specific PTSD. Further, many individuals living with sexual assault-specific PTSD do not respond to the current psychotherapeutic treatments (Leiner, Kearns, Jackson, Astin, and Rothbaum; 2012). Survivors of sexual assault stand to benefit if effective treatment modalities for sexual assault-specific PTSD are studied. Research exploring the effects of established interventions such as EFT and hypnosis in sexual assault-specific PTSD is needed.

Many individuals living with PTSD have survived a variety of traumatic events and will report experiencing physical as well as psychological symptoms. The combined approach of hypnosis and EFT may provide a way to assist people living with PTSD in releasing old trauma, stabilizing the nervous system, and restoring them to a balanced way of being. Furthermore, EFT and hypnosis, once taught, can be self-administered at home, reducing cost and increasing accessibility.

## Treatment Interventions

### Emotional Freedom Techniques (EFT)

EFT is a therapeutic intervention that combines acupressure tapping with systematic desensitization and cognitive restructuring. Currently, clinical EFT has met the criteria for Empirically Validated Treatments as set forth by the American Psychological Association (APA) Division 12 Task Force (Church, 2013; Flint, Lammers, & Mitnick, 2006).

EFT is a derivative of Roger Callahan's Thought Field Therapy (TFT; Mollon, 2008). Gary Craig, the creator of EFT, studied under Callahan. It was through his tutelage that Craig discovered that the order of the acupressure points need not be so specific and that the desired results could be achieved by tapping on 12 acupressure points (Flint et al., 2006). Craig simplified Callahan's approach and developed EFT. This simplification contributed to EFT's accessibility and teachability. EFT also has cognitive-behavioral components in that it uses "neuro-linguistic programming techniques, to address negative thoughts, emotions, and memories" (Williams, Dutton, & Burgess, 2010, p. 57).

## Hypnosis

The use of hypnosis as an adjunctive tool in the treatment of trauma and anxiety goes back over two hundred years (Spiegel, 2013). Hypnosis is a phenomenon that can be characterized by a state of focused and receptive concentration involving dissociation, absorption, and suggestibility to varying degrees, occurring simultaneously (Hammond, 1998). Hypnotherapists believe that hypnosis is helpful because it relaxes patients while allowing them to focus more fully on goals and motivations (Hammond, 1998). Yapko (2012) stated that hypnosis is most effective at amplifying individuals' abilities, empowering them to develop and discover unknown strengths. Although hypnosis is a naturally occurring state of narrowed focused and attention, it can be utilized and directed in a way that may increase the benefit of another psychological tool, such as a cognitive reprocessing method or stabilization technique (Spiegel, 2013).

## The Purpose for a Combined Treatment Approach

Research has demonstrated that a complicated neurochemical response can be observed in individuals with PTSD (Van der Kolk, 2014). This psychophysiological response can make it difficult for the trauma survivor to experience a sense of stillness and calm. Thinking about a traumatic event after it is over elicits a similar response in the brain as if it were currently happening (Van der Kolk, 2014). As a result of the way traumatic experiences are processed and stored, traditional talk therapies and cognitive restructuring techniques are often not effective and at times even harmful to the trauma survivor. When asking a survivor to talk about the traumatic memory, the well-intentioned clinician risks triggering the client, further dysregulating them. Due to recent advancements in neuroscience, treating professionals now have a deeper understanding of the complex nature of PTSD.

Most trauma therapists agree that a multi-pronged approach may be more effective than a single modality treatment (Green, 2002). However, few studies involving a combined treatment approach of any form of psychotherapeutic treatment for PTSD currently exist. The purpose of this study was to explore the effects of an integrative,



dual-modality therapy in the treatment of sexual assault-related PTSD. EFT was combined with hypnosis to investigate these effects.

## Method

### Study Design

This study used an explanatory sequential mixed methods design. The study was approved by the Institutional Review Board of Saybrook University on December 19, 2017. Participants were only admitted into the study after informed consent was obtained. Participants were permitted to terminate study involvement at any time.

### Study Aims

**Specific aim 1.** Aim 1.1: Determine if there is a difference in pre and post scores of the PCL-5, which is the PTSD Checklist for DSM-5 (*Diagnostic and Statistical Manual of Mental Disorders, 5th Edition*; American Psychiatric Association, 2013).

**Specific aim 2.** Aim 2.1: To determine if the hypnotic ability of research participants does have a significant effect on pre and post PCL-5 scores.

**Specific aim 3.** Aim 3.1: To determine if participant experience in the therapy session, as determined by an open-ended qualitative question, has a significant effect on treatment outcomes as measured by the PCL-5.

### Participants

Participants were recruited from local psychotherapists in the community. Interested participants responded to a flyer advertising the study and reached out to schedule a screening to determine eligibility. All participants were given the informed consent before the telephone screening.

### Sample Size

A power analysis was conducted in G\*power to determine sample size. Running an analysis on a paired *t*-test with an effect size of .50, an error of probability of .05, and a power of .80, a sample size of 27 was determined. Thirty participants were recruited to account for potential attrition.

### Inclusion and Exclusion Criteria

Participants qualified for study consideration based on self-identification of PTSD as the result

of surviving a sexual assault. As noted, this study used the 2016 definition of sexual assault from the U.S. Department of Justice in which sexual assault was defined as “any sexual contact or behavior that occurs without the explicit consent of the recipient. Falling under the definition of sexual assault are sexual activities as forced sexual intercourse, forcible sodomy, child molestation, incest, fondling, and attempted rape.”

Inclusion criteria for this study were:

1. Participants are between the ages of 18 and 65 years old;
2. The self-identification of currently experiencing symptoms of PTSD as the result of sexual assault;
3. The sexual assault occurred no less than six months ago and no more than five years ago;
4. Self-rating of PTSD symptoms of mild or moderate; and
5. Must currently be in or able to get mental health care if wanted.

