

University of Nevada, Reno

**The Possible Effect of the Combination of Family Systems Point of View with Either
Eye Movement Desensitization and Reprocessing or Cognitive Behavior Therapy**

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Abstract

Trauma, and more specifically Post-Traumatic Stress Disorder, is the after effect of experiencing something that is too overwhelming for the mind to simply move past. Several methods have been developed to help treat PTSD. Common methods are Cognitive Behavior Therapy (CBT) and Eye Movement Desensitization and Reprocessing (EMDR). Both of these methods focus on the individual, as the individual is the one with the trauma. Less commonly used are group based therapies that focus not only on the individual, but on the effect of the trauma on those around individuals with PTSD as well as the effect of other people on the individual's in regards to trauma. One of these methods is referred to as Family Systems Therapy (FST). In this literature review the efficacy of all three (EMDR, CBT, and FST) methods will be reviewed. Furthermore after reviewing the similar level of efficacy for all three methods the review will put forth that the treatment methods can be used in conjunction. While CBT and EMDR have been used together, there is little research on the use of group-based therapy and individual-based therapy together. This literature review seeks to provide a base of information for researchers to further perform experimentation on this concept.

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Introduction

In the broadest sense this research begins with the concept of trauma. There are two types of trauma; physical, in which the body is damaged in some way, and psychological trauma, in which the mind is impaired. When dealing with physical trauma, the psychological is not far behind. This paper will delve into the psychological aspect of trauma.

Psychological trauma is still a massive field. First it would be pertinent to offer a rough definition, and it must be a rough definition because when one deals with the mind there are almost never certainties involved. There is also still a sufficient lack of knowledge regarding the field due to its complex history of study. Trauma, which is described by the DSM-V as Post-Traumatic Stress Disorder, is best described by the classic trauma text written by Judith Herman (1997), “The ordinary response to atrocities is to banish them from consciousness. Certain violations of the social compact are too terrible to utter aloud: this is the meaning of the word *unspeakable*. Atrocities, however, refuse to be buried. Equally as powerful as the desire to deny atrocities is the conviction that denial does not work” (1). Denial is directly referring to the manifestations of the symptoms of PTSD or trauma.

When someone experiences a terrible event, part of that event becomes suppressed in the mind as the mind tries to forget about the memory. However, minds do not work that way and this suppression usually resulting in the trauma leaking out in symptoms of PTSD. These symptoms fall into three categories: hyperarousal, intrusion, and constriction (Herman, 1992; Zaleski, Johnson, & Klien, 2016; Friedman, 2017).

Hyperarousal is when unconscious or conscious thoughts cause the subconscious to leave the body in a constantly alert state. Intrusion is return of the trauma in full force from the unconscious memory to the conscious mind, stopping time at the point of trauma. Lastly, constriction is a feeling of complete powerless and can cause a state of full body surrender (Herman, 1997; Zaleski et al., 2016).

The National Center for PTSD found that 6.8% of the population has a lifetime prevalence for PTSD. Adolescence have an estimated 3.7% for boys and a 6.3% chance for girls to have PTSD. Veterans, who are a high risk population for PTSD, were estimated to be at 30.9% for men and 26.9% for women veterans of Vietnam, and 13.8% for Iraq War veterans (Gradus, n.d.; Bisson, 2007).

Narrowing a little more, there is a broad spectrum of treatment that is equipped to help ease the burden of PTSD, though arguably it can never be fully recovered from (Herman, 1992). Traditionally the first efforts used to combat the illness, aside from simply placing a traumatized person into a psychiatric hospital, is drug therapy (Friedman, 2017). There is a range of drugs used to combat PTSD, none of which is specifically suited for PTSD. Rather they are used to combat the previously mentioned symptoms. Some of the drugs include antidepressants, anti-hallucinogens, mood elevators, hydrocortisone, and adrenaline blockers (Friedman, 2008). There are also forms of treatment that work specifically on the mind: such as exposure therapy, Cognitive Behavior Therapy (CBT), and Eye-Movement Desensitization and Reprocessing (EMDR). Since the field and literature are so broad this paper seeks to explore just two of these methods, CBT and EMDR.

CBT focuses on altering a traumatized individual's ways of thinking to a more positive light in which the individual is able to get past their mental blocks. EMDR is a disputed field, but generally the idea is that the brain becomes overstimulated. This overstimulation makes it easier to talk about traumatic memories without the complication of regression (EMDR Institute, 2017).

A problem that arises from the field of trauma study is that treatments are almost solely individual focused. The problem is addressed with an entirely different field of study comes into play called family therapy. This field revolves around the idea of treating the entire family to alleviate dysfunction and even trauma. Family Systems Theory (FST) suggests that the family (either of origin or choice) is a continually linked system in which every action of every member affects all other members (Ford, & Saltzman, 2009; Mendenhall, & Berge, 2010).

The problem that this paper seeks to address is that there is a lack of combination of treatment modalities in mainstream psychology. This paper first seeks to show that the efficacy for both EMDR and CBT are essentially at the same levels independently, but when used together they offer even better results. There is also a lack of research in the efficacy of family systems theory on trauma, therefore it is also the goal of this paper to display the need for research. Once the need for research has been displayed the second phase will show that CBT and EMDR can work in conjunction with Family Systems Theory. The combination of the individual focused methods and FST would in theory be able to provide a better and easier healing experience for the trauma survivor.

Significance of Study

The need for this type of research is critical as combining treatments is not practiced by many psychologists that could find combining treatments useful. The compilation of research in one easy to find place would make running real life trials easier for other psychologists, thus creating a new avenue in psychology. Above all else in importance is that this type of treatment, if developed, could help people either more quickly or with ease, or the treatment will simply get people to budge when other treatments do not work. After all, this is all about the people that need the help the most.

History and background of Treatment

The roots of behaviorism began in the late 1800s with physiologists looking at the behavior in animals and trying to determine if the behavior was learned or instinctual. The first psychological experiments began with Pavlov and Bekhterev, who emphasized conditioned reflex response—theories when one can essentially be programmed to react a certain way (Pavlov, 1897; Bekhterev, 1932; Scott, 2012). The concept of generalization stated that things similar to the conditioned stimulus provided the conditioned behavior. The concept of extinction showed that if a behavior was not reinforced for a certain amount of time the behavior was reduced and terminated. The field of behaviorism was founded by J.B. Watson, insinuating that everything is based on behavior and how people react to stimulus (Watson & Rayner, 2000; Scott, 2012). Watson suggested behaviorism could be applied to people not just animals. Watson was the first to experiment on humans, though they were infants. His work supported that it wasn't only simple motor habits that could be conditioned, but also traits of the personality. Later in the mid-1900s

B.F. Skinner introduced the idea of operant conditioning and shaping which further specified the field (Skinner, 1953; Scott, 2012; Mills, 2000). Then came Bandura who combined the cognitive and behavioral frameworks leading into CBT (Bandura, 1961; Mills, 2000; Scott, 2012). After the initial gateway was opened by the previously mentioned leaders in behaviorism, Aaron Beck was able to create the term and field of study that is CBT (Beck, & Dozois, 2014; Scott 2012).

CBT is about the concept of implicit cognitions or rather the thoughts we think to ourselves (de Arellano et al, 2014; Scott, 2012). These cognitions largely affect how we react to and think about everything. Therefore if these implicit cognitions are changed then the behavior and emotions may change. A student taking a test who has high anxiety will see other students turning in the test and may think “I am stupid because all these people are done and I’m still sitting here.” While someone with low anxiety may think, “Man those guys must have not known anything. I’m still sitting here because I want to make sure I get every answer right.” These cognitions actually go on to affect the performance of the student in a test with the high anxiety person scoring lower than the low anxiety person (Scott, 2012, Beck, & Dozois, 2014.). CBT changes the implicit cognitions to a more positive, less anxiety-based cognition, and the result is positive in the end. Implicit cognitions is more complicated in regards to automatic thoughts, in which one has cognitions based off no reaction to the situation, but implicitly automatic reactions (Beck, & Dozois, 2014). Automatic thoughts are harder to break because they are reflexive for the individual, but it is the objective of some forms of CBT to specifically target these cognitions and put them through extinction. One of these ways is by producing self-talk in which the patients talk to themselves explicitly trying to reduce

the automatic thoughts. The behavioral component comes into play when using CBT to put a behavior through extinction (Beck, & Dozois, 2014).

Seven different layers are involved in treating trauma from a Trauma Focused Cognitive Behavior Therapy perspective (TFCBT) (Scott, 2012; Cohen, Mannarino, Kliethermes, & Murray, 2012). The layers begin with reconstructing and managing the latest trauma representation, then constructing a view of self, others and the world, reconstructing the view of the future for the client, reconstructing view of traumatic stimuli and attention control, and reconstruction of the daily transactions. Each of these layers is typically addressed one after another, breaking each aspect of the trauma into its own phases. The first of the layers to be addressed should be reconstructing and managing the latest trauma representation. Two different ways that are employed to reconstruct the trauma, these are having the client listen to audiotapes of the trauma or having the client write about the trauma (Cohen et al., 2012). Audiotapes and writing are used to normalize the trauma to a certain extent and get the patient used to talking and thinking about the trauma without breaking down. According to Scott (2012) the written method results in more compliance. One reason that writing works better is that the event is restricted cognitively when one is writing about the event, but if the patient is listening to audiotapes there is less cognitive interaction. Another reason that writing is more beneficial is that it is more easily controlled (Cohen et al., 2012). Though the eventual goal should be to get one to write a page every day about their trauma one can start with a paragraph, a sentence, or even a word. Writing ends up limiting the impact of the trauma so a tolerance can slowly be built. The end goals of the writing include being able to

utilize one's emotions in the writing, but not go overboard. There is also the telling of the whole story, not the watered down version that is often told at the beginning of therapy.

