
2010 VA/DoD Clinical Practice Guideline for PTSD

Recommendations for Eye Movement Desensitization and Reprocessing (EMDR) and Stress Inoculation Training (SIT)



VA/DoD CLINICAL PRACTICE GUIDELINES FOR PTSD (2010)

Presented by
National Center for PTSD
U.S. Department of Veterans Affairs

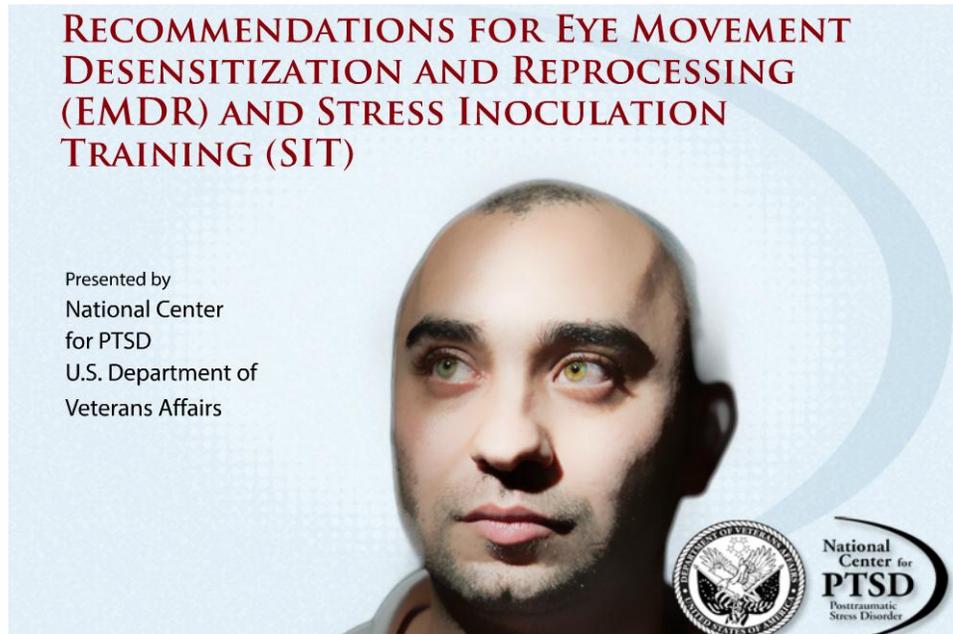
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Recommendations for Eye Movement Desensitization and Reprocessing (EMDR) and Stress Inoculation Training (SIT)



Hello everyone and welcome to this discussion of another section of the 2010 VA Department of Defense Clinical Practice Guideline for PTSD. Today's topic is covering recommendations for Eye Movement Desensitization and Reprocessing treatment otherwise known as the EMDR, and, also Stress Inoculation Training, or SIT.

Meet the Presenter: Josef I. Ruzek, Ph.D



JOSEF I. RUZEK, PH.D.

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I am Joe Ruzek. I am the Director of the Dissemination and Training Division of the National Center for PTSD which is located out in Palo Alto, California at the VA Palo Alto Healthcare system.

