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The Effect of Eye Movement Desensitization and Reprocessing Therapy in the Treatment of Post-Traumatic Stress Disorder

A scoping review

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Degree Thesis for Bachelor of Health Care

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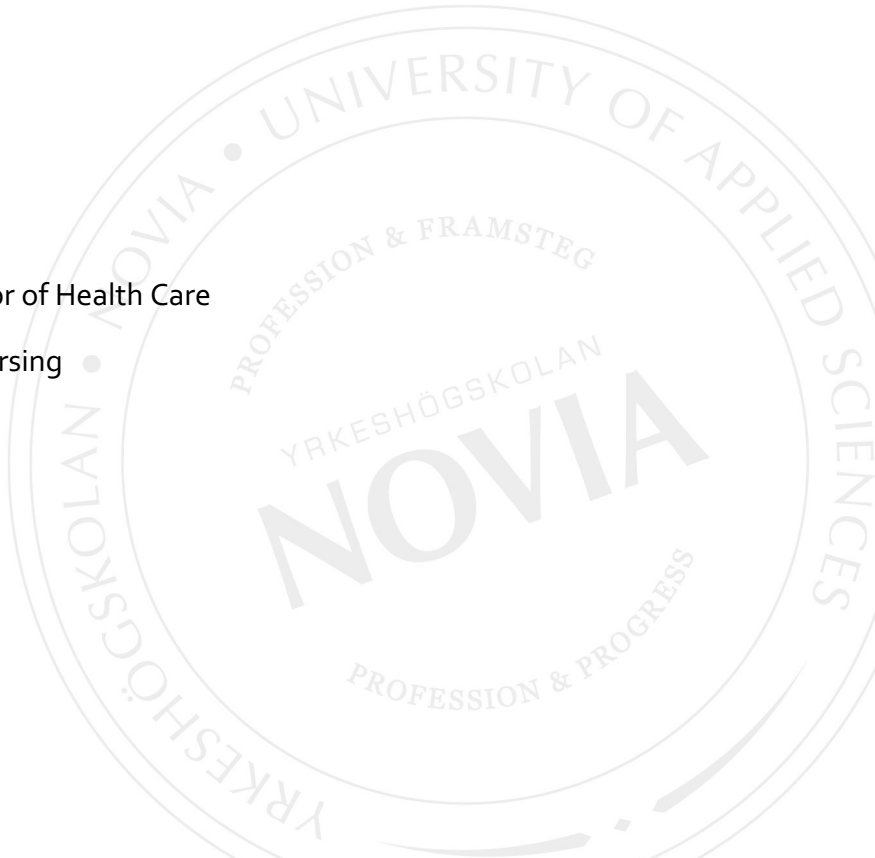

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Abstract

The aim of this study was to get a better understanding of the Eye Movement Desensitization and Reprocessing Therapy (EMDR) as a treatment method for Post-Traumatic Stress Disorder (PTSD). The problem definition of this thesis was: What kind of effect does the EMDR therapy have on the symptoms of PTSD? Nurses will undoubtedly encounter patients with PTSD in their line of work. It is therefore necessary for them to have adequate knowledge and understanding of the disorder in order to be able to provide a good quality of care. Furthermore, as Finland receives new refugees yearly who suffer from PTSD it is now more common for nurses to encounter patients suffering from this disorder. Nurses are also in a good position to further educate themselves to become EMDR therapists. This study was done as a scoping review using an inductive content analysis approach. In this study 9 articles were analyzed. The theoretical framework used in this study was Janice M. Morse's (2001) theory of suffering which was especially fitting in this context as those who suffer from PTSD experience *suffering* and *enduring* until they get a treatment. The study results focused on the treatments effect of the psychological and physical symptoms, results indicating that the treatment does have a healing effect on PTSD symptoms.

Language: English Key words: Post-Traumatic Stress Disorder, Eye Movement Desensitization and Reprocessing, Treatment, Experiences, Scoping Review

EXAMENSARBETE

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Titel: Effekten av Eye Movement Desensitization och Reprocessing Terapin som Behandling av Posttraumatisk Stressyndrom

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Abstrakt

Syftet med denna studie var att få en bättre förståelse om Eye Movement Desensitization och Reprocessing (EMDR) terapin som behandlingsmetod för Posttraumatisk Stressyndrom (PTSD). Problemformuleringen av detta slutarbete var: Vilken effekt har EMDR terapin på PTSD symptomen? Sjuksköterskor kommer utan tvivel att möta patienter med PTSD i deras arbetsbransch. Det är därför nödvändigt att ha tillräcklig kunskap och förståelse om syndromen för att kunna garantera vårdkvalitet**.** Eftersom Finland får nya flyktingar årligen som lider av PTSD, blir det mera vanligt att möta patienter i vården, som lider av detta. Sjuksköterskor har en bra grund att vidareutbilda sig till EMDR terapeuter. Denna studie gjordes som översiktsstudie (scoping review) gjort med induktiv innehållsanalys. Till denna studie analyserades 9 artiklar. Teoretiska referensramen som användes i denna studie var Janice M. Morse's (2001) teori om lidandet, eftersom den passade i detta sammanhang att de som lider av PTSD upplever *lidande* and *uthärdande* tills de får en behandling. Studieresultaten var fokuserade på behandlingens effekter på psykiska och fysiska symptomen, och resultaten indikerade att behandlingen har en helande effekt på PTSD symptomen.

Språk: Engelska Nyckelord: Posttraumatisk Stressyndrom, Eye Movement Desensitization and Reprocessing, Behandling, Erfarenheter, Scoping Review

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Tiivistelmä

Tämän tutkimuksen tarkoituksena oli saada parempi käsitys Eye Movement Desensitization ja Reprocessing (EMDR) terapiasta Posttraumaattisen stressihäiriön (PTSD) hoitomenetelmänä. Tutkimuksen ongelman määrittely oli: Mikä vaikutus EMDR terapialla on Traumaperäisen Stressihäiriön oireisiin? Sairaanhoitajat tulevat kohtaamaan ammattialallaan potilaita, jolla on PTSD. Näin ollen, sairaanhoitajilla on hyödyksi olla pätevää tietoa ja ymmärrystä Traumaperäisestä Stressihäiriöstä hoidon laadun varmistamiseksi. Lisäksi, koska Suomeen tulee vuosittain uusia pakolaisia, jotka kärsivät Traumaperäisestä Stressihäiriöstä on nyt tavallisempaa, että tästä kärsiviä potilaita kohdataan hoitotyössä. Sairaanhoitajilla on myös hyvä perusta jatkokouluttautua EMDR terapeutiksi. Tämä tutkimus tehtiin scoping review menetelmänä käyttäen induktiivista sisältöanalyysia. Tässä tutkimuksessa analysoitiin 9 artikkelia. Tutkimuksessa käytetty teoreettinen viitekehys oli Janice M. Morsen (2001) teoria kärsimyksestä, joka sopii tähän kontekstiin koska he jotka kärsivät Traumaperäisestä Stressihäiriöstä kokevat *kärsimystä* ja *sietävät* kunnes saavat hoitomenetelmän. Tutkimustulokset keskittyivät hoidon vaikutuksiin psyykkisen ja fyysisiin oireisiin, ja tulokset osoittivat, että hoidolla on parantavaa vaikutusta oireisiin.

Kieli: Englanti Avainsanat: Traumaperäinen Stressihäiriö, Eye Movement Desensitization and Reprocessing, Hoito, Kokemuksia, Scoping Review

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1 Introduction

On a yearly basis, it is estimated that 100 000 people in Finland go through a stressful situation which can lead to Post-Traumatic Stress Disorder (PTSD). Approximately 20-30 percent of those experiencing a stressful event, will develop PTSD, which equates to a prevalence rate of about 0,5 percent in Finland yearly (Käypähoito, 2016). Approximately 57-78% of immigrants living in Finland have experienced some sort of traumatic event such as war, or witnessing disturbing injuries or violent deaths. It is important that healthcare professionals are able to recognize the impact of traumatic experiences when assessing suitable treatment options (Castaneda et.al 2012, 151).