The last part of the first layer is that, there is a more positive appraisal of the trauma such as, "I won't let this control me anymore." After the trauma's effect has been lessened it is likely that the patient is ready for a more exposure based treatment, in which the client is to imagine the traumatic scene in great detail (Cohen et al., 2012; Scott 2012). Exposure involves teaching the client ways to calm themselves while experiencing trauma much like the positive appraisal statement above. These positive statements are included before the reexperiencing of the trauma, during the trauma, and when the client is feeling overwhelmed. Once these statements are established then the exposure begins as the clients are able to use the statements to calm themselves before and during the treatment. Once the client gets through the memory, they are able to see more how it can no longer harm them. Exposure-based treatments utilize this for much longer than than in TFCBT.

The second, third, and fourth aspects of recovery involve constructing the view of the self, others, and the world. This is done by reconstructing what is called the prism of PTSD. This is a metaphorical prism that has three sides: self, others, and world. It is referred to as a prism in that negative thoughts are created and then are reaffirmed by bouncing around between the three different views (Scott, 2012). To combat this, each side of the prism must be removed, thus stopping the negativity from bouncing around. The best way to degrade the negative self perception is by the socratic method (Clark & Egan, 2015). In this method the therapist challenges the validity, utility, or authority of the information that the client is saying. As the negative self thoughts are often regarding

one's worth, or after the trauma they are a different person, the therapist can question why this is true for the client. Eventually the client will not be able to adequately defend their stance and will therefore be able to see why their negative self perception is wrong. Often, guilt is associated with a negative self view; in this case it is best to use a "frame by frame" method, in which the client and therapist go through every moment of the trauma in the smallest detail possible. This often breaks down the guilt because the client sees that there was no "right" decision in the first place and the one that they made is the right one (Clark & Egan, 2015; Scott, 2012). The therapist will also communicate how difficult it is to make split-second decisions such as those that are often made in traumatic situations and a person cannot be blamed for what they do in such a short time.

As for the side of the prism that represents the greater world the solution is in vivo exposure. Exposure means that the clients themselves shape their own boundaries and push those boundaries. As most problems in consideration of this side of the prism are relating to fear meaning, this is the best method because the client can slowly step outside their comfort zone and test their fears (Scott, 2012). In doing this they will see more and more that their fears are unfounded (Coffey et al., 2016). This can also be used for the "others" side of the prism, because many of the negatives associated with this side revolve around fear. These are fears such as "no one likes me" and "they want too much from me." The client can test these out, often finding that their community steps up to support them. Being open and communicative with one another is also something that should be stressed with the client as hiding one's true feelings is often dangerous for relationships of any nature (Scott, 2012).

The fifth layer to tackle is reconstructing the view of the future for the client. It is often that client feels like their life began and ended with the trauma, making their past seem like an entirely different person. In this reality they have no past and no future as well, just the trauma. One way to help them understand that life is a continuum is to bring them back before the trauma, or to early trauma if they have some childhood trauma (Lowe & Murray, 2014). The client is to write “I am..”, “Life is...”, and “So I...” statements before hand. Then when brought back to the time of the event they are ask if they know what they do now would they have different statements based on that knowledge (Scott, 2012). This separates the self into two versions the younger self and the adult self. The client is shown that the adult self can now take care of the past self, thus returning a version of the past or tackling childhood trauma (Lowe & Murray, 2014; Scott, 2012).

The sixth layer to be reconstructed is the view of traumatic stimuli and attention control. Trauma survivors are often vigilant for anything resembling their trauma. Once they find something close enough it will “trigger” them, send them into a hyper aroused state (Scotland-Coogan & Davis, 2016; Scott, 2012). A method to counter this is to train the client to list the differences between their current situation and the trauma situation. This should help to calm them and distance themselves from the traumatic situation. Another thing to do is to not only focus on the differences, but also the positives of the situation, For example if someone had been assaulted, then the survivor could focus on what a nice day it is rather than on how the man in front of them is the same size as their assailant (Scotland-Coogan, & Davis, 2016). It is even helpful to have the client get behind a cause that supports protecting others from what they went through.

The seventh and final layer that needs reconstruction is the daily transactions that one endures everyday. It is not the doing of these tasks, rather the way they are handled by the survivor. A cycle is created in which daily hassles are met by poor problem solving or communication (Scott, 2012). This is then met by anger which causes the person to become alienated, thus putting them in an even worse mood. To counter the first aspect, daily hassles, the client must recognize that there is something that must be done rather than ignoring it or passing it on to others. They then should treat each problem one at a time allowing for celebration when a task is complete (Scotland-Coogan & Davis, 2016). The client should also visualize the consequences for the problem for some time in the future be it six months or six weeks. The client should also be reassured that this is not a problem specifically to them or even trauma survivors everyone can get overwhelmed by daily living sometimes. When tackling poor problem solving and communication one must remember that trauma survivors live with fear constantly in the background. Focusing on tasks can be a way of managing that fear (Scotland-Coogan, & Davis, 2016). Clients can get into the mindset of solving problems by using the phenomenics TIC and TOC (Scott, 2012). TIC stands for tasking interfering cognition, this is when thoughts interfere with tasks. This would be a statement like, "I can't even think about bills right now." This should be replaced with Task Oriented Cognitions (TOC) that are positive statements about completing tasks. This would be something like, "I'll just look over the bills for now then take a break before I start cutting checks." One must also stress to the clients that there is not always going to be perfect solutions to problems so one should be prepared for some semblance of failure.

The client experiences anger because the client feels a loss of control or blames those who are responsible for their trauma. In some respects survivors become obsessed with control as a means of protection. Since the client was out of control when the trauma occurred anger is the client's way to take back some of the control they believe they have lost. The best way to treat anger is by focusing on one's overall mood. Like anger, alienation is an aversion to the trauma specifically an aversion to talking about the trauma. Alienation is helped by the emotional numbness that one feels after having received trauma. The client must recognize their feelings of anger and alienation as common responses to trauma and the client are by no means unloved or incapable of love. The client should designate a specific time to communicate especially if that time is with their partner. Although anger is a big one there are also other negative emotions associated with trauma such as extreme sadness. The counter to this is using a MOOD chart to monitor and plan to change one's mood (Scott, 2012). This starts with M for monitor the mood, what are they doing and how are they feeling. Then O for observe thinking, what are they thinking about their emotions and how can more positive ones be established. The next O stands for objective thinking, pulling the emotion for the situation momentarily and analyzing what can one do objectively to fix these emotions. Lastly, D stands for deciding what to do and doing it, which is using the previous objective thoughts to decide what the best course of action is and then actually implementing it (Scott, 2012).

It should be noted, however, that there are possible down sides to this type of treatment, specifically the exposure component. In a study called *The Cruellest Cure*, it is analysed whether or not exposure therapy is ethically sound due to the danger of further

traumatization during recall. (Olatunji, Deacon, & Abramowitz, 2009). The researcher's question was based off the notion that although exposure in CBT has been shown to be efficacious time and time again it has a very low rate of use. Many therapist do not even consider exposure as a means of trauma treatment when considering a client (Olatunji et al., 2009). Despite these contentions in the end the researchers found exposure to be safe for use with a majority of clients, however, it was also stated that it is up to the therapist to make the decision on whether or not a client should participate (Olatunji et al., 2009). . That being said a wrong judgement could potentially make way for further traumatization, even if there is a low chance of that happening. In concurrence with this idea there was another study that suggests exposure is not needed in trauma recovery. Researchers utilized a internet based trauma treatment program in which half of the participants used exposure and half did not (Spence, Titov, Johnston, Jones, Dear, & Solley, 2014) . Thirty-eight (38) percent of the people participating in the non-exposure treatment and thirty-two (32) percent no longer met the diagnostic criterion for PTSD (Spence et al., 2014). This makes the difference not statistically relevant implying that both have the same level of efficaciousness. If it is dangerous, even in the slightest, to use exposure than this study suggests there is a way to avoid that risk.

Eye Movement Desensitization and Reprocessing

The second of the psychological techniques to be examined is Eye Movement Desensitization and Reprocessing (EMDR). The examination of a second technique is necessary because if one individual focused technique is better than the other then there would only be a need to use the more efficacious study. EMDR is a relatively new

technique that has only been around since the mid 1990's when it was developed by Francine Shapiro (Shapiro, 2001). Since EMDR is a relatively new development, EMDR has made significant gains within the field of psychology, but has not gone without being met with a large amount of criticism by those such as Muris & Merckelbach (1999) (Hout, 2012). These criticisms were based largely off of the lack of empirical evidence that the treatment had behind it, but this area of literature has grown significantly since its creation. In 2005 the technique was able to meet the criteria of "evidence-based practice" in the United Kingdom set by the Institute of Clinical Excellence as well as meeting the standards set by the American Psychiatric Association, and the Australian Centre for Posttraumatic Mental Health (Regel & Joseph, 2007). Further evidence that supports the efficacy of EMDR as a treatment for PTSD is shown in a meta-analysis (Bradley, Greene, Russ, Dutra, & Westen, 2005). Yet another meta-analysis (Seidler & Wagner, 2006) reaffirmed that EMDR is just as effective as Cognitive Based Therapy (CBT), which was the current leading treatment of PTSD treatment at the time (Hout, 2012).