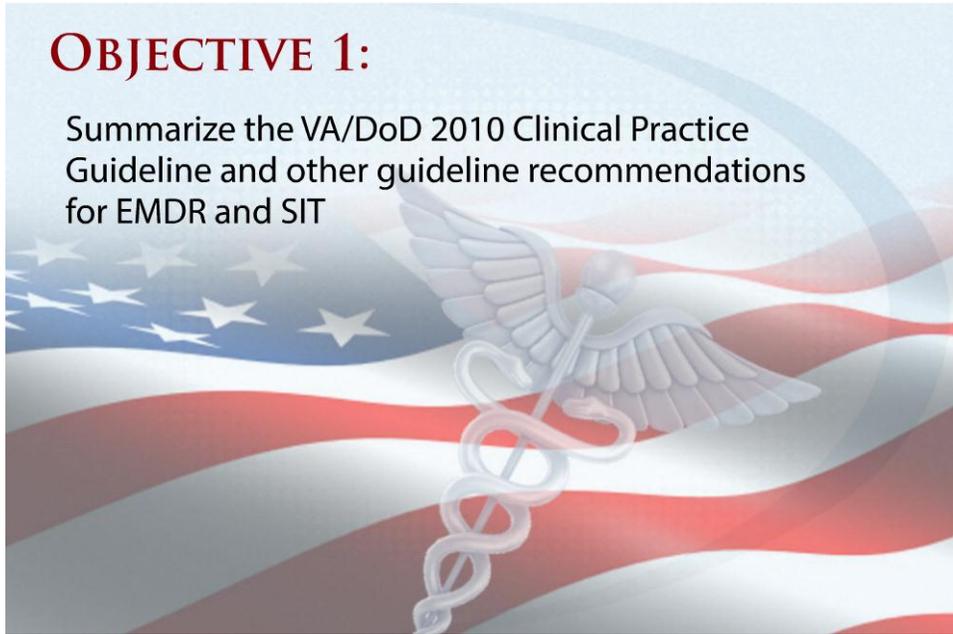
OBJECTIVES

1. Summarize the VA/DoD 2010 Clinical Practice Guideline and other guideline recommendations for EMDR and SIT
2. Describe EMDR and the research literature supporting its use for PTSD
3. Describe SIT and the research literature supporting its use for PTSD

And, today I'm going to have 3 objectives for this talk. The first is to summarize the 2010 second revision of the VA Department of Defense Clinical Practice Guideline, focusing on the recommendations for EMDR and Stress Inoculation Training. Second, I'm going to describe EMDR as an intervention and also the research literature supporting its use for PTSD. Then, finally, I'll move to Stress Inoculation Training; describe the treatment and the research literature that support its use as a first line of treatment for PTSD.

OBJECTIVE 1:

Summarize the VA/DoD 2010 Clinical Practice Guideline and other guideline recommendations for EMDR and SIT



Objective 1 is summarizing the guideline for EMDR and SIT.

VA/DOD CLINICAL PRACTICE GUIDELINE FOR PSYCHOTHERAPY

SR	SUBSTANTIAL	SOMEWHAT	UNKNOWN
A	<ul style="list-style-type: none"> • Trauma-focused psychotherapy that includes components of exposure and/or cognitive restructuring and Eye Movement Desensitization and Reprocessing; OR • Stress Inoculation Training 	SR = Strength of recommendation (Full Guideline, p. 115)	
C		Patient Education, Imagery Rehearsal Therapy, Psychodynamic Therapy, Hypnosis, Relaxation Techniques, Group Therapy	
I		Family Therapy	Web-Based CBT, Dialectical Behavior Therapy, Acceptance & Commitment Therapy

Here we can see a table from the practice guideline, which summarizes the findings related to psychotherapy for PTSD. And, you'll see that eye movement desensitization and reprocessing and Stress Inoculation Training both receive the highest level of recommendation that the guideline allows. And, this is a level rating of A, a strength recommendation of A rating.

You'll notice, as well, that Eye Movement Desensitization and Reprocessing is categorized as a trauma-focused psychotherapy along with cognitive therapy or cognitive restructuring, exposure therapy, in that these treatments all are similar in some key ways, particularly in that they take people on a focus on their trauma memories and on the experiences that happen to them.

Stress Inoculation Training is not categorized as a trauma focused psychotherapy, because it is more focused on giving people generic coping skills for managing anxiety. And, although it may cover trauma-related memories in some tangential ways, that is not the focus of the treatment, so I'll say more about that as I move forward today.

OTHER TREATMENT GUIDELINES

- ▶ Guidelines are based on reviews of the evidence
- ▶ International Society for Traumatic Stress Studies (ISTSS) and National Institute for Clinical Excellence recommend EMDR as first line treatment for PTSD
- ▶ However, Institute of Medicine (2008) judged evidence inadequate to determine recommendation
 - Most methodologically rigorous review



The guidelines that we are talking about today are based on reviews of the evidence. And, in fact, like our VA Department of Defense Clinical Practice Guideline, all other practice guidelines developed by different organizations including the International Society for Traumatic Stress Studies or Great Britain's National Institute for Clinical Excellence, all recommend EMDR as a first line treatment for PTSD. The evidence is very supportive of the intervention, but looking at the evidence, as with all psychotherapies, has to be done through a lens of methodological rigor.