For some people who go through a frightening or shocking event, symptoms from the trauma eventually disappear. However, others may suffer longer standing psychological trauma, fulfilling criteria for PTSD, therefore needing more specific treatment (Källström, 2018). Different treatments exist for PTSD and this study focuses specifically on Eye Movement Desensitization and Reprocessing therapy (EMDR). EMDR therapy is a psychotherapeutic approach developed by Francine Shapiro based on her own random observations in 1987 (Shapiro, 2001, 30). Shapiro noticed that eye movement had a desensitizing effect on reducing her own negative feelings connected to disturbing memories. Shapiro then developed this into a treatment method to alleviate suffering from traumatic memories involving the patient following the clinicians hand movements with their eyes back and forth (EMDR Institute, Inc).

In order to improve the quality of care for patients suffering from PTSD, or any other mental illness for that matter, it is important that nurses should gain a good insight of how the patient is feeling. It is crucial for nurses to be able to encounter and support patients appropriately in their difficult circumstances. As I have always been passionate about helping others, this topic is of genuine interest to me, and I wished to develop a better knowledge and understanding in order to help recognize and support patients with PTSD in my future line of work, potentially even educating myself further to become an EMDR therapist. The aim of this study is therefore to develop an understanding of the effects of EMDR therapy as a treatment method for PTSD.

2 Theoretical Background

In this chapter, I will describe the PTSD, including the causes, symptoms and other treatment methods. I focus more specifically on EMDR therapy in comparison to other treatment methods.

2.1 Post-Traumatic Stress Disorder

Symptoms of mental illness can occur following terrifying and shocking events in one's life. Strong feelings of fear or horror may be induced by situations where a person has feared for their life. Witnessing unpleasant events or even natural experiences such as difficult childbirth, can result in mental health difficulties. For some people that feel mentally ill, the symptoms eventually will disappear. For some people these symptoms may eventually disappear, however others may suffer psychological trauma meaning that these symptoms are persistent enough to require treatment. Such cases may lead to or Post-Traumatic Stress Disorder or, PTSD.

Common causes of PTSD include experiences of robbery, abuse, sexual abuse, accidents, natural disasters, torture, war, difficult experiences during intensive medical care or surgery and difficult childbirth (Källström, 2018).

Studies have shown that certain traumatic experiences to be connected with higher rates of PTSD. Researches indicates that the highest rates of suffering from PTSD are associated with rape, followed by experiences of kidnap, physical and sexual abuse, being threatened, experiences of neglect in childhood and being held hostage (Regel & Joseph, 2017, 30-31). Although there is limited research on the psychological impact of rape during war time, recent study was made including 296 Yazidi women who had experienced rape and physical torture by the Islamic State (IS) found 48,7 % of these women to meet criteria for PTSD. This study indicated a high prevalence of PTSD in female survivors who had been held captive by IS (Kizilhan, 2018).

The World Health Organizations' (WHO, 2018) definition of female genital mutilation (also known as female circumcision) includes practices that involve removing partly or totally the external female genitalia, as well as other female genital injuries carried out for non-medical reasons. A study by Kizilhan (2011) examining the psychological impact of female genital mutilation of Kurdish girls aged between 8-14 years, found a higher prevalence of PTSD in

circumcised girls in comparison to uncircumcised girls (Kizilhan, 2011). Similarly, the psychological impact in relation to medical vs. ritual circumcision of a total of 3,253 boys aged between 11-16 years in Philippines found boys who had been ritually circumcised demonstrating more symptoms of PTSD than those having experienced medical circumcision (Ramos & Boyle, 2000).

In isolation, the experience of being a refugee or migrant does not make an individual more vulnerable to mental disorder, however different stress factors related to external circumstances increase vulnerability for mental health illness. In their home country, refugees and migrants may have experienced war or mistreatment due to racial, religious or political persuasions. Furthermore, many refugees and migrants make dangerous and difficult journeys (WHO, 2018), which has been found to increase the risk of developing PTSD. Early PTSD screening for refugees and migrants could be an important step to improve their mental health. A recent study including a total of 450 Syrian refugees aged between 14-45 years in North Lebanon found the prevalence of PTSD to be 47,3%. The study suggests that a screening tool for PTSD for early detection and treatment could be useful in order to prevent serious health issues in the future (Aoun, Joundi & Elgerges, 2018).

Symptoms

Symptoms of PTSD often appear within 6 months of experiencing a terrifying event. However, occasionally strong symptoms can appear later on, even decades after the trauma. Nightmares, flashbacks and feeling of re-experiencing the dreadful event are common symptoms in PTSD. Events or reminders of the experience can also trigger symptoms.

Other symptoms of PTSD include:

- Avoiding everything that reminds one of the experiences, which might lead to be isolated from close people.
- Memory loss.
- Feeling depressed and indifferent.
- Feeling tense, easily frightened or irritated and have sudden outbursts.
- Concentration and sleep difficulties.
- Suicidal thoughts.
- Unusual symptoms include: Depersonalization or a change in how one experience themselves.

Physical issues can also appear including:

- Headaches, pain in the back or pain due to tense muscles.
- Stomachache or diarrhea.
- Palpitations or hypertension

(Källström, 2018).

Treatments

Most often, people recover after a difficult experience without treatment. However, if the symptoms do not subside, treatment may be necessary in order to avoid different types of mental and physical illness. Different psychological treatments and medications are available from healthcare providers (Källström, 2018).

Trauma focused Cognitive-Behavioral Therapy, CBT is a type of treatment that has shown effectiveness in treatment of PTSD. By carefully approaching the traumatic memories, such as visiting places and exposing situations which trigger reminders of the event forms the basis of the CBT treatment (Källström, 2018). Narrative Exposure Therapy is a method which centers around talking about the traumatic event and to get used to the strong feelings that occur in connection with it (Källström, 2018). Psychodynamic therapy focuses on the unconscious processes that appear alongside a behavior. Other goals of psychodynamic therapy include identifying unresolved past struggles and symptoms and examining how these influence behavior (Haggerty, 2016).

To start the treatment of PTSD, a period of stabilization might be needed to provide safety and strength for the person to process the difficult experiences. An initial assessment and calming of the patient might be needed prior to treatment, especially when a person has been exposed to sexual or physical abuse. Stabilization can be enough to make the symptoms disappear in some cases (Källström, 2018). However, medical therapy in a combination with psychotherapy may be useful for some, for example by prescribing antidepressants to alleviate symptoms of depression, making the person less sensitive to shocking events (Källström, 2018).

2.2 Eye Movement Desensitization and Reprocessing Therapy

Eye Movement Desensitization and Reprocessing (EMDR) is a therapeutic method used for the treatment of psychological trauma. The Psychologist Francine Shapiro developed the EMDR method by a random observation that occurred in 1987. The patient's life experience, ability and willingness to confront the feelings associated with the traumatic experience is the foundation of the method. EMDR is an opportunity to work on difficult experiences and disturbing memories and recovery which can be speeded by using this this method. EMDR, results in changes in the patient's mental image, emotions, body and beliefs, leading the patient with a realistic view of the past event allows for reflection on it as a part of their life history (Suomen EMDR yhdistys, 2019).