Exclusion criteria were:

1. Current or past EFT or hypnosis treatment for PTSD symptoms;
2. Current use of psychotropic medication;
3. Presence of severe psychiatric illness;
4. A current psychotherapy client of this study's researchers; and
5. Self-rating of PTSD symptoms as severe on a mild-moderate-severe rating scale.

### Study Interventions

**Emotional Freedom Techniques (EFT) protocol.** EFT was delivered as per *The EFT Manual* (Church, 2018). EFT for PTSD involves the participant compiling a list of their traumatic memory(s) and symptoms in which they rate their level of distress on the Subjective Units of Distress (SUD) scale of 0–10, with 10 being the most highly distressed. Participants are then asked to focus on specific parts of the memory, thought, or symptom while tapping a series of 12 acupressure points as described in *The EFT Manual*. When the traumatic material moves down to a score of 0 or a low number, the next scene or memory is targeted. This procedure is followed until all traumatic scenes have been tapped on, and a SUD score of 0 (or a low number) is given. After the EFT protocol

was administered, a consistent hypnosis procedure was followed.

**Hypnosis protocol.** The hypnosis portion of the session was administered after the EFT protocol and followed a specific script. The script utilized an eye-roll induction, a deepening process involving a body scan, staircase imagery, and peaceful-place imagery to facilitate deep relaxation, followed by hypnotic suggestions to facilitate and strengthen healing and mastery over symptoms. The hypnosis portion was approximately 20 minutes of the 60-minute session.

**Study sessions.** Individuals attended a total of five sessions. Participants were scheduled to attend once a week. Individuals who were unable to attend once a week were still invited to participate in the study; however, all five sessions were completed within two months. Session activities were broken down in the following manner:

- *Session 1:* 90 minutes  
Review informed consent and answer questions: 10 minutes  
Administer the BBS: 10 minutes  
Administer the PCL-5: 10 minutes  
Administer EFT: 40 minutes  
Administer hypnosis: 20 minutes
- *Session 2:* 60 minutes  
Administer EFT: 40 minutes  
Administer hypnosis: 20 minutes
- *Session 3:* 60 minutes  
Administer EFT: 40 minutes  
Administer hypnosis: 20 minutes
- *Session 4:* 60 minutes  
Administer EFT: 40 minutes  
Administer hypnosis: 20 minutes
- *Session 5:* Final debriefing session: 30 minutes  
Administer PCL-5 and qualitative question

## Assessment Instruments: Quantitative Measures

**PTSD checklist for the DSM-5 (PCL-5).** The PCL-5 was administered at the first and fifth attended sessions. The PCL-5 was utilized to assess the presence of PTSD. The PCL-5 is a self-reporting measure of 20 items that assess the 20 symptoms of PTSD according to the DSM-5. Typically a score of 33 or higher is required for the consideration of a PTSD diagnosis. Study participants were not diagnosed for this study. Rather,

symptoms were measured to track any potential changes. The PCL-5 has been demonstrated to be strong in validity and reliability and can be considered a good measure of PTSD symptoms (Blevins, Weathers, Davis, Witte, & Domino, 2015). It has been suggested that a 5–10 point change post treatment intervention indicates a reliable change and 10–20 point change post treatment intervention indicates a clinically significant change (Weathers et al., 2013).

**Barber Suggestibility Scale (BSS).** Participants were also assessed for hypnotic ability. Hypnotic ability is defined as the degree to which an individual can be susceptible to hypnotic suggestions (Yapko, 2012). Assessing hypnotic susceptibility is key when exploring hypnosis as an intervention (Kihlstrom, 2014). In this study, participants were assessed for hypnotic abilities during the first attended session utilizing the Barber Suggestibility Scale (BSS; Barber & Wilson, 1978, 1979).

## Assessment: Qualitative Measure

An open-ended question at the conclusion of the study was asked to gather further information about participant experience. Participants were asked, “What did you think of this experience?” Further prompts were used depending upon the answer. Qualitative interviews were audio-recorded. According to Ivankova, Creswell, and Stick (2006), purposefully selecting participants for the qualitative phase may increase understanding in specific areas. At the fifth and final session, all participants were asked the descriptive question; however, for this study the individual who was affected the most, the individual who was affected the least, and the individual who represented the mean as it pertained to their PCL-5 posttest score were included in the results. By further studying these three particular individuals, a better understanding of the combined treatment approach was possible. Purposively analyzing the selected three individuals helped with feasibility.

## Results

### Sample Size

From March 2018 to July 2018, interested participants contacted the first author to inquire about potential participation. In total, 35 individuals expressed interest, 32 met the inclusion criteria,

and 30 individuals scheduled initial sessions and were formally admitted into the study. The five individuals who did not participate in the study were immediately provided with referral information. All 30 individuals completed the five treatment sessions, and all five sessions were completed within a two-month window from the time they were admitted into the study.

### PCL-5 Results: Baseline, Post-Intervention, Descriptive Outcomes, and Analytic Findings

The PCL-5 served as the instrument of measurement for the purpose of assessing PTSD symptom severity among respondents at two time points: baseline and post intervention. Baseline assessments took place at the first participant meeting, and post-intervention scores were collected through a second administration of the PCL-5 during each respondent's fifth session (debriefing). Each of the 20 items is assessed by the participant in accordance with a 4-point rating scale (0 to 4), producing a sum total or total score for each participant that allowed later assessment and comparison of self-reported changes in symptoms or symptom severity.