Even though EMDR has been shown to be useful in the treatment of trauma there is not a consensus within the community regarding how and why it works. The first of the three major hypotheses on how EMDR functions states that the eye movements used in EMDR are actually no more than a placebo, and the real effects of the therapy come purely from the aspect of exposure in the treatment. If this were to be true then this would mean that the recall phase of EMDR would provide a similar emotional reaction to the recall plus eye movement phase of EMDR. Over sixteen (16) experiments have been run solely on this aspect of EMDR. All results have shown that the emotional reaction to the stimulus was significantly decreased in the eye movement stage as opposed to the only

recall stage (Hout, 2012; Lee & Cuijpers, 2014; Engelhard, van den Hout, Janssen, & van der Beek, 2010).

The second of the hypotheses, referred to as Interhemispheric communication, is suggesting that only horizontal eye movements create more communication between the different hemispheres of the brain causing there to be better recall, but with decreased emotional reaction to the event (Hout, 2012, Gunter & Bodner, 2009). Gunter and Bodner's study both helped to prove this effect, but also devalued the effect due to the test that they ran involving horizontal, vertical, and no eye movements. In theory only horizontal eye movements should be helpful, but when the experiment was conducted, it was found that both the horizontal and vertical eye movements decreased negative reaction to the stimulus. The researchers provide a brief explanation for this, but it does not completely explain why vertical eye movements also make a difference.

The third hypothesis involves the use of working memory to draw out long term memories that hide trauma. Both recalling a memory and rapid eye movement call upon the working memory of an individual, therefore muddling the individual's memory when recalling the aversive memories. This counteracts memory inflations, which is what happens when one recalls a memory several times over. This memory inflation can cause significant mental harm to one going through EMDR, not to mention how the memory may altered. When another task is being done such as rapid eye movement the brain is unable to recall the memory in full force allowing it to be analyzed more liberally and without as much chance in retraumatizing the person (Hout, 2012; Goff, & Roediger, 1998).

EMDR is a phase-based therapy program that requires patients to complete certain phases to move on, also allowing clients to drop back phases if needed. According to the EMDRIA (Eye Movement Desensitization and Reprocessing International Association) as well as Francine Shapiro (founder) eight steps go into the process of EMDR (EMDR International Association 2017; Shapiro, 2001; van der Vleugel, van den Berg, de Bont, Staring, & de Jongh, 2016). The first phase is the history and treatment planning phase. In this phase a history of the client is taken, the history taking can be brief or extensive. An important aspect the therapist needs to know is why the person came into therapy and what past events may be related to the person's trauma. Once the history is taken a treatment plan is developed for the individual to suit their specific needs. This stage only lasts for one to two sessions (Shapiro, 2001).

The second phase of the therapy is called the preparation phase in which the client is prepared for the intensity of therapy. The process of EMDR is explained to the client including how it works, the theory behind it, and what to expect from it. This is also the phase when trust is built between the client and the therapist, this is incredibly important as trust is key to any therapy (EMDR International Association, 2017). The client is also taught relaxation techniques that will be used to calm them down in the case that the traumatic memories become too intense. This phase should last between one and four sessions unless the trauma is extreme in which case more time may be required (EMDR International Association, 2017).

Third comes the assessment phase in which the therapeutic process actually begins. The first step involves taking a specific picture of one of the traumatic events that were identified in the first phase (van der Vleugel et al., 2016). Then the client picks a

negative self-belief (i.e. “I am worthless”) that is associated with the event that they are picturing. Then a positive statement (“I am worth happiness”) is picked to replace the negative self-belief. Then the client rates how true they feel the positive statement is on a scale from one to seven, this is called the Validity of Cognition Scale (VCS) (van der Vleugel, et al., 2016; Shapiro, 2001). It is key that the rate this based off how the client feels not how the client thinks because a client can know they are not worthless, but still feel that way. The client also identifies all of the negative emotion and physical reactions that they experience due to the event. The disturbance caused by these emotions and reactions are then rated on the Subjective Units of Disturbance (SUD) Scale that rates from one to ten (van der Vleugel et al., 2016, Shapiro, 2001). For a single traumatic event this should take three sessions or at least significant improvement should be seen within that time frame. These first three steps are key for EMDR, even though they do not utilize eye movement they are important in setting up the client for therapy.

The fourth phase of EMDR is the desensitization phase, in which eye movements are finally used (or another form of stimulation) (van der Vleugel et al., 2016; Shapiro, 2001; EMDR International Association, 2017). The specific event is targeted until the rating on the SUD scale drops down to one or zero. During this time other events and feelings are brought up associated with the original event, then these are targeted until they are also at a one or zero on the SUD scale. This can last as many sessions as needed, but is generally not less than three sessions (EMDR International Association, 2017).

The fifth phase of EMDR is called the installation phase where the positive cognitions are reinforced (Shapiro, 2001). In the previous stage the negative self talk was proven wrong so in this stage not only is negative self-talk lessened, but positive

statements aren't just made they become true. It is also important to note that positive statements that are false are not reinforced, but rather achievable positive goals. The validity of the cognition is measured on the VCS from one to seven, seven being the statement is fully believed (van der Vleugel et al., 2016). In this stage the trauma is transferred from the motoric memory (physical memory) to the narrative memory where it can be adequately processed.

In the sixth stage of EMDR, called the body scan phase, the original target memory is brought back to mind (Shapiro, 2001). If the client experiences no physical reactions (such as body tension) during this phase then they are free to move on to the next step. If there is body tension then that will let the therapist know that they have not caught everything yet (EMDR International Association, 2017). The therapist will have the client return to the installation phase to try and target the residual hangups that the person has about the trauma.

In the seventh phase, the closure phase, the patient learns what to do in between session and ways to maintain what they have worked on (Shapiro, 2001). Lastly, in the reevaluation phase the patient returns to make sure that their progress hasn't regressed and to work on any other traumas that they may have (Shapiro, 2001). This gives the therapist a chance to reevaluate as well in the case that there is something else that they feel should be done.

Again the limitations of using EMDR must be assessed briefly. One limitation as stated before is that the community is still unsure of how EMDR actually works. While many are starting to believe in the interhemispheric communication theory there is still no solid amount of evidence to back any theory. This limitation can be solved by further

research in this specific matter pertaining to EMDR. Another limitation is the same as CBT in that exposure could provide risk for the client. Even though this is already a small chance, made even smaller by activating the working memory, it is still of concern. There is also rumblings that EMDR causes migraines and even brain failure. These are all made by people in online forums and have no evidence to back them whatsoever. Still this must be noted when one considers use of the trauma treatment method.

There is often what seems to be competition between those that support either of these individualist methods of treating trauma. Traditionally CBT was thought to be the most efficacious, due to its longer standing position in the field of psychology. Not only has it been around longer, but there are many more clinical trials involving CBT. As stated previously in the paper, recently EMDR has been rivaling CBT and many are starting to advocate for its increased efficacy.

Family Therapy History and Use

The field of family therapy took roots in the late 1930's with the beginnings of family life education spearheaded by Ernest Groves (Groves, 1941; Thomas, 1992; Goldenberg & Goldenberg, 2012; Broderick, 1993; Kerr, 1981; Lebow and Sexton, 2016). Cultural beliefs stressing the individual caused the field to take a long time to spring up, but in the 1930's and 1940's these ideals were starting to shift for some. The field began to gain speed in the mid 1900's due to World War II and the work of Lidz (1949) and Wynne (1950's). Their work involved the testing of family therapy in schizophrenic people (Lidz, Cornelison, & Fleck, 1965; Wynne, Cromwell, Matthyse, 1978; Thomas, 1992; Goldenberg & Goldenberg, 2012; Lebow and Sexton, 2016). This

influenced a number of soon to be figureheads in the field such as Ackerman (1957), Bateson (1951), Bowen (1946), and Whitaker (1946) (Thomas, 1992; Broderick, 1993; Kerr, 1981). It was at this point that Bowen began the creation of family systems therapy (Bowen, 1964; Thomas, 1992; Lebow and Sexton, 2016). The first journal for the field arose in 1961 and it was called *Family Processes*. It was not until this point that one could become professionally licensed in family therapy (Thomas, 1992). In the 1970's the number of people within the field tripled to over 7,000 members in the American Association for Marriage and Family Therapy (Goldenberg & Goldenberg, 2012). At this point it had already spread to Europe from the United States and therapist from both countries began to compare techniques. By the 1980's the amount of those in the AAMFT was doubled again (Lebow and Sexton, 2016). With this increase the amount of publications in the field went up as well as diversity of techniques. It was also at this time that family therapy was finally considered on par with of psychological techniques at the time (Thomas, 1992; Goldenberg & Goldenberg, 2012; Lebow and Sexton, 2016). In the 1990's the field further diversified with new techniques such as constructionist theories (Broderick, 1993). By the 2000's family therapy has become much more widely known and implemented, as well has continued to diversify its practices.