EMDR therapy has been found to be effective for females that have experienced sexual abuse in the childhood. Research indicates depression, anxiety and negative thoughts to be reduced, as well as a significant reduction in emotional disturbances, and positive changes in self-concept thoughts. Furthermore, EMDR therapy has been indicated to be more effective than routine individual treatment in keeping the therapeutic effect (Edmond, 1999). A systematic review on EMDR therapy in children and adults who had experienced traumatic events in childhood showed that EMDR therapy reduced PTSD symptoms when compared to other therapy treatments (Chen et.al, 2018). A meta-analysis to establish the scale of EMDR therapy's effect on PTSD symptoms showed that EMDR reduced anxiety, depression and distress, and improving self-awareness and behavioral changes (Chen et.al, 2014).

Originally EMDR was developed for the treatment of PTSD and traumatized memories, however, these days it is used more broadly for anxiety, panic attacks, sorrow, personality disorders and phobias. EMDR works in a similar manner in which a psychological trauma occurs. During a traumatic event, there is an imbalance in the brains information processing system. EMDR helps an individual to re-process the memory again, activating a new natural way of processing the memory. A person is then able to make positive and flexible choices in the present, and be freed from the disturbing memories, which is the most important goal of the EMDR therapy (Suomen EMDR yhdistys).

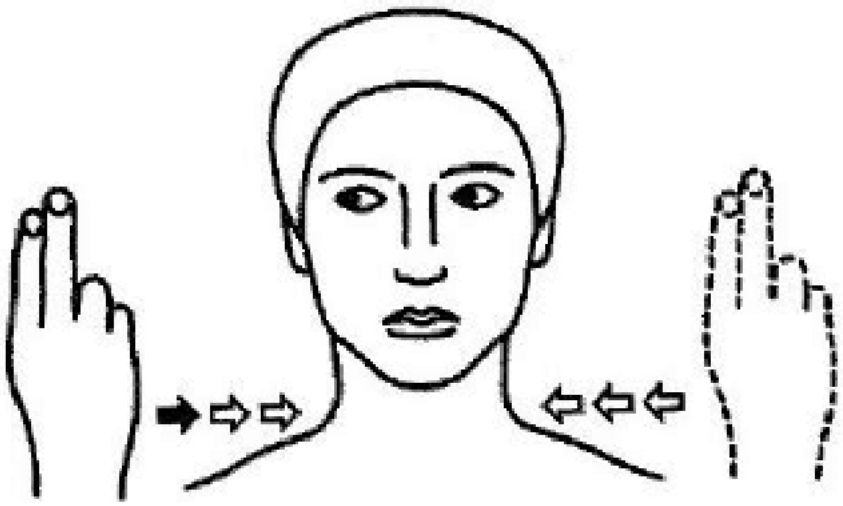

Figure 1: Hand Movements applied in EMDR (Shapiro, 2001, 66)

EMDR therapy involves inducing eye movements meaning the patient follows the therapist hand movements with their eyes, back and forth (Figure 1). When the memories and disturbing feelings start to process, it is believed that this process connect to REM (Rapid Eye Movement) sleep. The wounds that the memories bring up do not close, but they transform (EMDR Institute, Inc).

The EMDR treatment consist of 8 phases; *Client History and Treatment Planning, Preparation, Assessment, Desensitization, Installation, Body scan, Closure and Reevaluation* (Shapiro, 2001, 70).

Phase 1:

Phase one of EMDR therapy involves going through the *client history and making a treatment plan*. An evaluation of the patient is made in terms of safety, and whether the patient is suitable for the treatment. In order for EMDR to be effective there must be an understanding of when and how it should be used. A patient must be able to experience increased levels of disturbance triggered by the process of EMDR. During the evaluation an estimation is made of, how stable the person is and how restricted their current life is. If a patient experiences a lot of stress e.g. deadlines at work then the EMDR therapy might not be suitable to proceed with, as the patient might become distracted by going through the traumatic material. The clinician may the choose to postpone the process until the stress has decreased. Furthermore, it is important that the patient can physically endure intense emotions. The clinician must also take to consideration possible respiratory or cardiac conditions and age-related issues (Shapiro, 2001, 70).

When a patient has passed the evaluation stage, they can then proceed to the treatment phase outlined by a treatment plan. The treatment plan requires a whole clinical picture including the symptoms, dysfunctional behaviors and characteristics that need to be attended. Specific targets which need reprocessing are then determined by the clinician such as events that activate the abnormality, triggers that causes the dysfunctional behaviors to be stimulated, but also behaviors and attitudes that are positive for the future. When the full evaluation and treatment plan is completed the reprocessing of information can be started (Shapiro, 2001, 70).

Phase 2:

Phase two of EMDR therapy includes *preparation,* which involves creating a therapeutic relationship, explaining the process and effects of EMDR, discussing the patients concerns and starting relaxation and safety procedures. During and after the EMDR session, emotional disturbance can occur, which is an important aspect for the clinician to explain to the patient. This information gives the patient a chance to make right choices and gives the patient opportunities to schedule their work and social commitments accordingly. Before the EMDR sessions the patient should practice guided relaxation exercises using an audiotape provided by the clinician. This will support the patient during the EMDR reprocessing sessions to be able to go through the disturbances that occur via relaxation techniques (Shapiro, 2001 71).

Guided visualization techniques area also available (Shapiro, 2001, 71) or applying hypnosis which the clinician must use at the end of the session if the patient is showing symptoms of disturbance or releasing emotions. This is important in order to be able to return the patient back to their comfort state (Shapiro, 2001, 164). The clinician should not continue with the EMDR process unless the patient is not able to fully eliminate sufficient levels of disturbance with these techniques. These relaxation techniques are vital so that the clinician can end an unfinished session or help the patient to deal with the memories or disturbing emotions that the session might bring. Using techniques effectively can bring confidence for the patient to go through the session and deal with the disturbing material that may occur. However, it is important to acknowledge that there can be an increased level of fear and processing which might become more challenging because of the patient's incapacity to deal with the disturbing feelings (Shapiro, 2001, 71).

During this phase the clinician needs to discuss possible secondary gain problems i.e., if the abnormality is fixed with the EMDR therapy, there might be something the patient has to confront or give up. Trauma reprocessing cannot begin before any concerns around this are

discussed and an action plan is made to handle specific situations if they occur e.g. moving to a new home or a changing one's job. If there is low self-esteem or unreasonable fears due to the secondary gains, these need to be processed first. No meaningful therapeutic effects can be expected or sustained, if these fears are not fixed (Shapiro, 2001, 71).

Phase 3:

Phase three includes *assessment* before the processing starts, i.e. the clinician must find target components and create a baseline response necessary to finish the processing. When the memory has been recognized, the patient is asked to decide an image that signifies the memory best. The patient must then choose a cognition associated with the event, and make a statement around the distressed or maladaptive self-assessment. Statements such as "I am worthless", *"I am dirty"* or *"I am unlovable"* are the negative beliefs of the disturbing affect. The patient will then identify a positive cognition to exchange the negative cognition with during the installation phase. It should contain an inner locus of control, with statements such as *"I am in control", "I am valuable", "I can succeed"* or *"I am loveable"*. A 7-point Validity Of Cognition (VOC) scale is used to evaluate the validity of the positive cognition (Shapiro, 2001, 72).

By combining the image and negative cognition, the 10-point Subjective Unit of Distress (SUD) scale evaluates the level of disturbance with the emotion. When the memory is retrieved the patient will pick a number which implies the intensity of the emotions. The emotions and the intensity of them will possibly change, when the reprocessing has begun. Often the disturbance becomes worse temporarily (Shapiro, 2001, 72).

Phase 4:

Phase four is the *desensitization* phase, which includes focus on the patient's negative affect as shown in the SUD scale, including reactions, new insights and reminders nonetheless of the rising, reducing or motionless distress level. The clinician repeats the sets during this phase, with suitable changes of focus. This is done until the patients SUD level is lessened 0 or 1 signifying that the main issue is cleared. However, at this stage the reprocessing is not yet complete as there is still one remaining phase which is vital for the information to be addressed. Clinical reports indicate that in many cases, the eye movements are not suitable to finish processing, which means that in order to stimulate the process again, the clinician must find other strategies and advanced EMDR techniques to continue (Shapiro, 2001, 72-73).