#### Descriptive Data

When looking at the descriptive outcomes for the entire group ( $N = 30$ ), the mean self-reported PCL-5 score for participants at baseline was  $M = 55.93$  ( $SD = 10.63$ ). With a potential range of responses from a total score of 0 (respondent reports a 0 on each item) to a possible total score of 80 (respondent reports a 4 on each item), the mean is indicative of participant scores ranging from a minimum of 36 to a maximum of 72. The assessment score at posttest intervention was  $M = 37.03$  ( $SD = 11.48$ ). This is a numeric decrease of 18.9 points in PCL-5 assessment scores. Post-intervention scores ranged from a minimum score of 18 and a maximum total score of 55 reported by participants at the post-intervention assessment (see Table 1).

Although study participants were not diagnosed for the purpose of this study, when viewed from a clinical perspective, a total score of 33 or higher is required for consideration of a PTSD diagnosis. An evaluation of the frequency distribution for responses, at both time points, indicates that 100% of participants met this cutoff criterion

**Table 1.** PCL-5 Descriptive Data: Baseline Assessment and Post-Intervention Assessment ( $N = 30$ )

Output Measure	Pre-Intervention Result	Post-Intervention Result
<i>M</i>	55.9333	37.0333
<i>SD</i>	10.63479	11.47857
Range	36.00	37.00
Minimum	36.00	18.00
Maximum	72.00	55.00

at baseline, while only 60% scored a 33 or higher at the post-intervention assessment. That is, 40% of study participants no longer met the criteria for PTSD as measured by the PCL-5 post treatment. Figures 1 and 2 depict the distribution of responses at baseline and post intervention, respectively.

In response to the outcomes derived from the descriptive data, it is evident that the post-intervention PCL-5 scores differed from those collected at baseline. According to Weathers et al. (2013), a reliable change is indicated by a 5–10 point variation, while a 10–20 point change is likely indicative of a variation that is clinically significant. Another perspective for consideration, however, is the perceived numerical improvement experienced by each participant. When looking at the group of participants, as a whole, the mean scores at baseline  $M = 55.93$  ( $SD = 10.63$ ) and post intervention  $M = 37.03$  ( $SD = 11.48$ ) represented an

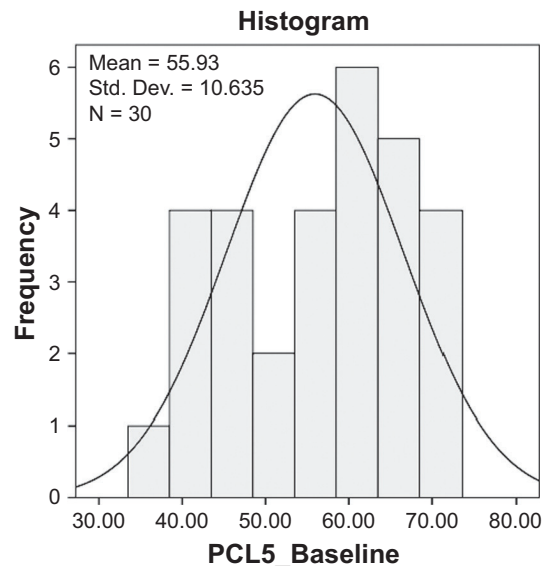


Figure 1. Frequency distribution: PCL-5 baseline.

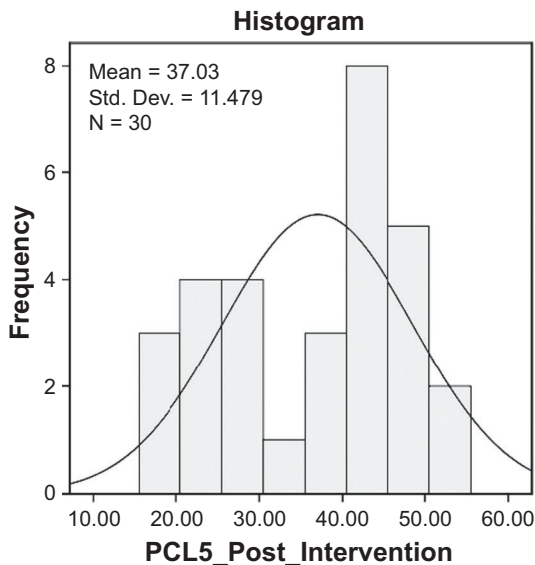


Figure 2. Frequency distribution: PCL-5 post intervention.

improvement of  $M = 18.9$  points overall. Although the range of improvement varied from a minimum of 4.26 points to a maximum improvement in the score of 62.3 points, the average for the participant group translated into a 34.3% improvement when quantifying the amount of change as a percentage. The full distribution of participant improvement between baseline and post-intervention scores, expressed as the percentage of change that took place, is depicted in Figure 3.

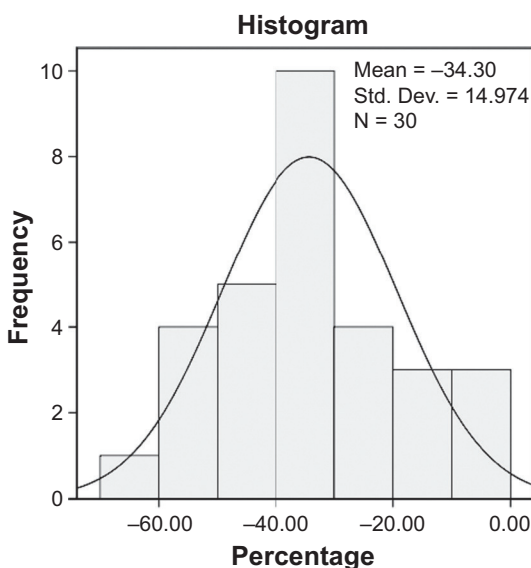


Figure 3. Percentage of improvement across the group.