Interestingly, the Institute of Medicine, in 2008, published a report on psychotherapeutic interventions for posttraumatic stress disorder. In that report, only one intervention, exposure therapy, was deemed efficacious in the treatment of PTSD, because the levels of methodological rigor were really tough in this review.

The IOM actually judged that EMDR was not--did not have a sufficient evidence base to strongly recommend it. That is, the evidence was judged to be inadequate, that determined the efficacy of EMDR in the treatment of PTSD. The judgment was not that EMDR was ineffective but that the current base of evidence was ineffective

INSTITUTE OF MEDICINE REPORT

Institute of Medicine (IOM, 2008) report on EMDR

- ▶ 4 of 10 randomized clinical trials (RCTs) reviewed had no major methodological limitations; 3 were compared to active treatments and 1 compared to waitlist
 - Of these 4, 2 showed consistent positive effects for EMDR
- ▶ Other 6: lack of assessor blinding or independence, high dropout rates, or weak (or no) treatment of missing values
- ▶ IOM Conclusion: Evidence inadequate to determine the efficacy of EMDR in the treatment of PTSD

Their review showed that 4 of the 10 existing randomized clinical trials of EMDR had no major methodological limitations. Of those very strong studies, three studies compared EMDR to active treatments, and one compared it to waitlist only. Of the four methodologically strong trials, two showed consistent positive effects for EMDR. The other two showed mixed results. The six other RCTs that have been conducted to date suffered from various methodological weaknesses, including a lack of assessor blinding or independence, high dropout rates, or problematic treatment, statistical treatment of missing values and research data.

It should be mentioned that other major well-known treatments, that have been used with PTSD patients, also were judged not to be efficacious by virtue of inadequate evidence. So, for example, coping skills training, in which SIT was categorized, also was judged to be having inadequate evidence, and cognitive therapy, as well, was in the same boat. There was not enough of a research base that was consistent enough to judge that was efficacious.

CHOOSING A TREATMENT

- ▮ VA supporting Prolonged Exposure and Cognitive Processing Therapy
 - Based on strongest evidence base and limited resources/practicality

- ▮ There is no evidence to support which type of treatment works for which types of patients
 - Choice should be based on “the severity of the symptoms, **clinician expertise** in one or more of these treatment methods, and **patient preference**”
 - Consider whether patient is willing to talk about trauma and complete homework



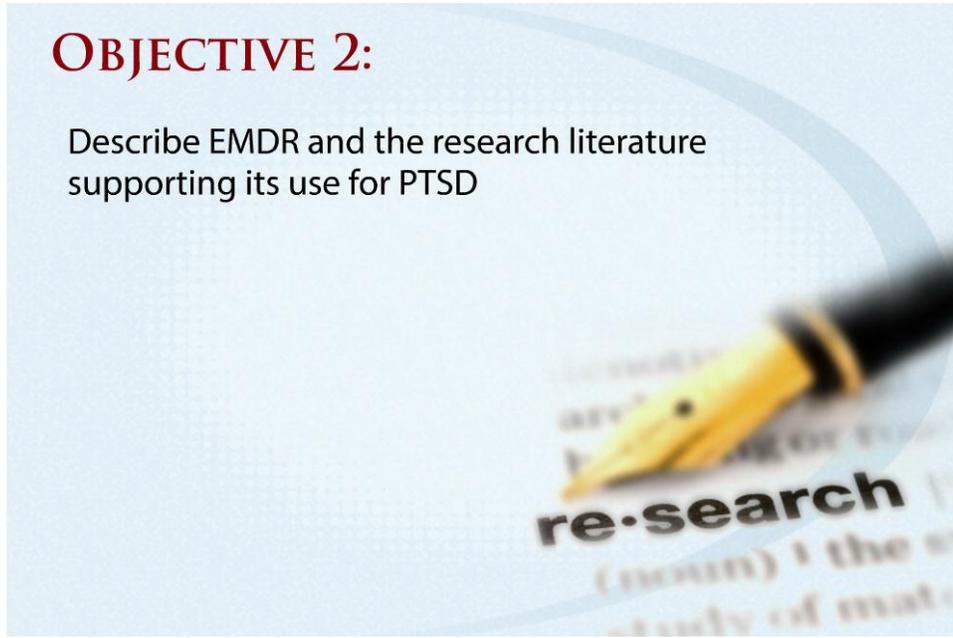
Now, our practice guideline, inside the Department of Veterans Affairs and Department of Defense, has some guidance about choosing treatments. As we've said, EMDR, like exposure therapies and cognitive restructuring, as trauma focused psychotherapies, receive the highest rating as does Stress Inoculation Training. The VA itself, as you may know, has focused a great deal on the dissemination of two particular PTSD treatments, Prolonged Exposure and Cognitive Processing Therapy. And, this was in part a judgment based on the state of the evidence, but also on pragmatic considerations, such as ease of training.