Phase 5:

Phase 5 includes *installation* and it includes focus is on the positive cognition, in order to emphasize and increase its strength. A statement from *"I am helpless"* might be replaced with the sentence *"I am in control"* during the fifth phase. Treatment effect is then assessed using the VOC scale, and when the level of emotion has dropped to 0 on the SUD scale, the installation phase can begin. The patient is then asked to keep in mind the most suitable positive cognition together with the target memory. The eye movements set is continued until the patient rates the positive cognition level to 7 on the VOC scale. However, the eye movements sets should be continued to guarantee that the positive cognition has significantly improved. Positive images, thoughts and emotions develop into more vivid and more valid images, while the negative images, thoughts and emotions become less vivid and valid. To complete the treatment session, the VOC rating is valuable to decide what has to be further focused on (Shapiro, 2001, 73).

If the memory of the original event is triggered and returning to the consciousness, the positive cognition will be attended with thoughts such as *"It is over"* or *"I am safe"*. Concentrating on the positive cognition makes it implanted to the target memory network. The installation phase is essential for the EMDR treatment session to strengthen the patient's positive cognition (Shapiro, 2001, 74).

Phase 6:

Phase six includes a *body scan*, involving the patient keeping in mind the positive cognition, the target event and scanning their body from top to toe mentally. The clinician asks the patient to recognize remaining tension in the form of bodily sensations. These will be targeted in the continuing sets. Often the tension disappears, but for some it reveals further distressing information. The sixth phase can reveal hidden tension or resistance that is essential in being able to help resolving remaining information that is unprocessed (Shapiro, 2001, 74-75).

Phase 7:

Phase seven includes *closure*. By the end of every session the patient must be returned to a stable emotional state, even though reprocessing is not finished. It is also important that the patient has received suitable instructions when the session is finished. In between sessions the images, thoughts and emotions might occur, but this is a part of the process and a positive sign. The patient should keep a journal keeping track of occurring memories, dreams,

thoughts or situations. Through the act of writing it is possible to keep distance from emotional distress. These will also be used as target for next sessions. It is important to keep a journal and use visualization techniques to keep client stable between the sessions. Without appropriately debriefing the client, there is a risk for failure. If the patient gives the disturbing emotions excessive significance this can result in life-threatening situations, in the worst case these can lead to suicide. It is essential that the clinician informs the patient in phase seven that both negative and positive responses may surface during and after treatment (Shapiro, 2001, 75).

Phase 8:

Phase 8 includes *reevaluation*. Every time a new session begins this should be applied. The patient is asked to return to the targets that have been previously reprocessed, and the clinician evaluates the responses. This is to determine if the effect of the treatment has been sustained. It is important to ask how the patient feels about the targets that have been previously reprocessed, to check the journal records in case there are other targets to be addressed. If the clinician decides to target new information, then earlier treated targets must first be fully integrated. New behaviors may be the result of the reprocessed traumas. This requires the clinician to discuss the issues that might be brought up in the family or social system. When acceptable reevaluation of the reprocessing and behavior effects have been concluded, then it can be established if the treatment has been successful (Shapiro, 2001, 75-76).

3 Theoretical Framework

For this thesis, Janice M. Morse's theory of suffering was chosen as a theoretical framework. This theory is suitable for this thesis as PTSD includes experiences of suffering and enduring.

Suffering involves two behavioral states, *enduring* and *emotional suffering*. Enduring is a state where there are suppressed emotions and emotional suffering is a state that is distressing, and emotions are let go. In the model of suffering (Figure 2), Morse has drawn suffering in two concepts: *enduring* and *emotional suffering.*

In the model of suffering (Figure 2), the circles are drawn quivering. This characterizes that the type and strength of the experience differ from time to time. The person altering among

enduring and emotional releasing is due to that they are not able to endure any more or bear releasing (Morse, 2001).

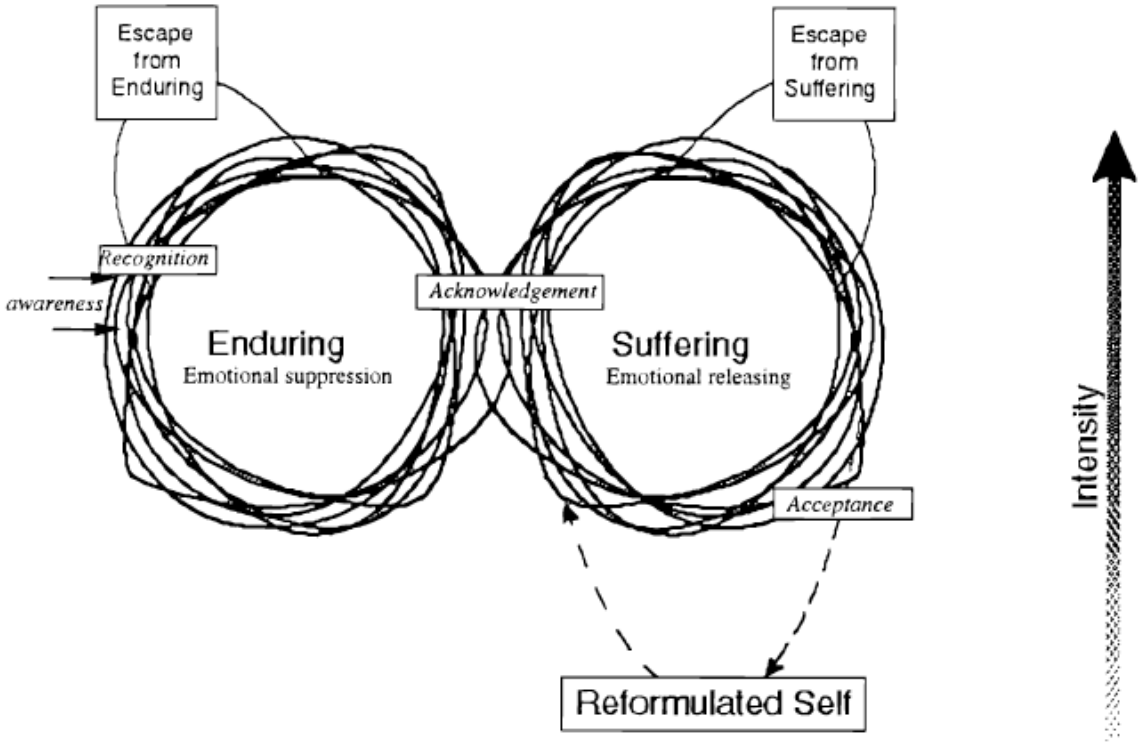

Figure 2: Morse's Model of Suffering (2001, 54).

3.1 Enduring

Morse describes *enduring* as an outcome of blocking the emotional response though which a person copes with a situation i.e. bottling up emotions. Threats to the integrity of oneself can be caused as a response leading to the occurrence of enduring. Enduring empowers a person to continue doing their responsibilities in the day to day context. This is a normal and needed behavior, however, relief is not brought by keeping the emotions bottled up. Therefore, an experience of letting go of the emotions is needed for healing to occur (Morse, 2001).

There are different levels of intensity that can appear of enduring, depending on how severe the threat is. A person who goes through the most severe form of enduring does not show emotions at all. This form of severity of enduring in a person is characterized by an upright posture, keeping the shoulders back, head up and walking like a robot. The person barely shows facial expressions, while speaking the mouth and lips barely move. The person talks with a toneless voice, uses sentences that are short and sighs frequently. The eyes seem dull and glazed and the person has a vague appearance. Suppressing emotions separates the

person from life and might lead to that the person has no memory of a stressful event, which is the most severe form of enduring (Morse, 2001).