Nevertheless, the mean percentage representing the amount of change or improvement for the group may potentially be biased or skewed as a product of possible outliers, as is evidenced in Figure 3. Therefore, in order to gain more accurate insights into the percentage of change most readily experienced by participants, the proportion of improvement that occurred was broken down into easily observable categorizations. When examined from this perspective, six participants ( $n = 6$ , 19.8% of the participant sample) reported an improvement of less than 20% between baseline and post-intervention scores; four participants ( $n = 4$ , 13.3% of the participant sample) reported a 20–29% improvement in score; 10 participants ( $n = 10$ , 33.3% of the participant sample) experienced a 30–39% improvement; five participants ( $n = 5$ , 16.67% of the participant sample) showed a change of 40–49%; four respondents reported a 50–59% change ( $n = 4$ , 13.3% of the participant sample); and one participant ( $n = 1$ , 3.33% of the participant sample) produced a pre-post improvement of 60% or more. Finally, the most frequently realized range of improvement was 30% to 50% change from the baseline score, which occurred in 15 participants or 50% of the group.

However, neither the percentage of change nor the proportion of improvement addresses the probability of the baseline/post-intervention changes meeting the criteria for statistical significance. It was, therefore, in consideration of this information that a paired samples  $t$ -test analysis was conducted, allowing for a more accurate mean comparison. This not only satisfied Aim 1.1 of this study, which was to determine if a valid difference occurred between the pretest and posttest scores that were not attributable to chance, but also tested the first hypothesis that asserted there would be a significant difference between pre and post scores as demonstrated by the PCL-5.

### PCL-5 $t$ -test Analysis

To further examine the hypothesis that there would be a significant difference between pre-intervention scores ( $M = 55.93$ ,  $SD = 10.63$ ) and post-interventions scores ( $M = 37.03$ ,  $SD = 11.48$ ) as demonstrated by the PCL-5, a paired samples  $t$ -test was executed. A 95% confidence interval (CI) around the mean difference was estimated to provide “information about the magnitude of



the relationship” (Cohen & Cohen, 2003, p. 48). The resulting *t* score was then compared to the critical *t* score in the standard *t* table and the subsequent variation evaluated at a standard alpha level of .05 for identifying statistical significance. Table 1 illustrates the subsequent results, as indicated by the SPSS 21.0 output data.

As illustrated in Table 1, the paired samples *t*-test analysis between PCL-5 baseline and post-intervention scores produced the following outcome:  $t(29) = 12.198, p \leq .001$ , indicating that overall the change in self-reported symptom ratings was statistically different between the two time points. Because the post-intervention scores were substantially lower than the prior baseline scores, this indicated a lower presentation and/or severity of symptom scores at the second assessment. This reduced severity of symptoms implies a notable improvement from the earlier measurement, thereby potentially representing the treatment effect (Creswell, 2015). In response, the null hypothesis was rejected and the alternative hypothesis accepted.

#### **Analyzing the influence of hypnotic ability.**

The outcomes resulting from evaluating the relationship between BSS scores and participants’ change in PCL-5 scores were positively correlated, but in a notably weak, nonsignificant relationship, as indicated by the bivariate output,  $r(28) = .017, p = .929$ . Similarly, the results from BSS scores and PCL-5 baseline scores produced the following outcome:  $r(28) = -.167, p = .377$ . Meanwhile, the result for the BSS and PCL-5 post-intervention scores was as follows:  $r(28) = -.141, p = .457$ . According to Cohen (1988), a correlation coefficient of .5 is required for a strong relationship and .1 is indicative of a small effect size.

### **Thematic Analysis**

The last and final segment of analysis involved the qualitative component that was intended to establish Aim 3.1: To determine if participant experience in the therapy session, as determined by an open-ended qualitative question, has a significant effect on treatment outcomes as measured by the PCL-5.

In response, the null hypothesis ascertained that the participant experience would have no significant effect on treatment outcomes. To gain further insights into the participant experience,

the open-ended question posed to participants at the conclusion of the study was broad in nature to elicit a range of responses: “What did you think of this experience?” As coded, Participant #1 represents the individual who was affected the least, Participant #2 represents the individual who was affected the most, and Participant #3 represents the individual whose score represents the mean as it pertains to post-intervention scores on the PCL-5.

All responses were recorded and additional prompts were utilized as necessary for eliciting further information. Recorded dialogue was then transcribed and the subsequent transcripts were analyzed for emergent themes. Those themes that were consistent were maintained, those that varied were added as supplemental insights, and those that were not consistent were discussed further. In the majority of cases, the same predominant themes emerged (Table 2).

The information elicited in the interviews, interestingly, served to answer some common questions, including what participants favored, what they gained, and what they felt the outcomes were, as well as challenges. All participants also offered a general perception of the experience, as a whole, while also making specific mention of the mind-body connection or elements of the mind and body that were dually impacted throughout the process. In order to gain greater insight into responses related to each thematic category, the following section provides relevant responses, emerging in association with each theme.

### **Illustration of Themes Realized**

The first theme identified was that of the participants’ overall perception of the experience. Regardless of each participant’s individual progress or additional feedback, the overall perception was positive and consistent (Table 3).

The next theme identified, and an area addressed by all participants, refers to what they liked or reflected favorable elements throughout the experience (Table 4).