In terms of determining which treatment we should use with our Veteran patients at present, there is no evidence to support selecting one treatment over the other and addressing PTSD symptomatology. And, the guideline itself argues that the choice of PTSD treatment should be based on some other important considerations. One, which is very important, is clinician expertise, how familiar is the clinician with the particular methods of treatment. We only want to use treatments that we're well trained in and feel competent to deliver.

The second major consideration is patient preference. As we explained to the patient what the treatment alternatives are, what does our patient want? Which of the treatments would the patient like to participate in? And, also which are they willing to go forward with? For example, if they know they need to talk about their traumas in a trauma-focused psychotherapy, are they willing to do that; If they understand that there will be significant homework in the treatment? We need to make sure that that's something that they are on board with.

OBJECTIVE 2:

Describe EMDR and the research literature supporting its use for PTSD



Our second objective is to describe the EMDR intervention itself as well as the research literature that supports its use for PTSD.

EMDR: SOME HISTORY

- ▶ Introduced by Shapiro in 1989
 - Reportedly following a personal experience involving distressing memories



Dr. Francine Shapiro

EMDR first came on the scene in 1989 when Dr. Francine Shapiro, the developer of the EMDR, started to publish some of the first work. And, she reports having developed the intervention following a personal experience she had when thinking about some of her own distressing memories and began to realize what some of the processes were that underlay her experience and that could be harnessed therapeutically.

And, the initial studies of EMDR were simple case studies, series of clinical cases that were published. But, over time, the research methodology has improved and we now see that there are multiple randomized control trials. And, there is now a considerable body of research on this intervention.

ADAPTIVE INFORMATION PROCESSING THEORY (SHAPIRO & MAXFIELD, 2002)

- ▶ Objective of EMDR is to assist patients to access and process traumatic memories while bringing them to an adaptive resolution (Shapiro, 2001)
 - “If distressing memories remain unprocessed, they become the basis of current dysfunctional reactions”
 - Suggestion is that EMDR vis-à-vis the use of eye movements or other “dual attention” stimuli facilitate this information processing
 - “As the image becomes less salient, clients are better able to access and attend to more adaptive information, forging new connections within the memory networks (Shapiro & Maxfield, 2002, p.935)”

The developer, Francine Shapiro, and her colleagues, have formulated some theoretical understandings of how they think their intervention achieves its change. And, they label their theory adaptive information processing theory. So, following this idea, the objective of EMDR is to assist patients to access, and process, traumatic memories while bringing them to an adaptive resolution. And, similar to some other theories of PTSD and some other treatments, the notion is that, if distressing memories remain unprocessed, they become the basis of current dysfunctional reactions and maintain problems overtime. And, the suggestion is that EMDR itself, particularly through the use of the eye movements or other dual attention stimuli, facilitate the kind of emotional processing that is needed to resolve the traumatic memories.

As the image of the trauma, and the memory of the trauma, becomes less salient with this process, clients are thought to be able to better access, and attend to, more adaptive information and forge new connections in their memory networks to change how the memory is represented. The concept is that these procedures both increase the accessibility of the trauma memories and also improve the ability to process the memories in new ways.

DESCRIPTION OF EMDR

- ▶ Incorporates the following 8 stages:
 1. Patient history and treatment planning
 2. Preparation
 3. Assessment
 4. Desensitization and reprocessing
 5. Installation of positive cognition
 6. Body scan
 7. Closure
 8. Reevaluation

Shapiro, 2001; Shapiro & Maxfield, 2002



EMDR itself is a manualized therapy that is divided into a series of steps or 8 stages. The first step is obtaining a patient history and treatment planning. The second has to do with preparing the client to participate in the treatment. The third step focuses on assessment. Step 4 is desensitization and reprocessing. In step 5, there is the installation of a positive cognition. Step 6 involves a body scan. Step 7 is reaching closure for the procedure, and step 8 is an ongoing reevaluation of patient status.