Focusing on the present is a strategy which empowers people who are enduring to carry on. The person tries to forget the past and the future, by focusing on the present. The persons might acquire strategies to keep a grip on to the present, if it's a physical threat that is being endured. This might be to count, breathing in or out or keeping an eye at the clock (Morse, 2001).

In Morse's model of suffering, *escape from enduring* is presented in Figure 2. A person who endure usually burst out emotionally, because the energy of the emotion needs to be released somewhere. The person escapes from enduring by releasing the bottled-up energy, often by expressing emotional outbursts that are short lasting and fast returning to enduring. This energy can also be seen in the persons behavior e.g. hysterical laughing, doing extreme physical exercise or counting e.g. tree leaves (Morse, 2001).

There are three forms of enduring that has been recognized: *Enduring to survive,* which appears when there is a physiological threat that is serious and the person controls pain by focusing. *Enduring to live,* which appears in circumstances when life is untenable and a person is empowered to go through every moment, every day by focusing. At the end of life *enduring to die*, appears empowers a person to prioritize, maintain energy, and control and focus on the present in order to go through the unpleasant experience. When the person gets weaker and the tiredness overcomes, the person releases from the enduring and surrenders to death (Morse, 2001).

3.2 Emotional Suffering

Morse describes *emotional suffering* as a way of releasing emotions when a person is feeling sadness by talking openly to someone that will listen. It seems as the person repeats the story multiple times as if they need assurance that it's a real nightmare. The person is characterized by their posture which includes a bent neck and shoulders and a drooping facial expression. The person that is going through emotional suffering is gradually able to acknowledge that there is hope, a meaning with their life and a changed future. This is when they have had enough suffering (Morse, 2001).

In Morse's model of suffering, *escape from emotional suffering* is presented in Figure 1 and describes a person who might escape from the emotion by sleeping, drinking or overeating,

or watching television to avoid thoughts. Physical escapes that are used while enduring take a lot of energy, however, the emotional suffering also takes energy (Morse, 2001).

4 Aim and Problem Definition

The aim of this study is to understand the effect of Eye Movement Desensitization and Reprocessing therapy as a treatment method for Post-Traumatic Stress Disorder.

This study will give a better knowledge about PTSD and EMDR therapy. Nurses will meet patients suffering from PTSD, particularly as Finland receives immigrants who have gone through stressful experiences, and this number is likely to increase. As health care professionals, it would be important to have knowledge about PTSD and what effective treatment methods are available, as well as how best to encounter the patient in order to increase quality of care. EMDR therapists are needed, and nurses have a good foundation to further educate themselves to become EMDR therapist. The following questions will be answered in the current study:

1. What kind of effect does the Eye Movement Desensitization Reprocessing therapy have on the symptoms of Post-Traumatic Stress Disorder?

5 Research Methodology

This chapter will describe the data collection method, data analysis and the ethical considerations for this study.

This study will be conducted as a scoping review, with a broad focus. In order to be able to determine if a comprehensive systematic study can be completed, a scoping review can be done first in order to ascertain the level of accessible research in a certain area. In areas with little or no research, a scoping review can be conducted to identify new research areas. There are several different ways of using a scoping review. One way is to examine the range of a research area and not having to explain in detail the results. Another way is recognizing parameters e.g. population, intervention, comparison and outcomes which are suitable for conducting a systematic literature study. A third way is to outline a purpose and certain problems in a systematic literature study. When a lack of randomized controlled studies makes it tricky to implement systematic literature reviews or when there are areas where the

research is under construction, a scoping review might be relevant. (Forsberg & Wengström, 2015, 169-170).

A scoping review is suitable for students as it often involves a limited amount of research. In a scoping review, the researcher can include a wide range of published scientific articles. Additionally, grey literature can be included such as reports, thesis works and clinical guidelines. Easily accessible studies should be prioritized in the selection of articles. Searching, developing the search strategy and examining the articles is an interactive process as a part of selecting studies (Forsberg & Wengström, 2015, 170-171).

5.1 Scoping Review

Literature for a scoping review can be searched in databases, journals, webpages, network, reference lists and conference reports. Scoping reviews are also a good way to gain an understanding of the amount of research conducted in a certain area, as well as what research methods have been used. Furthermore, a scoping review can help in the selection criteria for a systematic literature review (Forsberg & Wengström, 2015, 171).

The development and documentation of data collection is reported during the work process. Detains of data collection will be categorized in a table including title, author, publication year, journal, aim, target group, research method and result (Forsberg & Wengström, 2015, 171).

In the context of this study, material was searched from database portals such as EBSCO Academic Search Elite, PubMed and Springer Link. Due to the difficulty to find articles relevant to this study topic further sources were included, such as the Finnish EMDR website and their reference lists on EMDR therapy research.

Inclusion criteria for this study were peer reviewed, full text articles published in English, Swedish or Finnish, published from 2008-2018 The exclusion criteria were studies published in other languages than English, Finnish or Swedish and articles older than 10 years, non-peer reviewed articles, or articles that are not related to the study subject, or where EMDR therapy was combined with another therapy method. The following search words were used “Eye Movement Desensitization Reprocessing, Experiences, Post-Traumatic Stress Disorder”, “Eye Movement Desensitization Reprocessing, Treatment, Post-Traumatic Stress Disorder”.

The search process is detailed in Appendix 1 as a PRISMA flow diagram (Moher, Liberati, Tetzlaff & Altman, 2009). A description of the database search history is detailed in Appendix 2. No articles were found in Swedish or Finnish on this topic, and a total of 230 records were screened for this study with total of 9 studies being included in this scoping review. The articles included in the study can be seen in Appendix 3.

5.2 Data Analysis

There are many methods which can be used to analyze data, one of which is content analysis. In order to have an effective content analysis data may be reduced to concepts including descriptions of the research question into categories, a model, conceptual diagram, concepts or a conceptual system. What should be analyzed is defined by the research question. It is essential to clearly describe the way in which results have been built, and how the analysis and conclusions have been reached (Elo et. al, 2014).

Either an inductive or a deductive method can be used in content analysis. There are three main points in both ways: preparing, organizing and reporting. In order to collect appropriate data, an understanding of the data and deciding the element of analysis is an important part of the preparation phase. Coding, as well as making categories and concepts is included in the inductive approach within the organization phase. Results are explained using the category contents which describe the research question using either a deductive or an inductive (Elo et. al, 2014).

An inductive approach was used in the present study, beginning with careful reading through of the included articles. Focus was placed on the articles result and discussion sections, and important sentences answering the aim were highlighted with different colors for different themes. Following this, different themes were then categorized.

5.3 Ethical Considerations

In both quantitative and qualitative research ethical issues must be taken to consideration. These ethical principles protect the participants involved in the research and avoid harm or risk. Researches must also follow professional rules of conduct which and guidelines for research practice (Holloway & Wheeler, 2013, 53).

Research must be organized according to the principles of the responsible conduct of research, so it can be approved ethically, reliable and to acquire trustworthy results. When

conducting research, and when evaluating research results, authors must take into consideration integrity, meticulousness and accuracy. Data acquirement, research and evaluation in the research methods need to correspond to the scientific criteria's and be ethically sustainable. The results of the research must be discussed with an open and responsible approach as this is essential for the development of scientific knowledge. Other research must be taken into consideration and clearly referred to via clear citation, acknowledging other researcher's accomplishments and importance of the work. When planning and conducting research and reporting the results of the research and collected data, the researcher meets the norms of scientific knowledge (Finnish Advisory Board on Research Integrity, 2012, 30).