This was followed by a discussion of the outcomes within each response dialogue. The outcomes seemed to fall into one of several subthemes, including self-awareness, self-improvement, increased trust, and the improved relations that

**Table 2.** *Theme Categories and Emergent Subthemes*

Major Theme/Theme Category	Related Emergent Themes
<b>Perception of the Experience</b>	
• General Opinion of the Entire Experience	
<b>Favorable Elements</b>	✓ Tapping exercise
• Elements perceived as “Positive”	✓ EFT
	✓ Hypnosis
<b>Outcomes of the Process</b>	✓ Self-awareness (increased)
	• Changes in self-perception
	• Shift in perspective
	✓ Subsequent self-improvement
	• “Transformation”
	✓ Trust
	• Improved interpersonal relations
	✓ Forgiveness
	✓ Anxiety relief
	✓ New coping mechanisms
<b>Challenges</b>	✓ Defense mechanisms
	✓ Disclosure to a “stranger”
	✓ Reticence about tasks (i.e., hypnosis)
<b>The Mind-body Connection (realization of)</b>	✓ Realization of It
	✓ Utility in the process
	✓ Benefit as an outcome, i.e., recognition of a “physical calmness”/Sleep habits

come from a greater ability to trust oneself and others, as well as the ability to engage in forgiveness. Finally, anxiety relief emerged as a common and dominant outcome, as well as adaptation of new coping mechanisms that enabled this reduction in anxiety. Examples of these responses are detailed in Table 5. Naturally, some discussion also entailed challenges encountered within the process, as illustrated in Table 6.

Mention of a mind-body connection was also a common element across the participant responses. In some cases, participants alluded to the mere realization of a mutual influence of the mind over the body or vice versa. In other cases, they

mentioned elements of the process in which the mind and body were impacted or made reference to outcomes after the intervention that involved this connection between the mind and body, as a whole. Typical responses that are illustrative of each of these instances are detailed in Table 7.

### Sample of Specific Themes

Another purpose of the sampling technique selected was to identify information that was relevant to participants who reported the most successful outcomes or who realized the most benefit, as well as those who specifically represented the least and the median. Doing so allowed for

**Table 3.** *Illustration of Responses: Perception of Experience*

Theme	Responses
<b>Perception of the Experience Overall</b>	Participant #1 (Least affected): “Um, overall it was a pleasant experience...um, it was really cathartic and relieving though I know I was um, challenged by my resistance...”
	Participant #2 (Most affected): “The experience was very surprisingly positive...”
	Participant #3 (Mean): “This was life changing”

**Table 4.** Illustration of Responses: Favorable Elements

Theme	Responses
Favorable Elements	Participant #1: “...there was something about the act of tapping and reciting those things as past and present that were really engaging...”
	Participant #2: “...especially the EFT because it really, um, was helping me to focus my body and get some release from the stressors...”
	Participant #3: “I really like the feeling after the exercises...after the sessions and after each round of EFT and just checking in, I really noticed how different I felt....So I really love the exercises we did, I felt safe as we did everything...”

additional insights into areas that were effective and/or beneficial across all participants, those that were experienced by participants with the most progress and should be maintained, and areas of additional focus to enhance the engagement of those with the least positive feedback. A summary of themes, according to the participant classifications, is presented in Table 8.

Supplementing Table 8, the themes presenting only in the “least” participant are illustrated in Table 9 with additional notes, as needed, for sufficient insights. These represent issues of concern or areas of challenge that deterred optimal engagement and may have impeded the overall experience of the participant, as well as the outcomes realized in response to it.

Presented for comparison in Table 10 are those themes that were present among participants with the greater degree of progress and/or most positive feedback. These provide useful insights into what should be maintained and capitalized on within the intervention and also provide a comparative assessment of what is possible for participants when the experience is fully embraced. As such, the information illuminates goals to strive for among the “least” participants, while illuminating what is feasible if measures are taken to enhance their experience.

## Discussion of the Findings

Overall the findings provide preliminary evidence that the combined treatment approach of EFT and hypnosis may produce a significant decrease in PTSD symptom severity in survivors of sexual assault. Although results are not generalizable due to the small sample size, this study does pave the way for future research on this topic.

## Major Findings

Analysis of the data demonstrates a significant decrease in PTSD symptom severity after four sessions of the combined treatment approach of EFT and hypnosis. The PCL-5 pre-intervention score of  $M = 55.93$  ( $SD = 10.63$ ) with scores ranging from a minimum of 36 to a maximum of 72 compared to the post-intervention score of  $M = 37.03$  ( $SD = 11.48$ ) with a minimum score of 18 and a maximum total score of 55 after four sessions of the combined treatment. This demonstrates a numerical decrease of 18.9 points. The paired samples  $t$ -test analysis between PCL-5 baseline and post-intervention scores produced the outcome of  $t(29) = 12.198, p \leq .001$ , indicating that overall the change in self-reported symptom ratings was statistically different between the two time points, demonstrating a clinically significant decrease in PCL-5 assessment scores.

Every participant experienced a decrease in score on the PCL-5. Twenty-four of the 30 participants experienced a drop in score in the 10–20 point range, which is a clinically significant change. Of the remaining six, the score decrease was in the 5–10 point range for five individuals and one individual decreased the score by two points. In general, improvement varied from a minimum of 4.26 points to a maximum improvement in the score of 62.3 points. The most frequently reached amount of improvement in study participants was between 30% and 50% change from the baseline score, which occurred in 15 participants or 50% of the group. Based on PCL-5 post-intervention scores, 40% of the group no longer met the criteria for PTSD. This finding is consistent with the current research that suggests EFT can reduce PTSD symptoms in as little as