Now, I'm going to describe these stages in a bit more detail, but one thing to notice is that several of the stages are consistent with good therapeutic practice no matter what kind of intervention is being delivered, for example, obtaining a good patient history and planning treatment, preparing the client for the intervention, conducting an assessment and so on. Some others are very specific to EMDR, such as desensitization and reprocessing, installation of positive cognition and the conduct of the body scan.

PATIENT HISTORY AND TREATMENT PLANNING

- ▶ Assessment of...
 - Patient readiness
 - Barriers to treatment
 - Dysfunctional behaviors
 - Specific symptoms
 - Other illness characteristics



Patient history and treatment planning involves an assessment of several key things. One is the degree of patient readiness to participate in the treatment. Are they committed to it? Are there other things going on that might get in the way of their readiness? And, assessment of the barriers to treatment, which can be, of course, within the person but also can be a logistical pragmatic barrier to participation.

Assessment of the dysfunctional behaviors that go along with the PTSD that may complicate treatments, such as substance abuse or interpersonal violence or social withdrawal or other types of dysfunction; and, assessment of the specific symptoms that are causing particular distress for the patient, and that the patient may particularly want to work on in therapy, and assessment of other characteristics of the problem.

PREPARATION

- ▶ Therapeutic alliance is developed and fostered
- ▶ Patient education regarding trauma is provided
- ▶ Treatment is reviewed and explained
- ▶ Suggestions are made for coping with trauma reactions
- ▶ Perspective-taking in the face of trauma reactivation is also taught



In the preparation phase, the EMDR therapist takes time to establish a strong therapeutic alliance to build the relationship that will be necessary to sustain the client in moving through the treatment. The client is educated regarding trauma and PTSD and the recovery processes. The nature of EMDR is reviewed and explained to the client so that the client understands well what he or she will be experiencing and how it should work.

Suggestions are made for coping with trauma reaction, in the sense that it's likely that talking about the trauma, in EMDR, will cause the person to have some reactions, and the effort is made to prepare the person for coping with those more effectively. And, in the event of trauma reactivation, the person is thought to be--to anticipate that possibility and to be able to take, to step back and take a positive perspective on why that reactivation is taking place.

ASSESSMENT

- ▶ Careful assessment of the trauma memory
- ▶ Patient is asked to:
 - Identify targets in memory and associated negative cognitions
 - Identify an alternative positive cognition and rate validity
 - Identify associated emotions
 - Rate the subjective level of disturbance
 - Identify trauma-relevant physical sensations and bodily locations



The assessment process is built largely around the kinds of things that take place within the EMDR intervention. So, there is, of course, a careful assessment of the traumatic memory. But, in this assessment, the patient is asked to identify targets in memory, that he or she would like to work on, that are particularly associated with distress. And, also the associated negative cognitions, negative attitudes and beliefs, that are related to traumatic memory and which will be the focus of treatment.

The person, during the assessment process, is also asked to identify an alternative positive cognition, which will be used later in the treatment. And, also to rate the validity of that cognition, how much does the person believe that that alternative positive cognition is, in fact, true and valid. The person is asked to identify their associated emotions with the traumatic image. And, they are asked to rate the subjective level of disturbance that the memory brings up for them, and also to identify trauma-relevant physical sensations and bodily locations, which also figures in the conduct of the treatment.