Family Systems therapy as mentioned above was inspired by Bowen's work with the schizophrenic (Thomas 1992; Kerr, 2000). Family Systems theory essentially states that the family is always part of the individual and that the individual is always part of the family (Thomas, 1992). Therefore, both the individual and family will always affect each other in whatever they do. A good example of the interaction between individual and family, in the traumatic sense, would be an adolescent girl who has been raped. After the

rape, the father cannot stop talking about how if he ever got his hands on the perpetrator, he would murder him. Likewise after the rape, the mother breaks into tears at the slightest mention of it. Not only has the daughter been traumatized by the rape, but now she is forced to witness the negative effects of her trauma on others. The negative effects on other leads to even more self-blame and self-hatred as she transfers her parents pain onto herself. FST shows that what has happened to the girl affects her family as well as what happens to her affects them (Kerr, 2000; Goldenberg & Goldenberg, 2012). In turn the realization of how family is affecting her would lead to group therapy in which the daughter would be able to tell her family how these comments made her feel. The group therapy would also lead to her family to changing their behavior so their actions and words actually help with the trauma instead of increasing it. It is a reciprocal dynamic: traumatized individual affects the family and family affects the individual.

An even more specialized extension of Family Systems Therapy is referred to as Trauma Systems Therapy (TST). TST is simply a type of systems therapy that is specifically designed to target those who have had trauma (Hidalgo, Maravić, Milet, & Beck, 2016; Saxe, Ellis, Fogler, & Navalta, 2012). Since TST is a very new treatment there is not a streamlined way in which TST is conducted, rather each implementation is different. Therefore several examples of the therapy will be used to give an idea of what a TST treatment plan would look like.

In a study done by Brown, McCauley, Navalta, & Saxe (2013) there is an outlining of how TST is supposed to progress based off of its use in residential settings involving children and youth. The first thing to know is that TST is based on the idea of trauma systems in which there are two criteria. The first is that the child has difficulty

regulating their emotions, and the second is that the child's environment is not conducive for healing (Brown et. al, 2013; Redd, Malm, Moore, Murphy & Beltz, 2017). Finding these means in the beginning of therapy it is imperative that the therapist takes great care in assessing and identifying those criteria and their intensity. This can be done through observation of the child and their environment (Brown et al., 2013; Redd et al., 2017). Once the evaluation is made the child can then be matched with the phases they are in and treatment can begin. One must note however, that these evaluations should be happening throughout treatment to measure progress and make sure there is no regression (Brown et al., 2013).

Brown and colleagues found the creation of a common language to also be quite important in the establishment of TST. This is referring to a common language between the parents, children, and staff so that everyone is on the same page (Brown et al., 2013; Ellis, Fogler, Hansen, Forbes, Navalta, & Saxe, 2012). An example of common language is the use of the word "bad" or "difficult" when referring to a traumatized child. Whether or not the use of bad and difficult is the parents referring to the child or the child referring to himself/ herself in the fashion, things are not as simple as that. The child may be exhibiting bad behavior, but that does not make them bad, that makes the child reactive to either a stressful environment or past traumatic events (Brown et al., 2013). There are many other parts of language to make more common between all parties. The point is to make a common language that is safe and comfortable for everyone as to make communication between so many parties easier for everyone (Brown et al., 2013; Ellis et. al, 2012). After the development and implementation of such a common tongue it will be far easier to hone in on the "priority problems" that will be targeted throughout the

therapy. One of the best ways to identify these priority problems is by using a “moment by moment” assessment in which the child is observed in times of dysregulation, in hopes of deriving a particular cause, whether it is environment or recall related (Brown et al., 2013; Ellis et. al, 2012;2011; Redd, et al., 2017). The identification of the priority problems allows for the problems to be broken off into different areas such as clinical, education, and social environment and are thus more easily targetable.

The Child Ecology Check In, is a form that a therapist can use to more accurately and consistently evaluate the child (Brown et al., 2013; Murphy, 2016). Questions are asked and then ranked on a scale of one to eight, eight being the most intensity. The first two questions are concerned with emotional regulation, such as how sad and anxious has the child been. The next two involve behavior regulation, such as to what extent has the child’s behavior been harmful or aggressive towards themselves and others. The next two directly assess trauma, such as to what extent has the child or someone important to them been threatened or endangered and has the child experienced something that reminded them of a traumatic event. There are also two questions based on caregivers, to what extent has the child’s caregivers and the treatment team not been able to provide for the emotional needs of the child. Lastly, the last two questions are about the Service System, meaning to what extent did the school system and service system (courts, medical services, and child welfare agencies) fail to provide for the child (Brown et al., 2013; Murphy, 2016).

Something else that is important to note when looking at TST is that it is a combination of clinical and organizational methods (Ellis et. al, 2012). Not only does TST follow a clinical method, but it organizes many different clinical methods together to

create the best possible plan for an individual. TST draws from several different areas, home- and community-based care, outpatient, skills-based psychotherapy, psychopharmacology, and services advocacy (Saxe, Ellis, Fogler, & Navalta, 2012). TST incorporates many different mental health professionals to collaborate on the perfect way to treat a client. Due to TST's complicated nature TST can be time consuming and expensive, but it also allows TST to be highly effective and diverse. The diversity in the treatment allows for a greater spectrum of clients that can be helped.

Further explanation of the process of TST is provided in the 2012 study done by Saxe, Ellis, Fogler, and Navalta. In the study TST is compared to care as usual, in this case represented by psychotherapy. Their engagement strategy went by the name of *Ready-Set-Go!* being perhaps one of the simplest representations of TST as these are the simply the baseline concepts of the therapy with no added surveys or measurements (Saxe et al, 2012). *Ready-Set-Go!* consists of three simple aspects the first and foremost being establishing a trusting treatment alliance with the family (Saxe et al., 2012; Ellis et. al, 2012). Then with the family practical barriers to treatment engagement are assessed. After these are assessed interventions can be planned and implemented. Lastly, psychoeducation about the nature of traumatic stress and perhaps more importantly there is a discussion based on the importance of the family's active role in TST and the understanding of TST (Saxe et al, 2012).

As explained the systems approach takes into consideration the whole family and the therapy is far less useful if the family is not on board or refuses to acknowledge their role (Saxe et al., 2012; Ellis et. al, 2012). At the end of the period there should be a comprehensive plan developed by the therapist and the family that seeks to work out a

particular set of problems. There will also be a specific way in which to deal with these issues and if it is possible these solutions should have particular values to family members. This is because it is much more likely that the family will actually participate and be conscious if the issues are relevant to them (Saxe et al., 2012). The study was apparently largely successful due to the fact that at the three month assessment 90% of the clients remained in the program compared to 10% of the care as usual clients (Saxe, et al., 2012). It was directly related to the attention that is paid to the specific wants and needs of the client and parents.

In a study done by Hidalgo, Maravić, Milet, and Beck (2016) staff were trained in TST to work with over two hundred children in several different locations. Part of the program relies on a playing program called *Life is Good Playmaker* training, however the training was not for the children, and it was the staff. It took the four domains of playfulness, which are, safety and empowerment, social connection, active engagement, and joy (fun and positive feelings) (Hidalgo et al., 2016). During the training the staff played games that emphasized these values as well as trust and collaboration. The staff was then asked to implement the training in their personal and professional lives. The training was a major benefit to the children because the training made the staff more inclusive and supportive of client while they went through their own therapy (Hidalgo, et al., 2016). Though the study did not particularly target the clients it still benefited them in the end through the staff doing better at their job. Not only was more connection with the clients provided, but interstaff teamwork rose and burnout decreased. Using the Trauma Attachment Belief Scale it was shown that there were significant changes in perception of relational ability by the end of the study (Hidalgo, et al., 2016). Staff was recorded

saying that they felt “better equipped to effectively and safely manage the children” (Hidalgo, et al., 2016, pg. 23). The usage of restraints also dropped to zero for up to eight months after the implementation of the program. The study shows that not only is TST beneficial for clients, but also for the staff, thus making therapy more effective.

The comparative efficacy of CBT and EMDR in Treatment of Different Types of Trauma

Out of the different types of trauma treatment CBT is already the main trauma treatment (Hamblen, et al., 2009; Margolies, Rybarczyk, Vrana, Leszczyszyn., & Lynch, 2013; Billette, Guay, & Marchand, 2008; van Dam, Ehrling, Vedel, & Emmelkamp, 2013; Hind, Cotter, Thake, Bradburn, Cooper, Isaac, & House, 2014). Therefore the efficacy of CBT has already been conveyed due to its frequent use and long standing establishment in the trauma community. As a result CBT’s established efficacy, this paper will not be focusing on the efficacy of CBT. Instead it will be focusing on showing that EMDR is at the same level of efficacy as the leading form of treatment. CBT will be discussed, however, in regards to some direct comparisons between the two types of trauma treatment.

The comparison of multiple types of trauma is necessary and essential to this analysis, different types of trauma have the potential to affect people differently. While trauma on the whole functions the same across the spectrum of trauma such as the broader terms such as hyperarousal, intrusion, and constriction, there can be subtle differences in expression. For example someone that has survived a natural disaster will not have the same triggers as a soldier who is fighting overseas. They both could indeed

have trauma, but the sounds of a helicopter may agitate the soldier where it could alleviate a disaster survivor because they were rescued by a helicopter. It is because of these subtle differences that different types of trauma will be compared with both CBT and EMDR to see if there is any substantial benefits to using one type of therapy over the other for any specific type of trauma.