**Table 5. Illustration of Responses: Outcomes**

<b>Theme: Outcomes of the Process</b>	<b>Responses</b>
<b>Self-Awareness</b>	Participant #2: “...So when I was tapping, I was talking to them and they appeared. And it was nice to see them, I didn’t realize how much I missed them. So I have a lot of gratitude and I opened my heart so I could forgive and I realize that unopened heartness was blocking me from relating to my husband and other people that I am afraid to love...” Participant #3: “...It was also really helpful to think about my symptoms and the way I manage the world through a PTSD lens rather than just seeing myself as an anxious person, this was kind of a paradigm shift...”
<b>Self-Improvement</b>	Participant #2: “I’m not 100% healed but I feel this was very powerful and transformative and it’s begun, I can’t say it’s finished but there is a transformation in the works...” Participant #3: “I feel like me but I also feel like a different person in a really positive way.”
<b>Trust</b>	Participant #3: “...and I just kind of trust myself like I trust that it is going to be ok, um, I don’t find myself kind of stuck in hypervigilance that’s what I really felt before this...” Participant #3: “I would avoid social situations before and I feel like now I really enjoy being out in my communities and I have a lot of energy and I just generally feel like things are going to be ok...” Participant #3: “I still have moments but, um, I still kind of struggle in a certain way with trusting people but in general, I just feel calmer and in moments when I don’t feel that way I feel like pretty soon I am able to identify ways I can feel better.”
<b>Forgiveness</b>	Participant #2: “During the last session we had with the EFT before the hypnosis I saw them in the room and they asked me to forgive them and I was actually able to do that. So that was quite poignant.”
<b>Anxiety Relief</b>	Participant #2: “EFT...was helping me to focus my body and get some release from the stressors and making the things that make me feel jumpy and underconfident and worried and alert and the anxiety went down tremendously.” Participant #3: “I really didn’t think it was possible for me to experience the kind of calm and relaxation that these techniques and strategies provided. I really kind of just accepted that I was always going to be jumpy and nervous.”
<b>New Coping Mechanisms</b>	Participant #3: “...I am able to identify ways I can feel better, I can take deep breaths, I can do the tapping exercises.”

**Table 6. Illustration of Responses: Challenges**

<b>Theme</b>	<b>Responses</b>
<b>Challenges in the Process</b>	Participant #1: “It was a little more challenging just in the act of reciting things that actually happened to me to a stranger, and the act of tapping my body based on a directive and the hypnosis took a lot of energy to push through my resistances.”



**Table 7.** Illustration of Responses: Realization of the Mind-Body Connection

Theme	Responses
<b>The Mind-Body Connection (Realization of connection; use of it in the intervention process; its utility as a benefit in outcomes)</b>	<p>Participant #1: Presence of mind-body connection in this process: “...there was something about the act of tapping and reciting those things as past and present that were really engaging physically and mentally and I guess I describe it as you have a deep bruise or strain and when you press against it, there is a feeling of pain and relief at the same time, so it kind of aligned with that.”</p> <p>Participant #2: Mind-body connection as a benefit of the process: “...the word that is coming to my mind is my exo-skeletal system is being rebounded in my deep bone system...my psyche and bone system is being restructured and I feel like hands are just working on me, and I’m not finished but I just feel like I am being worked on like in a workshop and, um, its very powerful. I just feel like I am on an operating table and I am going through a transformation and I am standing up above and seeing it and its beautiful thing, a little scary but I trust that the outcome will be a much stronger me.”</p> <p>Participant #3: Mind-body connection as a benefit of the process: “...Even with sleep I don’t know if I really have a way to describe this but it’s not something I ever tried before this but I just like lie down and then I just relax and I kind of try to go to a similar place that we go to in the hypnosis and I just tell myself that I feel very calm and heavy and I never remember anything after that. I just try to go to that place and then I am able to just be calm and relax and...I found that I am not really anxious all the time anymore.”</p> <p>Participant #3: Realization of mind-body connection and benefit: “...this really did show me that I can experience my body and this world in a totally different way. I am so grateful because I didn’t think this was possible for me.”</p>

1–6 sessions (Church, 2013). It is important to restate that study participants were not diagnosed for the purpose of this study and these results suggest a need for further investigation into the abilities of the combined treatment approach of EFT and hypnosis.

In exploring the potential relationship between hypnotizability and treatment outcomes, BSS scores and participants’ change in PCL-5 scores were positively correlated, but in a notably weak, nonsignificant relationship, as indicated by the bivariate output. This finding suggests that participants’ hypnotic ability may not have an influence on the treatment effect of the combined treatment approach. It is possible that participants may experience the treatment effect regardless of hypnotic ability. According to Hammond (2007), this is inconsistent with research that suggests a higher level of hypnotic ability may produce a more significant treatment effect. However, a study conducted by Price and Barber (1987) found that hypnotic susceptibility had little influence on treatment outcomes. According to Schoenberger (2000), empirical assessments of hypnotizability and treatment outcome are limited and have

demonstrated conflicting findings. Future research is needed to explore the effect of hypnotic susceptibility on treatment outcomes.

Based on the qualitative data, all three individuals, who were strategically sampled, reported a general positive experience and an overall decrease in anxiety symptoms. All three individuals sampled also reported a greater understanding and felt benefit of the mind-body connection after participating in this study. The participants sampled reported an increase in self-trust and overall increase of positive feelings as a result of completing the four treatment sessions. This may speak to why no individual dropped out; all 30 participants completed the study, which is atypical in studies of this population. Clients often drop out of therapy because either their symptoms do not improve or there are alliance problems (Duncan & Miller, 2008). Church, Yount, Rachlin, Fox, and Nelms (2018) noted that PTSD is a difficult and treatment-resistant disorder, due in part to lack of engagement and early dropout in treatment.

If a treatment approach can provide quick and positive shifts, an individual may be more likely to engage in treatment and find further relief.