DESENSITIZATION AND REPROCESSING

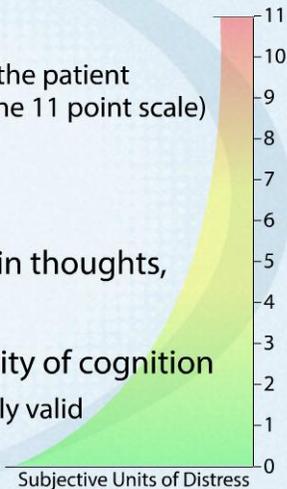
- Hold the distressing image, cognitions, and bodily sensations in mind
- Track therapist's fingers across complete field of vision in rhythmic sweeps
- After 20 seconds the patient is asked to rest, let it go, or blank it out; meaning let go of the memory, take a deep breath
- Provide feedback to the therapist as to any changes in image, sensations, thoughts or emotions
- In successive tracking episodes, the patient concentrates on whatever changes or new associations have occurred

Then the treatment begins with desensitization and reprocessing as a core phase. And, during this process, the client is asked to hold to the distressing image, and the negative cognition, and the bodily sensations that are associated with the image in the cognitions, in their mind at the same time, while they track, visually, therapist's fingers across their complete field of vision, as in rhythmic sweeps following the therapist's fingers back and forth.

After about 20 seconds of this process, the patient is asked to let go of the memory and take a deep breath, just to blank it out, let it go, or rest. At that point, the client is asked to provide feedback to the therapist as to any changes that occurred during the process, changes in the image, in physical sensations, in thoughts or emotions. And, this process is repeated so that in successive eye tracking episodes, the patient concentrates on whatever changes have happened or whatever new associations have occurred.

INSTALLATION OF POSITIVE COGNITION

- ▶ After desensitized
 - Subjective Units of Distress scales report by the patient indicates little or no distress (0-2 points on the 11 point scale)
- ▶ Patient instructed to hold the positive cognition in mind while tracking
- ▶ Patient not asked to report on changes in thoughts, feelings and images during this phase
- ▶ Rather to report on changes in the validity of cognition
 - Utilizing a 7-point scale where 7 is completely valid and 1 is not valid at all

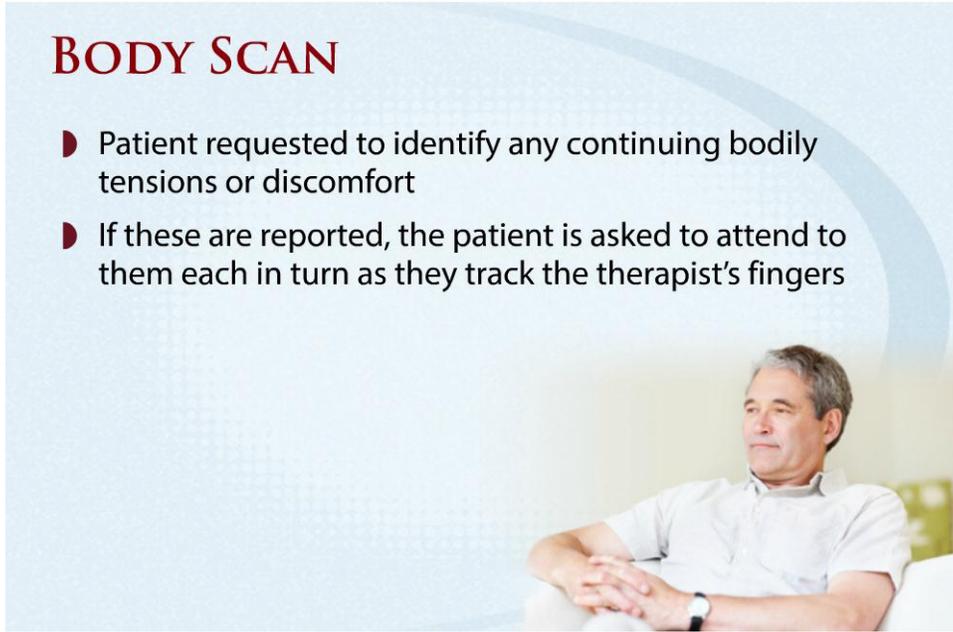


Now this goes on for a period of time until we're ready for the next step, called the installation of positive cognition. Once the individual is desensitized to their image, and that is defined as their subjective units of distress rating falling to 0, 1 or 2 points on an 11-point subjective units of distress scale. The patient is then instructed to hold the positive alternative cognition in mind while engaging in the eye movement tracking.

At this point, the patient is no longer talking about the changes in thoughts, feelings and images, but rather reports on changes in the perceived validity of the cognition. And, the person is trained to use a 7-point scale where 7 is completely valid and 1 is not valid at all.