Post-disaster Trauma

The first type of trauma to be compared will be post disaster trauma. Post disaster trauma type of trauma generally refers to people that have been victims of natural disasters, an example being Hurricane Katrina. Criteria for post disaster trauma includes watching one's home be destroyed or leaving one's home knowing it will be gone, losing a family member or friend to the disaster, experiencing or witnessing injury, threat to life, and participating in rescue efforts (Hamblen et al., 2009). Another instance that contributes to post disaster trauma is victims of artificial disasters such as wars and terrorist attacks, for example the current Syrian refugee crisis and the 9/11 terrorist attacks. Artificial disasters are included in the group because it involves the same set of criteria to qualify as disaster trauma.

According to the 2006 study performed by Konuk, Knipe, Eke, Yuksek, Yurtsever, and Ostep there is promise for EMDR in regards to treating post-disaster victims. The sample they took was out of 1,500 survivors of the 1999 Marmara earthquake in Turkey. Out of these people 41 were chosen to be part of the study. In an average of five ninety minute sessions there was an incredible 92.7 % of survivors that completely eliminated their symptoms of PTSD (Konuk et al., 2006). PTSD symptoms

was measured using the PTSD Symptom Scale Self-Report Version (PSS-SR), the Subjective Units of Disturbance scale (SUD), and Validity of Cognition scale (VOC). Even more impressive were the results at the six month check in, showing that there was a near 100% retention rate (Konuk et al., 2006). These success and retention rate are seen regardless of the use of medication or not. The assertion that EMDR is an efficacious method of treatment is further backed up by an article written by Silver, Rodgers, Knipe, and Colelli (2005). In their study of trauma survivors of the 9/11 terrorist attacks they also found that when employed there was a significant decrease in PTSD symptoms when using EMDR as a treatment (Silver et al., 2005). For the 65 participants in the study all had a reduction of symptoms of over 50% or greater (Silver et al., 2005). According to SUD and VOC scores the patients showed significant personal improvement in symptoms as well as stress management of symptoms. Lastly, it was the contention of the researchers that due to the lack of homework needed for EMDR it could best suite disaster victims, as there are often too many for therapists to treat at the time of the disaster, effectively decreasing the time it actually takes to start treating the trauma (Silver et al., 2005). EMDR was also shown to be effective in treating traumatized Syrian refugees when employed in a study done by Acarturk, Konuk, Cetinkaya, Senay, and Sijbrandij (2016). Using the Harvard Trauma Questionnaire (HTQ) and Impact of Event Scale-Revised (IES-R), there was a visible and substantial change in symptom intensity (Acarturk et al., 2016). The results of the study coincides with assertions of the other EMDR based studies that suggests that it is at least equally efficacious as CBT.

Looking at individual studies there seems to be no discernible difference in treatment between the types of therapy in the sense that both of them seem to be

efficacious in their own regard. According to a study performed by de Roos, Greenwald, den Hollander-Gijsman, Noorthoorn, van Buuren, and de Jongh (2011) there really is no significant difference in the two treatment methods. In a study consisting of 52 children that had been victims of a disaster, the group was split into two one group being treated with CBT and the EMDR. In the study the UCLA PTSD Reaction Index (PTSD-RI), Child Report of Post-traumatic Symptoms (CROPS), and Parent Report of Post-traumatic Symptoms (PROPS) were used. At the end of the study it was found that both groups had progressed through their PTSD significantly (de Roos et al., 2011). What is more, at the three month follow up the effects of the treatment were determined to be holding steadfast (de Roos et al., 2011). One noteworthy aspect of the study was that it did take the children a shorter amount of time to reach recovery when utilizing EMDR. However, due to lax observation of treatment times in the CBT treatment area it is quite possible that the average time taken could have been lower for CBT (de Roos et al., 2011). That being said the researchers determined that there was no time difference that was significant and stated that the treatments were equally efficacious (de Roos et al., 2011).

Combat Trauma

The second type of trauma that will be compared is combat trauma. Combat trauma is probably the most studied area of trauma as the diagnosis of PTSD was originally developed for veterans of the Vietnam War and has been studied since World War I. The definition from one of the papers used by Albright and Thyer (2010) states, "...a person must have experienced, witnessed, or confronted death or serious bodily injury to self or other and responded with intense fear, helplessness, or horror" (2). In

general this is a well-rounded definition of the stressors that mainly cause combat trauma. It can be broadened in the sense that soldiers need not witness death or bodily harm persay, extremely intense situations and decisions such as those in firefights can also cause trauma. Also more specifically the root cause of much trauma is survivor's or killer's guilt. Both of these types of guilt violate the moral code of the soldier causing extreme stress over their guilt. In the case of survivor's guilt it is when a soldier believes that they could have save someone or that they could have done more. They take it as a personal failure on themselves rather than admitting that the entire point of war is death. It became internalized and they begin to view themselves as horrible people (Albright & Thyer, 2010). The feeling is similar with killer's guilt in which a soldier kills someone and experiences deep guilt and even regret over the matter, even though in many cases the death was unavoidable.

According to a meta-analysis run by Thyer and Albright (2010) EMDR has not been proven as efficacious means of treating combat trauma saying, "The evidence supporting the use of EMDR to treat combat veterans suffering from PTSD is sparse and equivocal, and does not rise to the threshold of labeling the therapy as an empirically supported treatment" (1). The study speaks of a platinum standard that must be met by an area of study at includes at least two studies that have no significant problems with them (Albright and Thyer, 2010). The meta- analysis claimed that every study looked at suffered from a small sample size as well as a lack of precision (Albright and Thyer, 2010). This sounds bad for EMDR, but that is not the whole story claims Hurley (2010). In his letter to the editor based off of this meta-analysis he has contentions about the results of the meta-analysis. First is that he cites a multitude of other meta-analyses all of

which assert that not only is EMDR efficacious, but it shows promise to be more effective than CBT (Hurley, 2010). Secondly, he uses his over 30 years of experience in the field to assert that when EMDR is used it is effective based off his own use of it and the use of his colleagues (Hurley, 2010). Hurley also claims that EMDR may be more effective because it achieves the same results in a shorter amount of time and with less homework. He also bashes the platinum rule insisting that no form of trauma treatment effectively measures up to the rule therefore making it void (Hurley, 2010). A literature review conducted by Rubin (2003) helped to reinforce the claims of Hurley showing that at least as of 2003 the literature suggested that EMDR can be just as efficacious as exposure, but with less sessions. In looking at all of these studies it is clear that EMDR is at least equally efficacious as CBT in regards to combat trauma.

Sexual Abuse and Assault Trauma

Next on the list is trauma that is caused by sexual abuse and assault. According to Katz who both wrote an article in and edited the book called *Treating military sexual trauma* (2016), there is a wide variety of factors that contribute to the creation of trauma in regards to sexual assault. In the book the topic is specified to military sexual trauma, but these criteria can be applied to all victims of sexual trauma. The first thing to know is that whatever happens it is of sexual nature, this includes battery, assault, and harassment (which can be referred to as unsolicited verbal or physical contact that is threatening in some manner) (Katz, 2016). The type of comments are generally demeaning, offensive, and inappropriate comments of a sexual nature. Inappropriate comments can break the victim's sense of trust and makes them fear the perpetrator. As for physical harassment

this includes: grabbing, threatening, harassing (physically) or unwelcomed sexual advances. The key is that it is without the victim's consent, a good example being if the victim is intoxicated they lose the ability to consent and are often taken advantage of (Katz, 2016). Sexual assault can be an isolated incident or it can be series of events. It can even be subtle such as a date pressuring and hinting at sex. Sexual trauma is a wide spectrum that can involve light, but uncomfortable harassment to full on rape, thus creating a wide spectrum of trauma intensity as well (Katz, 2016).

It is important to note that there are very few studies on this particular area of trauma that are submissible to this literature review. Many are disqualified purely for their age, as many of the studies that have been done on sexual assault were done in the late 1990's. Another reason many are disqualified is because of two issues with the content of the study. The first being that many are case studies performed on a single client that are not empirically admissible. The other reason is that many more are suggestive studies such as this one that review the literature and suggest more literature on a certain area.

Rubin and Edmond (2004) did some research of the efficaciousness of EMDR when treating survivors of childhood sexual assault. Classically the VOC and SUD scales were used to measure symptom severity and intrusion. It was found that there was a clinically significant difference between the EMDR patients and the results of the control group (Edmond & Rubin, 2004). It was also found that those that had participated in EMDR were not only still doing well at the eighteen month checkup, but they were actually doing even better, whereas the control group was doing worse than they had been eighteen months ago (Edmond & Rubin, 2004). It was also shown that EMDR

patients had a decrease in the number of sessions that were needed (Edmond & Rubin, 2004).