**Table 8.** Summary of Dominant Themes and Subthemes in Representative Participants

Primary Theme or Emergent Subtheme	Participant as Categorized by Degree of Progress/Benefit		
	Least	Median	Most
Perception of the Experience (as favorable)	X	X	X
Favorable elements: Tapping/EFT	X	X	X
Favorable elements: Hypnosis		X	X
Outcomes of the Process:			
Self-awareness (increased)		X	X
Self-improvement		X	X
Trust (for self & others/improved interpersonal relations)		X	X
Forgiveness (increased or ability to)	X	X	X
Anxiety relief		X	X
New coping mechanisms (acquisition)	X	X	X
Challenges:			
Defense mechanisms (overcoming)	X		
Reticence disclosing to a stranger	X		
Reticence about tasks (i.e., hypnosis)	X		
The Mind-Body Connection:			
Realization of <i>It</i>	X	X	X
Recognition of its utility in the process	X	X	X
Benefits realized as process outcomes		X	X

Additionally, the individual who was impacted the most and the individual who represented the mean reported an increase in self-awareness, self-improvement, trust in self and in others, and empowerment around gaining new coping skills. The individual who represented the mean stated that this experience was “life-changing.” The individual whose symptoms were affected the least discussed challenges in regard to having resistance to the process as well as discomfort working on such deep issues with a stranger. It is important to note that this participant still enjoyed the process and

only wished to have had more sessions to explore the treatment approach. These stated issues should be explored further and could indicate the need for further research with more sessions and greater time to establish rapport.

**Outliers.** Although the results were statistically significant, there were some individuals who did not respond with a clinically significant decrease. Of the 30 participants, the score decrease of five individuals was in the 5–10 point range and one individual’s score decreased by two points. These decreases are not sufficient to

**Table 9.** Themes Unique to the Participant with Least Beneficial Outcome

Theme: Challenges	Explanation
<b>Defense mechanisms</b>	Overcoming defense mechanisms and being open to engage in the process
<b>Reticence disclosing to a stranger</b>	Difficulty opening up to the therapist who is unfamiliar to the participant
<b>Reticence about tasks (i.e., hypnosis)</b>	Difficulty performing tasks such as envisioning, cynicism concerning whether they will work, and discomfort around tapping or participating in hypnosis

**Table 10.** *Themes Unique to the Participant with the Greatest Beneficial Outcomes*

<b>Themes</b>	<b>Explanation/Further Notes</b>
<b>Favorable Elements: EFT</b>	Participants with the most benefit engaged openly with EFT and found it useful.
<b>Self-awareness</b>	Increased self-awareness in the form of learning about oneself or self-perception was a product of the intervention for participants with the most beneficial outcomes and represents an area for improvement and what is possible if the experience of the less successful participants is improved.
<b>Outcomes of the Process: Self-improvement</b>	An enhanced self-perception or realization of how to become a better version of oneself was associated with outcomes in the participants with the most positive feedback. Again, this is a factor for consideration in how to promote this outcome in less successful participants, while also leveraging this component in all participants.
<b>Trust</b>	A greater trust in oneself and one's abilities, as well as in others, which led to improved relationships.
<b>Forgiveness</b>	The ability to forgive others, leading to a better "self" as well as better relationships.
<b>New Coping Mechanisms</b>	The participant(s) indicating the most success derived new coping mechanisms from the intervention that could then be applied in a real-world setting. This is a factor that should be continually emphasized in all interventions and examined for ways to better realize this outcome in participants with a less successful experience.
<b>The Mind-Body Connection: Benefits as Outcomes</b>	All participants recognized, in some way, the use of techniques that involved the mind and body, as well as realized the reality of a connection between the two. However, the participant(s) with the most positive feedback also realized positive physical and mental outcomes after the intervention as a product of the process.

suggest a clinically significant change. A possible explanation for this finding is the potential for individuals to be living with complex trauma rather than single-incident PTSD. An important factor to note here is that study participants were not formally requested to give a personal history including but not limited to child abuse history or previous sexual assaults. Every client met the stated criteria of surviving a recent sexual assault. Throughout the study, however, many participants mentioned a long history of abuse, indicating a potential for meeting criteria for complex PTSD. Up to 85% of individuals being treated for PTSD symptoms may also be dealing with subsequent comorbid issues such as mood disorders, addiction issues, eating disorders, and personality disorders (Ballard et al., 2015). Individuals with symptoms of PTSD that are the result of surviving multiple traumatic events throughout one's lifetime can complicate treatment and this can have an impact on treatment efficacy (Church, 2010). Individuals diagnosed with PTSD who are

living with complex PTSD do not respond at all times with equal recovery results (Dorrepaal et al., 2014). Ventegodt, Kandel, Neikrug, and Merrick (2005) found that between 33% and 68% of childhood sexual abuse survivors were subsequently raped. Most clinicians and researchers agree there is a correlation between childhood abuse and surviving abuse in the adult years. Research that explores these complicated factors is needed.

Keeping this in mind, the treatment outcomes demonstrated in this study indicate a decrease in PTSD symptom severity as indicated by PCL-5 scores, as well as the self-report of feeling better and overall enjoyment of the sessions. It is important to note that qualitative data gathered on the individual who was affected the least (a 2-point decrease) still demonstrated a positive experience, reporting generally feeling better. This individual only wished that more time had been available with the combined intervention to explore further and experience the effects. Future studies that take client abuse history into account are needed.

Future research exploring, if possible, the difference in treatment outcomes between single-incident sexual-assault PTSD versus individuals living with complex trauma symptoms as the result of surviving many sexual assaults over the course of their lives may be useful.