BODY SCAN

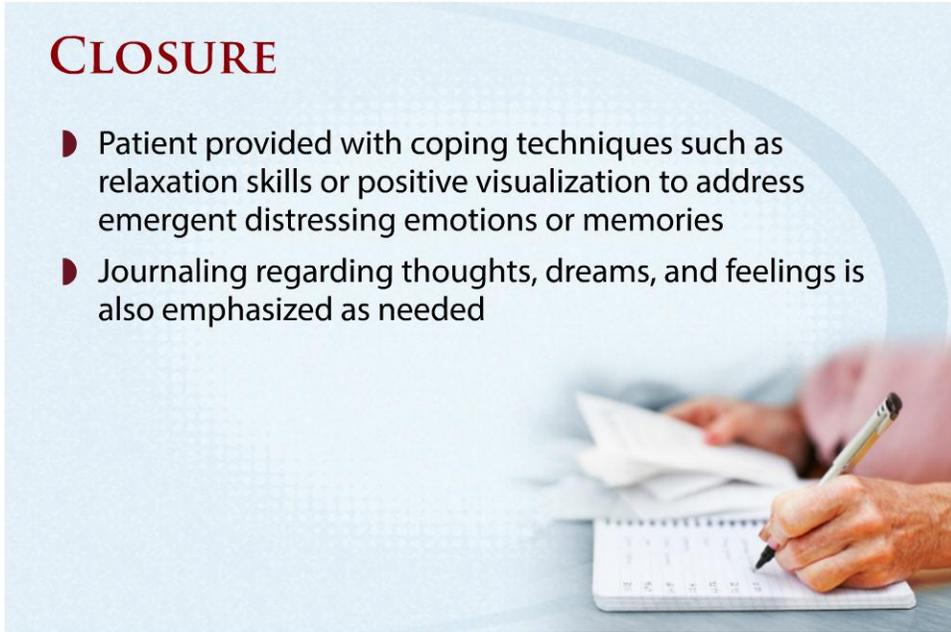
- ▶ Patient requested to identify any continuing bodily tensions or discomfort
- ▶ If these are reported, the patient is asked to attend to them each in turn as they track the therapist's fingers



The next phase is the body scan. So, at this point, the patient is requested to identify any continuing bodily tensions or discomfort, as we know that physiological sensations arise, and are associated with the traumatic memory. And, if body sensations, or feelings, are reported, the patient is asked to attend to them, in turn, as they track the therapist's fingers.

CLOSURE

- ▶ Patient provided with coping techniques such as relaxation skills or positive visualization to address emergent distressing emotions or memories
- ▶ Journaling regarding thoughts, dreams, and feelings is also emphasized as needed



Then we reach the closure stage. At this point, the patient is provided with coping techniques such as relaxation training or positive visualization, that they can use to address distressing emotions or memories as they may come up in the following days and weeks. They are outfitted with skills to help them cope. And, also, they're often invited to keep a journal of their thoughts, dreams and feelings, to help them remain aware of what is taking place and to facilitate their coping.