A comparison of individual studies would suggest that EMDR and CBT are equal in efficacy in regards to the trauma of sexual assault. Equality is mere speculation from comparing individual studies fortunately, Jaberghaderi, Greenwald, Rubin, Zand, and Dolatabadi (2004) have done a study comparing both treatment methods. This study made use of the Rutter Teacher Scale, CROPS, and PROPS in assessing the 14, 12-13 year old Iranian girls that participated in this study. The p for EMDR equals less than 0.05 and p for CBT equals 0.116, however difference between groups was greater than 0.05 indicating lack of significance (Jaberghaderi et al., 2004). The results of the study indicated that both CBT and EMDR were able to effectively treat all of the girls involved in the study (Jaberghaderi et al., 2004). However, it was found that EMDR was once again shown to work in a shorter duration, “EMDR was clearly far more efficient in terms of number of sessions to termination criteria, as well as amount of change achieved per session, at least on two of the three outcome measures” (Jaberghaderi et al., 2004 pg. 366). The assertion came with some discretions such as EMDR having no minimum session amount whereas those in the CBT group had to complete ten sessions (Jaberghaderi et al., 2004). Even though the session limit was a concern, only one of the seven participating in CBT finished in ten sessions thus making the previous point less relevant. There was also no significant difference between the treatments based on the various scales used (Jaberghaderi et al., 2004). The limitations of this study also impacted the results making them less credible. One of these limitations obviously being the small size of the group. Another was that there was no followup meaning there was no way to

see which treatment worked better in the long run (Jaberghaderi et al., 2004). There was also the fact that each girl saw only one counselor so the impact of the therapy could be in partial the differences between the therapists.

According to another comparative study performed by Rothbaum, Astin, & Marsteller (2005) on rape victims suggested that there is no significant difference between the two treatments rating them as equally efficacious. At the end of the study 95% of prolonged exposure patients no longer qualified for PTSD where 75% of EMDR patients no longer qualified resulting in $p=0.001$ meaning there is no significant difference between the two (Rothbaum et al., 2005). The results were quantified using the The Impact of Event Scale—Revised (IES-R) was used to measure the progress that the clients made with their PTSD. The Clinician-Administered PTSD Scale (CAPS) was also used, for comparison in the reduction of intrusion symptoms (Rothbaum et al., 2005). They also made use of the the PSS-SR. At the six month checkup it was shown that the retention rate stayed the same ($p=0.001$), but also showed prolonged exposure patients to be more high functioning (Rothbaum et al., 2005). The researchers in this study assert that in fact both EMDR and exposure are exposure techniques and are therefore essentially the same treatment with different ways of getting there (Rothbaum et al., 2005). They suggest that future research be created to analyse the difference in the techniques. Again, through these studies it is seen that both are equally efficacious.

Substance Abuse and Trauma

Substance abuse and trauma is the next area of trauma that will be observed. The relationship between trauma and substance abuse is different than any other type of

trauma because the trauma can be a result of substance abuse or the substance abuse can be a result of the trauma (van Dam, Ehring, Vedel, & Emmelkamp, 2013). First, one must look at how substance abuse can cause trauma. For one, substance abuse increases risk-taking behavior, which puts the individual in more danger (van Dam et al. 2013). Increased risk of danger can be correlated with an increased risk of trauma, due to the fact that trauma is caused when one is made to feel powerless in dangerous situations. Increased dangerous situations can be caused by a great many of things involved with drug use (van Dam et al. 2013). One being the buying and selling of illicit drugs as drug dealers can be dangerous people. On the flip side many addicts also end up selling thus putting themselves in danger of being attacked for their drugs. A phenomenon that is also seen is people providing sexual favors for drugs thus putting them in a more vulnerable position to be traumatized (van Dam et al. 2013). For others the dangers come from increased risk taking that comes with the “invincible” feeling many people get when using drugs. Also many drugs increase the risk of mental illness that could result in trauma as well (van Dam et al. 2013). Withdrawals also present a danger as the current literature shows that there is an increased risk of the triggering of PTSD when a client is going through withdrawals (van Dam et al. 2013). There have also been positive correlations shown between substance abuse treatment and the reduction of trauma based triggers.

As stated before there is another side to the dichotomy between substance abuse and trauma that shows that once one does have trauma it is exacerbated by substance abuse (van Dam et al. 2013). Exacerbation of the trauma is due to the concept of self-medication theory. Self-medication theory essentially states that people use drugs to

escape their problems, thus “medicating” themselves (van Dam et al. 2013). The drug use stems from a lack of control in one’s life, which is often seen in trauma patients. In the mind of a self medicator drugs often seem like the only means of control they have in their life where everything seems to be spiraling out of control at least they can control how they feel artificially. Current research shows that the chance of a relapse is high when the patient is experiencing high symptoms of trauma and low when the trauma is under control (van Dam et al. 2013). Research also shows that trauma triggers then become triggers for drug cravings (van Dam et al. 2013).

Seeing as addiction and trauma are so closely related one would think reducing one would reduce the other. This was the question that Perez-Dandieu and Tapia (2014) asked in their study. Unfortunately their results were different than expected in that they believed decreasing trauma symptoms with EMDR would lead to a decrease in addictive behavior. While there was no decrease in addictive behavior ($p=0.25$) (as measured by Addiction Severity Index-Lite [ASI]) there was a significant decrease in traumatic symptoms ($p=0.0011$) in comparison to those that received treatment as usual (TAU) that was measured using the PTSD Checklist Specific (PCL-S). TAU consisted mostly of drug treatments with forms of CBT being used for cognitive measures (Perez-Dandieu and Tapia, 2014). There were also significant increases in self-esteem paired with decreases in depression and anxiety, according to Beck’s Depression Index (BDI), thus increasing adaptive behavior ($p=0.004$). According to the study EMDR also provides a more functional and positive attitude in viewing the present and future which can be helpful for drug abuse clients (Perez-Dandieu and Tapia, 2014). Also, according to the researchers, there is a stigma against treating trauma until after someone is clean,

meaning that this study showed that it is possible to consistently reduce PTSD symptoms before someone is clean (Perez-Dandieu & Tapia, 2014). These researchers did not prove their hypothesis, but they unknowingly contributed to the literature that supports EMDR as an efficacious treatment for trauma. Strangely enough there is another study that insinuates just the opposite of the last study.

The question proposed by Hase, Schallmayer, and Sack (2008) was essentially the same: does EMDR have the potential to reduce cravings after its use. Their answer after doing their experiment was the affirmative (Hase et al., 2008). Not only did EMDR reduce traumatic symptoms, but it also showed a decrease in cravings according to the Obsessive–Compulsive Drinking Scale (OCDS). Along with finding the reductions in craving and traumatic symptoms in the post-treatment, but they also found the same results one month later as well. The difference between the two studies, that could have been the difference between the results, was that the latter study targeted Addiction Memory (AM). AM consists of “memories of preparatory behavior, drug effects (drug use), and loss of control” (Hase et al., 2008, pg. 171). These memories can often be traumatizing, but not the center of trauma so these could be effectively targeted without negatively disrupting the traumatic memories. It is the hope that if these lesser traumas are targeted it will make the overall trauma symptoms decrease. Despite mixed results on the reduction of cravings it is clear that EMDR is equal in efficacy in regard to substance abuse.

Complex Trauma

Another interesting division of trauma is actually a different type of trauma that is referred to as complex-PTSD (CPTSD). CPTSD refers to a severe form of trauma that is caused at an early ages that pervades every aspect of life for the individual (Lonergan, 2014). People who are diagnosed with PTSD have usually endured trauma for most if not all of their life. CPTSD often refers to victims of child abuse, but also refers to victims of domestic abuse. The diagnosis criteria for PTSD are as follows:

“(a) affective destabilization (e.g., repressed or volatile reactivity) and (b) behavioral dysregulation (e.g., self-harm, violence toward others, impulsive or risky behavior); (c) dysfunctional or avoidance of relationships (e.g., chaotic or preoccupation with relationships, dysfunctional views of or relations with perpetrator); (d) difficulties with attention (e.g., profound concentration or attentional difficulties); (e) prominent dissociation (e.g., feeling estranged from self, others, surroundings); (f) somatic distress (e.g., chronic pain); (g) dissociative identity symptoms (e.g., impaired self-concept); and (h) altered systems of meaning (e.g., damaged belief system, feelings of being permanently negatively changed by the event, despairing” (Lonergan, 2014, pg.1; American Psychiatric Association, 2013).

In PTSD the entire reality of the survivor is warped based off of many years of maltreatment, making it especially difficult to treat and live with.

There can be many benefits associated with the use of EMDR in regards to treating complex trauma. According to a review written by Korn (2009) the benefit most applicable to EMDR is the degree of control that the client gets during treatment. Recall

can also be limited to shorter intervals, thus limiting damage caused by the therapy, as compared to a much longer time that is incorporated into most exposure treatment (Korn, 2009). Korn also pointed out that while in this review drop out levels were not significant that overall EMDR has a better retention rate, which is always beneficial for the client. Patient who have been unsuccessful with other treatments might also find the EMDR method successful because it is so thorough in rooting out any traumatic experience no matter how big or small.

In a study performed with children with PTSD there was a direct comparison made between TF-CBT and EMDR. Diehle, Opmeer, Boer, Mannarino, and Lindauer (2015) had 41 children 8-18 participate in the study who were split into two groups one employing TF-CBT and one using EMDR. Comparisons were made using the Clinician-Administered PTSD Scale for Children and Adolescents (CAPS-CA). Not surprisingly the results they got were essentially the same as every other comparison study that has been reviewed in this paper in that the treatments were found to be equal in efficacy (Diehle et al., 2015). Once again it was found that EMDR was shorter in the long run, but on the other hand TF-CBT did have some significant decreases in comorbid symptoms. In both cases the differences were slight leading the treatments to be equally efficacious for complex trauma (Diehle et al., 2015).