Unethical and dishonest practices are violations that can lead to harming research and contributing to research results that are false. Research misconduct is separated to four subgroups; fabrication, falsification, plagiarism and misappropriation. Fabrication indicates that there have been false results reported and the claimed research method has not been used in the research. Falsification indicates that original results have been adjusted and presented so that they become misleading results. Plagiarism involves copying text directly from others work and representing it as one's own. Misappropriation indicates that a person illegally presents a research as their own when it's someone else's research (Finnish Advisory Board on Research Integrity, 2012, 32-33).

In this study the respondent will analyze and read carefully the articles, in order to ensure that the results are trustworthy. The respondent will correctly reference the material that is used and will not plagiarize or falsify the results.

6 Results

In this chapter the respondent will discuss the results of the analysis in different themes, how it had an impact on the patient's symptoms of Post-Traumatic Stress in both psychological and physical ways. The different traumatic events that resulted in PTSD will also be described.

6.1 Psychological Symptoms

Improvement of overall psychological symptoms were indicated in all of the studies. The PTSD scores were reduced (Acarturk et.al, 2016; Ahmad & Sundelin-Wahlsten, 2008;

Aldahadba et.al, 2012; Bongaerts, 2017; Jarero et.al, 2015, Mevissen et.al, 2017; Mevissen et.al 2012; Raboni et.al, 2014; & Yasar et.al, 2018) in most studies, however, in one study there was an increased PTSD score in one patient because of being exposed to a new traumatic event in beginning of treatment (Mevissen et.al, 2017). Furthermore, one patient had a relapse in aggressive outbursts because she had to go back to a group home where she had bad memories with a caregiver (Mevissen et.al, 2012).

6.1.1 Anxiety

EMDR resulted in reduced anxiety for patients that had experienced trauma from road accidents in Oman (Aldahadha et.al, 2012). Both state and trait anxiety were reduced in patients with PTSD after treatment sessions (Raboni et.al, 2014). Anxiety was particularly reduced in a patient with Schizophrenia that had a PTSD diagnosis who had experienced sexual abuse in childhood and been involuntary placed into psychiatric hospital care (Yasar et.al, 2018).

A 55-year-old female had been diagnosed with PTSD due to traumatic events such as being sexually and physical abused in childhood and adulthood. Her strongest symptoms were anxiety. EMDR therapy alleviated the symptoms and she no longer met the PTSD scale criteria (Bongaerts et.al, 2017).

Another female aged 36, had experienced sexual abuse by her father as a child, and during adulthood by an ex-boyfriend. Child protection services had also taken away her children from her. Following this she experienced severe anxiety, and this was treated by EMDR therapy after which she no longer suffered from PTSD. She also found the strength to regain custody of her children again (Bongaerts et.al, 2017).

6.1.2 Avoidance

A 38-year old female had experienced physical violence in her teenager years perpetrated by her father. She had also been assaulted by two boys who had kept her locked up, although she managed to escape. She was diagnosed with Complex PTSD, experiencing avoidance and flashbacks. After the EMDR therapy treatment she felt her avoidance symptoms had disappeared, however she was not able to participate in the follow-up due to her spouse's serious illness (Bongaerts et.al, 2017).

6.1.3 Depression

Depression symptoms were reduced effectively in Syrian refugees at a refugee camp in the Turkish-Syrian border using EMDR therapy. The refugees had experienced different traumatic events such as family members being killed, having experienced or seeing severe injuries, loosing homes, family members participating in war and being threatened to death (Acarturk et.al, 2016). Lower levels of depression were found in patients with PTSD after the EMDR treatment (Raboni et.al, 2014).

6.1.4 Hyperarousal

A 47-year-old male had been sexually abused in his early teenager. He also worked as a policeman and had seen disturbing events. The worst PTSD symptoms he experienced worst were his aggressiveness and being socially isolated. EMDR therapy resulted in improving these symptoms and he no longer met the PTSD scale criteria (Bongaerts et.al, 2017).

Another 52-year-old male patient had been physically and psychologically abused by his parents and had also experienced traumatic events while working as truck driver in challenging conflict areas. He was diagnosed with PTSD, his symptoms were problems sleeping, and had developed Obsessive Compulsive Disorder (OCD). EMDR therapy was successful in improving the symptoms and removing the memories related to the traumatic events. However, he did not participate in the follow-up (Bongaerts et.al, 2017).

A 39-year-old male had experienced an abusive and unsafe childhood, and suffered from aggressive outburst and had been diagnosed with PTSD. The EMDR therapy alleviated these symptoms and he didn’t meet the PTSD scale score after the treatment (Bongaerts et.al, 2017).

Sleep efficiency and Waking After Sleep Onset (WASO) was improved in patients suffering from PTSD after EMDR therapy sessions (Raboni, 2014). A patient with severe intellectual disability had serious sleeping problems, screaming throughout the nights. Her sleeping problems and screaming were removed after 4 EMDR therapy sessions (Mevissen et. al, 2012).

A 10-year-old girl with PTSD was reported to suffer from poor concentration, was constantly tense, unpredictable and got angry easily. She had experienced difficult situations and went through difficult medical examinations and procedures throughout her life. The result from EMDR therapy treatment resulted in that she was more relaxed, and her concentration had

improved. She was able to discuss and draw her traumatic experiences and also managed to go through medical examinations and procedures which had been a struggle due to the negative memories (Mevissen et.al, 2012).

6.1.5 Re-experiencing the trauma

It was shown that EMDR therapy was found to have a positive impact on improving re-experiencing symptoms among children between ages 6-16 who had experienced traumatic events such as substance abuse, accidents, or parents being chronically ill, experiencing criminality or having parents that are not available both psychologically and physically (Ahmad & Sundelin-Wahlsten, 2008).

Re-experiencing traumatic events was a common symptom of PTSD among survivors of an explosion in a factory in Mexico. Survivors described their flashbacks:

"I have disturbing images of one of my dead friend keep coming at all time…he had a dreadful death, the image of his intestines coming out is driving me crazy"; "Every day I can see the unrecognizable face of my friend…" (Jarero et.al, 2015, 171)

This study indicated that the survivors of the explosion had an overall improvement of the PTSD symptoms after the intensive EMDR therapy treatment and the effect of the treatment was maintained at the follow up (Jarero et.al, 2015).

An 18-year-old female explained the re-experiencing symptoms and terrible physical feelings resulting from the memories and feelings of the event occurring again. Another patient, a 10-year-old boy explained that he has nightmares, experiencing terrible physical feelings from the memories and thinking of the traumatic even involuntarily. Both patients' PTSD symptoms were improved after the EMDR therapy sessions.

6.1.6 Suicidal thoughts

A 30-year-old female had experienced sexual abuse by her boss in her teenage years. Her ex-boyfriend also shown sexual behavior that was disrespectful towards her. She experienced suicidal thoughts and was diagnosed with PTSD. After EMDR therapy she no longer met the criteria for PTSD. She had been scared of future suicide but now was able to recognize she can manage her distress (Bongaerts et.al, 2017).

6.2 Physical Symptoms

Some of the included studies indicated that improved physical symptoms had occurred due to the EMDR therapy.

6.2.1 Heart Rate

In the first EMDR treatment session of patients with PTSD caused by kidnapping or assault, changes in maximum heart rate were found in the following sessions (Raboni et.al, 2014). Tachycardia was a symptom of PTSD in patients that survived an explosion in a factory in Mexico which was improved after EMDR therapy (Jarero et.al, 2015).

6.2.2 Muscle Tension and Body Cramps

A patient's physical problems from PTSD were reduced due to the therapy resulting in more relaxed muscles following treatment (Mevissen et.al, 2012). Body cramps and tension were listed as physical symptoms in patients with PTSD after a factory explosion, these symptoms were alleviated after the EMDR treatment (Jarero et.al, 2015).