## The Relevance of Findings

The purpose of this study was to provide preliminary evidence into the treatment effects, if any, of the combined treatment approach of EFT and hypnosis on sexual assault-specific PTSD. To the authors' best knowledge, there is currently little research on the combined treatment of EFT and hypnosis on sexual assault-specific PTSD. The hope is that this study paves the way to future research, with larger sample size, control groups, use of biomarkers, and other forms of PTSD symptom change measures. There continues to be a need for research that explores treatment for PTSD symptoms in a routine clinical setting rather than a controlled laboratory environment (Nixon et al., 2016). Furthermore, most of the research exploring PTSD utilizes samples comprised of mixed trauma rather than sexual assault-specific PTSD (Nixon et al., 2016). This study worked to address both of those needs. The first author is a licensed mental health counselor and a certified trauma specialist and conducted all of the sessions in her clinical office. Therefore, study participants had the experience of a traditional psychotherapy setting with a trained clinician, yet they were participating in a research study. Every participant had survived a sexual assault and was seeking treatment to ameliorate PTSD symptoms that arose from this sexual assault. Every participant actively engaged and completed all four treatment sessions as well as the fifth and final debriefing session.

This treatment approach was manualized and can be administered and recreated. Community agencies are typically the first line of mental health treatment for the most vulnerable populations (World Health Organization, n.d.). Due to reasons connected to funding, community agencies are usually limited to providing treatments that have been labeled evidenced-based practices. By continuing to research treatment approaches, especially treatment approaches for PTSD, researchers may be increasing the types of treatment interventions available to these populations.

Current treatments for sexual assault-specific PTSD often involve a cognitive reprocessing element (Nixon et al., 2016). According to Van der Kolk (2014), in the largest published study of CBT for PTSD, one third of participants dropped out and the remaining participants reported a significant number of adverse reactions. Van der Kolk (2014) suggested that successful treatment of PTSD involves helping to restore balance between the rational brain and the emotional brain and learning tools to regulate emotional responses.

EFT does contain a cognitive reframing element, yet it is paired with acupressure tapping and, in this study, followed by hypnosis. Many individuals reported leaving each session feeling positive and relaxed; it is possible that the addition of hypnosis helped achieve this. This positive experience may have helped with therapeutic engagement and prevented participant dropout. Analysis of the qualitative data further revealed an increase in the participants' understanding and experiencing of the mind-body connection as well as the experience of an immediate shift in feelings state. Although much qualitative data were collected to increase feasibility of the study and to focus the understanding of the results, only three individuals were selected and reported on. Future research would benefit from the inclusion of qualitative data on every individual who participated in the study.

## Limitations

Despite the encouraging results demonstrated in this study, there were a few limitations. The first limitation to be discussed is the lack of a control group. This was a dissertation study and, for issues related to feasibility, a control group was not utilized. Future research comparing EFT as a stand-alone to hypnosis as a stand-alone is needed to explore further the potential benefit of a combined treatment approach. Additionally, future research comparing the combined treatment approach to standard treatment for sexual assault-specific PTSD is needed.

A second limitation of this study was the small sample size. In total, 30 participants were recruited and completed this study. However, according to Hackshaw (2008), when investigating a new treatment approach, a small sample size is recommended. As mentioned, this was a small



dissertation study and future research involving a larger sample size is needed.

A third limitation was in the use of only the PCL-5 as a measure of PTSD symptom change. The PCL-5 is a self-assessment measure. Self-assessment measures are limited because they cannot be independently verified (Brutus, Aguinis, & Wassmer, 2013). The PCL-5 was chosen because it is an accessible, reliable, and valid measure of symptom change in PTSD. Research suggests that PTSD impacts areas of hypothalamic-pituitary-adrenal in measurable ways (Yehuda, 2009). Current evidence suggests that EFT may lower cortisol levels in individuals (Church, Yount, & Brooks, 2012). Future research using physiological biomarkers for stress is needed to investigate potential treatment effects.

A fourth limitation in this study was the lack of follow-up. Again, due to the limited resources available for this study, a follow-up to measure PTSD symptoms at the three-month, six-month, and one-year periods were not available. Future research duplicating this treatment approach and including an adequate follow-up is needed to explore whether the treatment effect remains intact.

A fifth limitation in this study was the potential for the “Hawthorne effect.” The Hawthorne effect is characterized by behavioral changes that are due to the act of being observed and the potential for compliance with the apparent hopes of the researcher (Wickström & Bendix, 2000). The Hawthorne effect may be responsible for some of the positive changes that occurred in this study. In an effort to address this, participants were prompted to be as honest as possible with their responses, reminding them that, regardless of the outcome, the data were very useful. Oswald, Sherratt, and Smith (2014) stated that one of the greatest tools to overcome the Hawthorne effect is to establish rapport with study participants. Although an effort to establish rapport was made, this may also suggest a need for follow-up studies that utilize more sessions to aid in the building of the therapeutic alliance. In addition, the first author was both the researcher and the clinician, which may present a confounding variable. This factor may have added to the potential for participants to try to demonstrate a positive outcome. It is important to note that the first researcher repeatedly mentioned to participants the importance of their data regardless of the outcome.

## Conclusion

This study found an overall decrease of 34.3% on PTSD symptom severity based on PCL-5 assessment scores, after only four sessions of the combined treatment of EFT and hypnosis. Results cannot be generalized due to the limitations of this study. Further research, in which the limitations of this study are overcome, is needed to investigate the full potential of the combined treatment approach. Recent studies exploring effective treatment approaches for PTSD rarely focus on sexual assault-specific PTSD but rather used a mixed sample or combat-specific PTSD (Nixon et al., 2016).

Currently, it is estimated that every 98 seconds an American is sexually assaulted (RAINN, n.d.). It is further estimated that 70% of rape and sexual assault survivors will experience PTSD or symptoms of severe distress (U.S. Department of Justice, 2016). The current research has not yet caught up to the scope of this issue. Research exploring effective treatments for sexual assault-specific PTSD is needed. Effective treatments that are affordable and easy to administer are crucial.

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