Deadly and Debilitating Illness Trauma

Deadly and debilitating illnesses is another area of trauma that is unique and often not thought about although when one thinks about it, it is clear that illness can have an effect on trauma. Often people with long term debilitating or deadly illness develop

depression and have symptoms of PTSD (Carletto, 2016). The development of depression and symptoms of PTSD is due to many factors, the most prominent being the immanency of death, something most people fear greatly. Victims of these types of illness often also feel like they are a drain on the world around them (Carletto, 2016). Whether it is that they cannot leave the hospital or care facility or their family has to go to great lengths to care for them. The stress put on family creates a feeling similar to survivor's guilt, in which they feel guilty that they are still alive, burdening everyone else (Carletto, 2016). Victims also feel as though they are no real reason to live as they cannot function well anymore. All the things they used to do are replaced with medication and hospital stays. The new routine causes a type of trauma similar to that of domestic abuse in the sense that it is built over time, gaining more and more traction.

Deadly and debilitating illness area of trauma is relatively untouched as it is a fairly new concept in the field however there were still several studies found that helped to prove the efficacy of EMDR in this field. The first to be examined is a case examination produced by Gattinara (2009) in which she examined the reaction of one patient and his mother as well as another mother who had lost her child to neuromuscular disease. Gattinara was able to find that with the use of EMDR the fear of death was reduced not only in the patient, but in his mother as well decreasing both of their arousal levels (Gattinara, 2009). Through all three of the case it was seen that EMDR gave back control to whomever it was focused on whether it be the patient's control of his own body or the mother's control of their perception of death and dying. It was critical that there was a change in perception, facilitated by EMDR that allowed the patient and the mothers to look at their situations in a more positive light (Gattinara, 2009). It did not turn them

into blind optimists, rather showed them that they can't control the world around them very much, but they can control how they react and feel about things to a certain extent. This study applied something close to a systems approach in that it considered the treatment of the whole family not just the patient. It also showed how treating the family can help the patient and treating the patient can help the family (Gattinara, 2009). It should be noted that the results of this case study are fairly subjective as no statistical tests were involved, rather judgements were made by patients, parents, and the therapist. Another case study that furthers the efficacy of EMDR is one done by Royal (2008) in which someone suffering from chronic fatigue syndrome is treated as a form of PTSD. In short chronic fatigue syndrome is a condition in which the subject is always tired to the point of sleeping the entire day and not being able to keep employment (Royal, 2008). That being said the patient in this case study was sleeping between 15 and 20 hours a day and was unable to hold a job due to always being tired. It was also affecting his relationships and social life. After ten sessions of EMDR he reported that he was feeling more energetic and was sleeping less (Royal, 2008). Six months after the beginning of treatment he found a job and was able to maintain it. At the year checkup his progress had only enhanced to the point at which he was only sleeping an average of 9.5 hours a night and was increasing feeling more active both physically and mentally (Royal, 2008). His family commented that there was a significant change in his character and manner of being and that they were interacting more and more positively. Again, these results are fairly subjective due to the lack of hard statistical evidence.

In a study performed by Carletto, Borghi, Bertino, Oliva, Cavallo, Hofmann, Zennaro, Malucchi, and Ostacoli (2016) EMDR was compared for efficacy against

relaxation therapy. Forty-two multiple sclerosis patients were separated amongst the two types of therapy. The IES-R and CAPS were used to measure trauma as well as Trauma Antecedent Questionnaire (TAQ), which assesses previous trauma. The study found not only that EMDR was efficacious in terminating PTSD symptoms, but it was also more effective than relaxation therapy due to its focus on trauma ($p=0.001$) (Carletto et al., 2016). It was also able to reduce anxiety and depression as well as cultivate emotional stability (Carletto et al., 2016).

There are few studies that directly compare the efficacy of CBT and EMDR in regards to PTSD, but thanks to the work of Capezzani, Ostacoli, Cavallo, Carletto, Fernandez, Solomon, Pagani, and Cantelmi (2013) there is a study concerning death and dying that compares the two. The study was done comparing patients with a diagnosis of cancer all having been diagnosed with PTSD. The impact was measured using the IER-R and CAPS as well. According to the study EMDR actually ended helping reduce the symptoms of PTSD to a greater extent than CBT ($p=0.007$) (Capezzani et al., 2013). There was no significant difference between post and pre test scores for CBT ($p=0.075$) but there were for EMDR ($p<0.001$) (Capezzani et al., 2013). Almost all clients to utilize EMDR were able to curb their PTSD within the timeframe of eight sessions and furthermore keep that diagnosis a month later during the follow up (Capezzani et al., 2013). On the other hand those that underwent CBT were unable to as effectively curb their symptoms and all maintained a diagnosis of PTSD at the one month follow up. Both of the methods of treatment provided useful, however EMDR provided a greater decrease in symptoms (Capezzani et al., 2013). While this study stands to show that EMDR may be superior to CBT in the treatment of the chronically, ill one must take into

consideration the limitations. One is the small treatment group of only twenty- one people meaning there was only around 10 people in each group. Another limitation is that the clients only saw one therapist, so it could potentially be the effect of the therapist rather than the treatment (Capezzani et al., 2013). That being said the margins by which EMDR succeeded over CBT were wide and that should be taken into consideration.

The Efficacy of Family Systems in Treating Trauma

As stated previously there is not a vast body of empirical research behind family systems therapy and trauma. Lack of research is largely due to its relatively new status as a method of treating trauma. Most of the studies are literature reviews that suggest how research should be done. One of these studies written by Charles and Kathleen Figley (2009) stresses the need for FST in the face of the more individualist or “linear” trauma treatments. First the researchers compiled a list of six limitations that the current modes of treatment have in treating trauma, supported by the U.S. Institute of Medicine. The first limitation was that the current treatments have no generally accepted definition for trauma recovery, whereas family therapy does. The researchers assert that FST emphasizes assessment and diagnosis rather than treatment and recovery (Figley & Figley, 2009). Secondly, even though it has been decades since its “discovery” trauma does not have enough research especially in the areas of... “Culture, family of origin, personality, relational, emotional and other dynamic and systemic factors” (Figley & Figley, 2009, pg. 176). Third, that although research constantly shows that drug treatments are largely ineffective they still remain a big part of treatment (Figley & Figley, 2009). Fourth, there are subpopulations that have been under researched that

could react to trauma in different ways than most, meaning one size does not fit all. An example that they used was women in the military and with trauma in general. Women are more susceptible to trauma, yet are also more susceptible to treatment (Figley & Figley, 2009). Women are also less likely to report sexual assault and harassment in the military resulting in a lack of treatment. It is also possible that women respond better to some treatments than men and vice versa. No one knows because subpopulation based research is not being conducted enough. Fifth, there are no specifications on the best place for treatment to occur, how long it should take, and with what demographics it should be used for (Figley & Figley, 2009). Sixth, there is an unnerving separation between what type of treatment people want and what they get actually get. The goal of linear treatments is to sooth the symptoms, not to fix the underlying problem. Treating symptoms is evidenced in the military with their policy of getting a soldier back into duty as soon as possible instead of fixing the real underlying problems.

The article goes on to address trauma centered family systems more directly. The research suggests via a study done by Barnes in 2005, that survivors' stress levels are affected based on how much they think the traumatic event is stressing their families and those around them (Barnes, 2005; Figley & Figley, 2009). The effect of family members' perception means that each family member should weigh in their perceptions to help understand the reality of every family member and to determine what resources are available to both the client and the family.

What also matters is the family's reaction to crisis situations in that it can either be mastery-based or fatalistic (Figley & Figley, 2009). Mastery-based families believe that they have the resources to fix their problems, whereas those in a fatalistic family

believe they are powerless to help themselves. As mentioned earlier the current treatments do not really delve into mastery based analysis, so in theory, a family therapist would be able to help guide families to the healthier mastery-based style of thinking. An example of the dichotomy between mastery and fatalistic is mothers of cancer patients have greater PTSD symptoms if they feel restricted in expressing cancer related feelings (Figley & Figley, 2009). Family Systems is made to stress meaning making in regards to trauma. This article suggests that meaning making may be the best thing for trauma survivors, as making meaning out of the event gives control back to the individual as well as their families. Meaning making can also more easily happen in the family as in the family is when the most discussion and reference to the event occurs. Family therapy seems to be a great avenue for expanding trauma treatment because the individualistic treatments have already tackled symptomatology and what not to do. Individual treatments make way for family therapy to step in and use the old research to start expanding on what is right to do in treating trauma, such as involving the family more. According to the Figley's, "To stem the tide of trauma systemically is to respect the power of families to heal through family therapy" (Figley & Figley, 2009, pg. 182).

Trauma treatment and family therapy are addressed by Kasiram and Khosa (2008). One of the first points they make is that trauma treatment must be close-ended, meaning it needs to have an end point. If a counselling contract is left open then the client may see recovery as never ending (Kasiram & Khosa, 2008). Close-ended treatment is common practice in treating trauma with family therapy. Participation of all members of the close family is critical to get an adequate view of pre, present, and post trauma life. The researchers also noted (and will be stressed again) that the family dynamic is critical

(Kasiram & Khosa, 2008). After the trauma life changes rapidly and new alliances are formed while others are shattered. Previous negative family dynamics can be intensified and people can be left feeling abandoned by their family. Family interactions are critical because the client has to live with family interactions every day and after a while the weight of such negative relationships can become extremely heavy if left unchecked. Kasiram and Khosa expand the family dynamic to even involve the community especially when something traumatic has occurred to the whole community (Kasiram & Khosa, 2008). A bad relationship with a neighbor can definitely be damaging just as calling all members of the community brother and sister can be helpful and prevent isolation. The effect of the community can be seen especially in religious communities in where everyone supports everyone emotionally and spiritually.