7 Discussion

In this chapter the method, results and theoretical framework relation will be discussed.

7.1 Method Discussion

This study was done as a scoping review using an inductive analysis approach. It was challenging to find studies about this topic, however as it was possible to use both qualitative and quantitative studies in a scoping review, this method was suitable for this study. Seven out of the nine articles found were quantitative, only two qualitative. Five of the articles were collected from databases EBSCO, PubMed and SpringerLink with different search words which can be seen in appendix 2. As it was challenging to find articles that responded to the aim and research question, four further articles were found through another source, the Finnish EMDR website.

Analysis was performed by highlighting sentences which answered the research question with different colors. Some of the studies explained very little about the symptoms which were reduced with EMDR therapy, although other articles went in depth about the different

symptoms of PTSD describing the patient's experiences. Overall, this was a challenging topic to write a thesis about due to the lack of studies in this area.

7.2 Result Discussion

The purpose of this study was to gain a better understanding of the effects of EMDR therapy as a treatment method for PTSD. The aim of the study was to strengthen the level of knowledge about the symptoms of PTSD for nurse and to understand patients suffering. It is useful as a nurse to be able to give coherent information about different effective treatment methods for PTSD. The results of the study indicated that the EMDR therapy resulted in positively improvements of PTSD symptoms (Acarturk et.al, 2016; Ahmad & Sundelin-Wahlsten, 2008; Aldahadba et.al, 2012; Bongaerts, 2017; Jarero et.al, 2015, Mevissen et.al, 2017; Mevissen et.al 2012; Raboni et.al, 2014; & Yasar et.al, 2018). Both psychological and physical symptoms were alleviated with the EMDR, with symptoms not only reducing, but also bringing improvements in personal functioning (Mevissen, et.al, 2012).

In this study the respondent had chosen Janice. M. Morse's (2001) theory of suffering as a theoretical framework. Morse (2001) describes the suffering in two different behavioral states; *enduring,* meaning that the person bottles up emotions to cope with the difficult situation; and *emotional suffering* describing feeling distressed and releasing emotions. Some studies explained experiences in more detail such as the age at which the PTSD began, describing some living with their symptoms for years, while other studies described the EMDR treatment as starting quickly after a traumatic event. The patients with PTSD are described as *enduring* with their symptoms caused by the traumatic memories. The enduring doesn't end until there is healing. PTSD requires an effective treatment method, for erasing the enduring. Patients with PTSD switch between *enduring* and *emotional suffering* which described a release of their emotions. This study describes the possibility that the *suffering* patient can be healed with an effective treatment method.

8 Conclusion

The results of the current study describe the many symptoms a patient with PTSD goes through and how EMDR treatment was able to heal these symptoms. EMDR therapy is therefore shown to be an effective treatment method for PTSD. Many nurses will encounter patients with PTSD, and it is important to know that there is serious psychological and

physical suffering the patient goes through. Re-experiencing the traumatic events can feel very real for the patient.

Nurses should therefore show sensitivity to these patients and be able to support the patient and possibly advice the patient in terms of different treatment methods for PTSD. EMDR therapy is not such a well- known therapy method in Finland, so hopefully this study generated increased interest in this treatment method. Nurses have a good foundation to educate themselves further to become EMDR therapists. PTSD and treatment methods for it is an important topic at the moment as Finland receives immigrants that have experienced very traumatic events, making it more likely to encounter PTSD patients,

Not much research has been done on the EMDR therapy and its effects on PTSD. It could be argued that more research (including more qualitative studies) on this topic could be beneficial.

In conclusion, it is possible reduce the complications of PTSD if health care professionals had more knowledge on the topic, and were able to suggest effective treatment methods. Since it is possible to recover from PTSD, why not try to promote such recovery?

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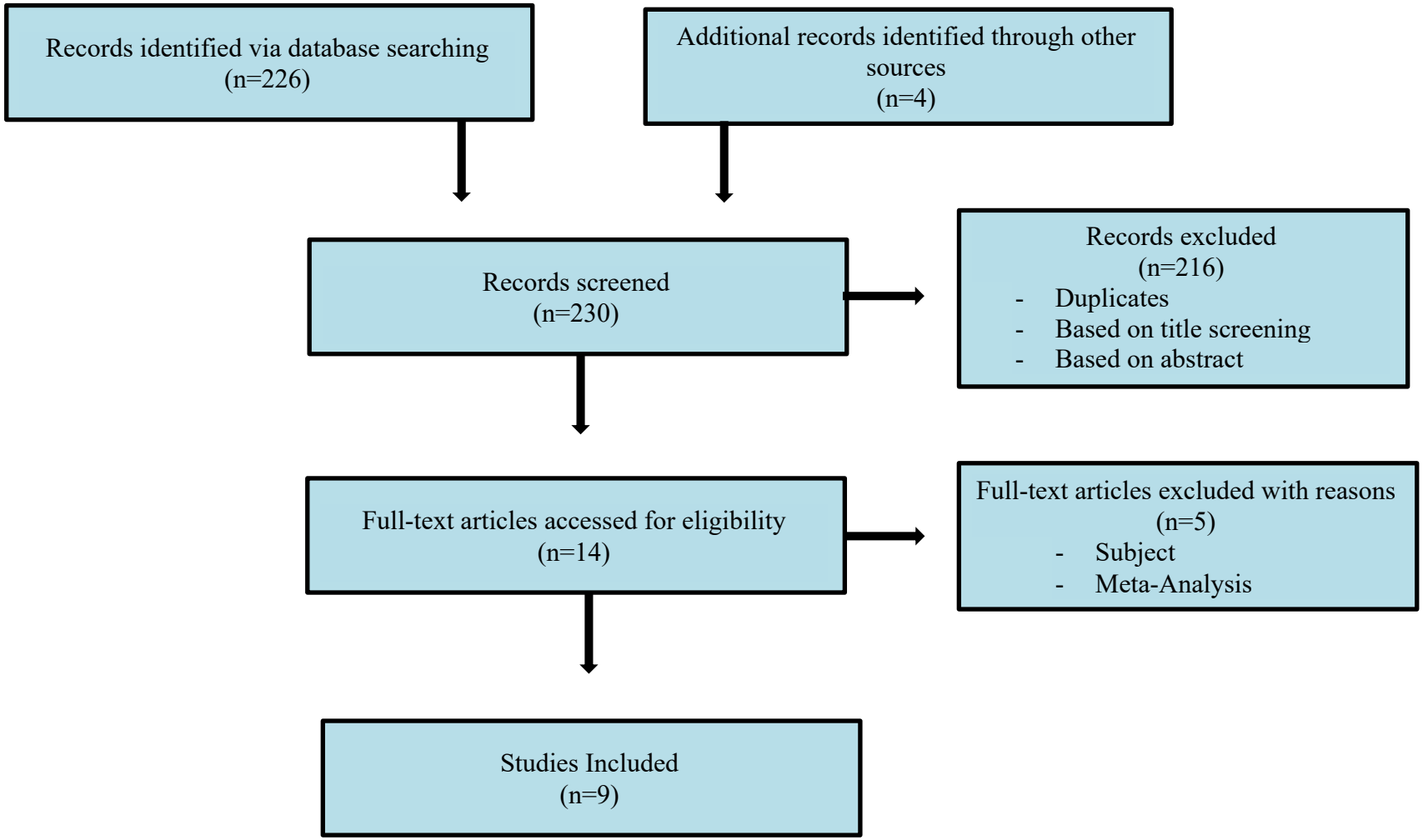
Appendix. 1: Prisma Flow Diagram