Looking at Kasiram & Khosa's suggested methods of treatment it is remarkably similar to that for the individualistic therapy. First the trauma story is told and reiterated, then there is reframing of guilt and anger, then identifying moments of mastery about the event (returning control), psychoeducation and normalization of symptoms, and facilitating and creating meaning (Kasiram & Khosa, 2008). The method of treatment is similar in concept to methods used by the other forms of treatment, but it is about how the therapist goes about them that is different. Family therapists not only focus on the previously mentioned method in the individual but the same method is used on the family as well. The researches show through the study that family systems therapy is efficacious in trauma treatment. The study also suggests that a combination of methodology would not only be better, but also relatively easy, in essence it is not something completely new

out of the blue. “Recovery, therefore, has to extend beyond the individual if sustained change is to be promoted” (Kasiram and Khosa, 2008, pg. 230).

According to Kerig and Alexander (2012) there is a multitude of reasons why trauma should be treated in a family setting. First and foremost is that in many cases, especially in poorer families, entire families can be traumatized by the same event or situation (Kerig and Alexander, 2012). These can be catastrophic events such as the death of a family member, disaster, or it can be drawn out like living in poverty and/or a dangerous community. They also point out that whenever a member of the family is traumatized at least one member of the family is also likely to experience post-traumatic stress about the incident whether it is a parent, sibling, or child (Kerig and Alexander, 2012). Families are also a critical source in the resilience of children where good parental involvement can help decrease stress and symptoms of PTSD (Kerig and Alexander, 2012).

There is also an intergenerational component to trauma, although not well understood, where parents who have PTSD are actually more likely to raise children with a susceptibility to the disorder (Kerig and Alexander, 2012). The intergenerational component can potentially be due to a few factors such as genetic susceptibility to anxiety and stress. There is also the notion that if the parents haven't addressed their trauma in a healthy way their maladaptive symptoms will be passed down to the child simply through observation and mirroring (Kerig and Alexander, 2012). Also the possibility that the parent's ability to be a fully functioning and available parent may be affected by trauma. Reduced parental ability could result in decreased responsiveness and emotional availability where the child soon learns that they have to take care of themselves

for the most part (Kerig and Alexander, 2012). The internalization of such thoughts can lead to a high susceptibility to trauma or trauma itself depending on the severity of the neglect. Trauma in the parent may also represent a critical issue if the child is traumatized as well because if the parent is unable to deal with their own trauma in a healthy way there is little chance that they will be able to deal with the child's trauma in a healthy way (Kerig and Alexander, 2012). The parent having trauma is especially unhealthy if the parent's trauma has already led to distorted thoughts about the child. These can consist of a feeling that the child is a burden or partaking in projective identification (injecting one's own feelings into another i.e. my arm hurts so I will hit your arm so you know what it's like to have your arm hurt). As Figley & Figley briefly touched on earlier each family has their own way that they handle stress (Kerig and Alexander, 2012; Figley & Figley, 2009). Family's ways of handling stress are based off of vulnerabilities, structure, strengths, coping strategies, and appraisals and can be especially affected if the ones who set these rules (parents) have undergone trauma. (Kerig and Alexander, 2012).

After trauma the family often handles stress in negatives ways and is magnified if the parents have trauma as well. There are three different types of negative adaptations to trauma in the family the first being cognitive distortions such as maladaptive beliefs, disturbed family myths, and dysfunctional family rules (Kerig and Alexander, 2012). The second dynamic is disrupted caregiving that unstable or unavailable emotions from the parent or parent ization of the child. The third dynamic involves traumatic sequences which includes the replication of themes (projective identification and reenactments), ongoing perceived threat, survivor missions (child plays the role as the rescuer) and symptomatic family members (stress caused by PTSD).

Discussion

This study compares the efficacy of CBT and EMDR. The studies used provide both positives and negatives to using either CBT and EMDR. By looking at the comparison between CBT and EMDR the positives and negatives are fairly similar as the treatments are individualistic approaches. For example, both treatments can be positive because the treatments are wholly centered on the individual that has the trauma, but the individual approach can also provide a too narrow of a scope in treating trauma. The wider scope is what makes the group based approach of FST so unique and interesting. A wider scope too poses positive and negative traits where the group based approach incorporates the healing to the broader group it may intern be too broad. These positives and negatives of the very type of treatment itself insinuate that a combination of the two types could provide a solution to the negatives of both types of treatments.

Between CBT and EMDR there are more comparative positives and negatives, that once again depend on what is being treated and focused on. In some cases EMDR was found to be equally efficacious as CBT, but was remarkably quicker than CBT. In some cases the increased speed was perhaps due to how sessions were monitored and in some cases it just took a reduced amount of sessions to curb PTSD symptoms. On the other hand greater time is a negative for CBT because it takes longer thus possibly keeping the client in pain longert. Another positive for EMDR seems to be that it is significantly less work outside of the therapist's office. There is less work because in CBT programs, homework is issued to make sure the patient is actively making progress and reinforcing that progress. EMDR seems to be able to have the same effect on the client without the added stress of the home work. Increased stress of homework can be

seen as a negative for CBT seeing as it could be potentially causing more stress than needed. A negative of EMDR or potentially a positive is that EMDR takes individualistic style to a whole new level where it is not simply focusing on the client, but focusing on the individual trauma. In comparison to CBT, EMDR had fewer reductions in comorbid symptoms that coincided with trauma, but was more successful in treating the traumatic symptoms themselves. Different positives such as reduced comorbidity and traumatic stress means that different treatments can be used based off the specific needs of the client i.e. whichever is more threatening, the trauma or the comorbid symptoms such as depression and anxiety. Another positive to the credit of CBT is that it is the mainstream treatment because there is a significant amount of evidence behind CBT. Less research can also be seen as another negative to EMDR in that even though it has a significant amount of research behind it, it is simply not as much as CBT and is still doubted throughout the field.

The positives and negatives of FTS are different in comparison to the positives and negatives of the individualistic treatments. One positive is that FST has the group dynamic, meaning that FST is able to stretch out and reach much more than the person receiving treatment. FST directly tells people what to do in regards to the person with trauma and allows a more open and communicative atmosphere between families. Not only does FST bring emotions and cognitions out into the open, but FST also helps to educate previously misinformed or oblivious family members that perhaps had no idea the effect they were having. Relationships are strengthened or even broken down and reconstructed, which can be critically difficult if the entire family is not coming into to

therapy. FST also gives a more accurate description of home life, so the therapist can get a better glimpse into what's happening in that family's world.

In coming to the end of this paper, there are some critical ideas that the reader should have gleaned. One is the many limitations that the current body of research has. Not only within the studies, things such as small effect size or lack of a control group, but also within the very field itself. Strangely enough there seems to be an under emphasis on certain types of trauma where other types receive more attention. The notion that a comparative study done between EMDR and CBT could only be found for three out of the six categories is troubling. According to Hurley (2010) there is not enough research in any field of trauma to live up to the platinum rule that was specifically constructed to phase out weak studies. So the first and foremost conclusion of the research is that there needs to be far more research done in every field of trauma work.

Something else the reader should have gotten from this paper is the notion that EMDR is highly efficacious. Whether it is better or worse than CBT is debatable, although significant evidence has been provided here that should insinuate that EMDR is at least as good as CBT. Comparative efficacy is a critical conclusion to come to as the more accepted EMDR is the more people EMDR can help. The more EMDR is used, the more research that will be done and the more humanity can understand about its benefits and consequences for different types of trauma.

Efficacy of family systems therapy and trauma systems therapy were also examined. It was shown that just as with more mainstream forms of treatment (EMDR and CBT) there needs to be an increase in the body of research regarding FST and trauma. While there is less research, especially empirically validated research, there are

still some that suggests that FST works in treating trauma. However, what is best about family therapy is that it can potentially be used in conjunction with more individualistic types of trauma treatment.

Main Conclusion

In showing the efficacy of CBT and EMDR it was clarified that these methods do work in treating trauma. In showing the efficacy of FST and TST it was also clarified that these are also effective methods of treating trauma. Due to lack of research it can only be assumed that individual treatments are more efficacious than family based treatments. However, there is no rule that says that one person can only use one type of therapy. Both the individualistic (EMDR and CBT) methods of treatment have their strengths and weakness just as the more group based methods of treatment (TST and FST) have strengths and weaknesses. The key is combine those strengths and eliminate those weaknesses by combining these two types of treatment. Further research should be put into the combination of treatment modalities, such as actual experimental studies where the two different types are compared as well as studies where they are used in conjunction. The discussed methodology could not only be better and even save lives, but also make the whole process easier and less stressful for everyone involved. Many of the studies that talked about the difference between individualistic and group based treatment make a casual remark that they should be used in conjunction. This paper will take a step further and leave it on the assertion that these have to be combined to further trauma treatment. They have to be studied and compared and morphed into one, so that the traumatized people of the world can be healed faster, easier and for a longer time.

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