Appendix 2

	Database	Search History	Year	Hits	Used	Actual Usable
1	EBSCO Academic Search Elite	Eye Movement Desensitization Reprocessing, Experiences, Post-Traumatic Stress Disorder	2008-2018	6	2	1 -1 meta-analysis
2	EBSCO Academic Search Elite	Eye Movement Desensitization Reprocessing, Treatment, Post-Traumatic Stress Disorder	2008-2018	32	6	2 -1 all of the participants did not have PTSD -3 subject
3	Pubmed	Eye Movement Desensitization Reprocessing, Experiences, Post-Traumatic Stress Disorder	2008-2018	15	2	1 -1 subject
4	Pubmed	Eye Movement Desensitization Reprocessing, Treatment, Post-Traumatic Stress Disorder	2008-2018	36	2	-2 Two treatment methods were used together
5	Springer Link	Eye Movement Desensitization Reprocessing, Experiences, Post-Traumatic Stress Disorder	2008-2018	137	2	1 -1 Subject

Appendix 3 (1/5)

	Author, Year & Country	Name	Aim	Target Group	Method	Result
1	Acarturk, C., Konuk, E., Cetinkaya, M., Senay, I., Sijbrandij, M., Gulen, B., & Cuijpers, P. 2016. Turkey.	The Efficacy of Eye Movement Desensitization and Reprocessing for Post-Traumatic Stress Disorder and Depression among Syrian Refugees: Results of a Randomized Controlled Trial.	To study if the EMDR therapy is effective in the treatment of PTSD among Syrian refugees.	70 Adult Syrian refugees in a refugee camp.	A randomized controlled trial. A treatment group consisting of 37 participants and waitlist group consisting of 33 participants. Interviews and different scales were used.	It was indicated that the EMDR treatment groups PTSD symptoms were alleviated. The results show EMDR to be effective in alleviating PTSD symptoms in challenging environments like refugee camps.
2	Ahmad, A., & Sundelin-Wahlsten, V. 2008. Sweden.	Applying EMDR on children with PTSD.	To test an adjusted protocol for EMDR therapy suitable for children.	33 Children suffering from PTSD between ages 6-16 years in a psychiatric outpatient clinic.	Randomized control trial. Different scales were used.	EMDR therapy largely alleviated the re-experiencing symptoms. The study indicated that the EMDR therapy gives the *"possibility to explore the child's thoughts and feelings"* and advised use of a child modified protocol for EMDR.

Appendix 3 (2/5)

	Author, Year & Journal	Name	Aim	Target Group	Method	Result
3	Aldahadha, B., Al-Harthy, H., & Sulaiman, S. 2012. Oman.	The Efficacy of Eye Movement Desensitization Reprocessing in Resolving the Trauma Cause by the Road Accidents in the Sultanate of Oman.	To study the EMDR therapy's effectiveness on patients with trauma due to road accidents in the Sultanate of Oman.	51 participants suffering from PTSD volunteered.	Volunteers were found from three hospitals in Oman. Three different scale measurements were used. The participants were divided into treatment group (25 participants) and control group (26 participants).	The study indicates that the EMDR therapy was effective in decreasing the PTSD scale in all participants. Anxiety symptoms were reduced. The reduced PTSD symptoms were maintained at follow up test.
4	Bongaerts, H., Van Minnen, A., & De Jongh, A. 2017. The Netherlands.	Intensive EMDR to Treat Patients with Complex Posttraumatic Stress Disorder: A Case Series.	To study if EMDR therapy is safe and effective in patients suffering from complex PTSD.	7 participants (4 women & 3 men) suffering from complex PTSD caused by trauma from physical or sexual abuse, or work.	Outpatient treatment program. EMDR therapy was carried out 2 x 4 consecutive days. Twice a day, morning and evening in 90-minute sessions.	EMDR therapy was indicated as safe and effective in decreasing PTSD symptoms which was also maintained at 3-month follow-up.

Appendix 3 (3/5)

	Author, Year & Journal	Name	Aim	Target Group	Method	Result
5	Jarero, I., Uribe, S., Artigas, L., & Givaudan, M. 2015. Mexico.	EMDR Protocol for Recent Critical Incidents: A Randomized Controlled Trial in a Technological Disaster Context.	To investigate how the EMDR therapy for 2 days alleviated the PTSD symptoms of 25 survivors from a factory explosion.	25 survivors of a factory explosion in Mexico City were 7 employees were killed. All survivors suffered from PTSD. Ages 23-56-year-old.	Randomized control trial study. In the treatment group, there were 13 individuals and in waitlist group 12 individuals.	The survivor's PTSD symptoms were alleviated with EMDR treatment. This study indicates that after a disaster EMDR therapy is effective in treating symptoms of PTSD.
6	Mevissen, L., Didden, R., Korzilius, H., & De Jongh, A. 2017. The Netherlands.	Eye Movement Desensitisation and Reprocessing Therapy for Posttraumatic Stress Disorder in a Child and an Adolescent with Mild to Borderline Intellectual Disability: A Multiple Baseline Across Subjects Study.	To study if EMDR therapy is an effective treatment for individuals with intellectual disability suffering from PTSD.	2 participants. One child 10-year-old and one woman 18-year-old with intellectual disability. Both participants had went through different traumatic experiences.	4 sessions of EMDR therapy. Before and after EMDR treatment the PTSD symptoms were measured.	The study supports that EMDR therapy can be used as an effective treatment method for children and adolescent with intellectual disability suffering from PTSD. At 6 weeks follow up the participants didn't meet the PTSD criteria longer. During the beginning the woman participant went through a new trauma and this was seen as increased PTSD symptoms.

Appendix 3 (4/5)

	Author, Year & Journal	Name	Aim	Target Group	Method	Result
7	Mevissen, L., Lievegoed, R., Seubert, A., & De Jongh, A. 2012. The Netherlands.	Treatment of PTSD in People with Severe Intellectual Disabilities: A Case Series.	To study if EMDR therapy is an effective treatment for people with intellectual disabilities suffering from PTSD.	4 participants. Two adult women and two 10-year-old children with intellectual disabilities suffering from PTSD due to different trauma events.	A case series evaluating 4 single participants treatment with EMDR therapy.	PTSD symptoms were reduced in all participants. Symptoms of depression and physical complaints was reduced, and an improvement of personal functioning was found.
8	Raboni, M. R., Alonso, F. F. D., Tufik, S., & Suchecki, D. 2014. Brazil.	Improvement of Mood and Sleep Alterations in Posttraumatic Stress Disorder Patients by Eye Movement Desensitization and Reprocessing.	To study what effect EMDR therapy has on patient's mood and sleep.	EMDR therapy on 13 PTSD patients that had been assaulted or kidnapped and 11 healthy individuals in control group. All individuals were volunteers	Different questionnaires and scales were used. Objective sleep assessment was done individually.	EMDR therapy did improve the sleep efficiency and depression was reduced in the PTSD patients. Heart rate was also noted to decrease after the first therapy session in PTSD patients.

Appendix 3 (5/5)

	Author, Year & Journal	Name	Aim	Target Group	Method	Result
9	Yasar, A. B., Kiraz, S., Usta, D., Abamor, A.E., Zengin E. M., & Kavakci, Ö. 2018. Turkey.	Eye Movement Desensitization and Reprocessing (EMDR) Therapy on a Patient with Schizophrenia and Clinical Effects: A Case Study.	To study what effect the EMDR therapy has on a patient with paranoid schizophrenia suffering from PTSD.	EMDR therapy on a female, 43 years old suffering of paranoid schizophrenia and PTSD due to past childhood sexual abuse and forced psychiatric treatment.	A case study of one participant. Different measurement scales used.	EMDR therapy can alleviate symptoms of PTSD in patients with schizophrenia. Feelings of anxiety, guilt and aggression was decreased. An improved clinical score scale and drug compliance were indicated at 6 months follow up.