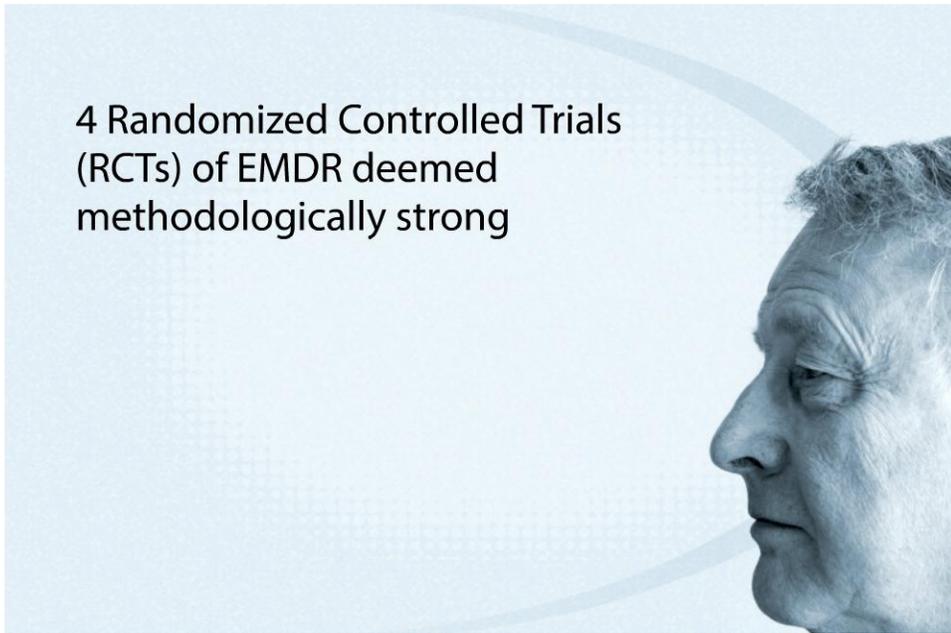
REEVALUATION

- Therapist evaluates whether treatment goals are being met and maintained at each session
- Additional sessions are scheduled as needed to target further trauma memories and/or skill development



And, finally, the last phase of EMDR is reevaluation, in which an ongoing reevaluation of whether treatment goals are being met, and maintained, is something that is paid attention to at each session. Additional sessions may be scheduled, for example, if only one major trauma memory has been dealt in the process, but if the individual has had a variety of traumas in their life that are associated, as well, with significant distress. So, they may agree to now apply EMDR to another trauma memory in turn, or, to continue skills development, if it's determined that the person needs to enhance their coping skills; then more sessions can be scheduled to help the person with those skills development.

4 Randomized Controlled Trials
(RCTs) of EMDR deemed
methodologically strong



As I mentioned previously, four of the randomized control trials conducted of EMDR had been deemed by the Institute of Medicine to have been methodologically strong. And, I'll just briefly review those now.

EMDR VS. WAITLIST

- ▶ 24 (21 completers) public transportation workers in Sweden with PTSD related to person under train events or assault at work
- ▶ 5 90 minute sessions of EMDR vs. waitlist (WL)
 - Of 12 EMDR completers, 8 (67%) no longer met criteria for PTSD
 - Of 9 WL completers, 1 (11%) no longer met criteria for PTSD

** Did not use Intent to Treat (ITT) analysis because there were no dropouts during EMDR, and ITT would have overestimated treatment gains.

Hogberg et al., 2007

The first study that I'll mention was conducted by Hogberg, and his colleagues, in 2007. And, this study was a comparison of Eye Movement Desensitization Reprocessing versus a waitlist controlled group. The subjects were 27 public transportation workers in Sweden who all had PTSD but related to a variety of events, for example, a person being struck by a train or an assault in the workplace.

EMDR was delivered in five 90-minute sessions in this trial. And, of the 12 individuals who completed EMDR, 8, or 67 percent, no longer met criteria for PTSD at the end of treatment. Of the 9 individuals in the waitlist condition who completed the trial, only 1, or 11 percent, no longer met criteria for PTSD. And, this is a significant difference favoring EMDR over the waitlist control.

EMDR VS. BIOFEEDBACK-ASSISTED RELAXATION VS. ROUTINE CLINICAL CARE

- ▶ 35 male combat Veterans with PTSD
- ▶ 12 sessions in each group
- ▶ Clinician Administered PTSD Scale (CAPS) results:
 - EMDR showed better treatment effects at post-treatment in frequency of symptoms, but not intensity of symptoms (was a trend)
- ▶ Impact of Events Scale:
non-significant trends

Carlson et al., 1998



The second study that I'll mention was conducted by Carlson, and colleagues, in 1998. And, this was a comparison of EMDR with biofeedback-assisted relaxation and also compared to routine clinical care, treatment as usual. This study involved 35 male combat Veterans with PTSD. And, the length of treatment was held consistent across the conditions, with each having 12 sessions. The measurement was assessed both on the CAPS clinical interview for PTSD symptoms and on the Impact of Events Scale, a self-report inventory of trauma-related symptoms.

In this study, EMDR showed better treatment effects at post-treatment in how frequently the symptoms were occurring but was not associated with any significantly greater reduction in intensity of symptoms. And, on the self-report inventory, the Impact of Event Scale, there were no differences, there were some non-significant trends in the right direction, but there were no differences between the two conditions.

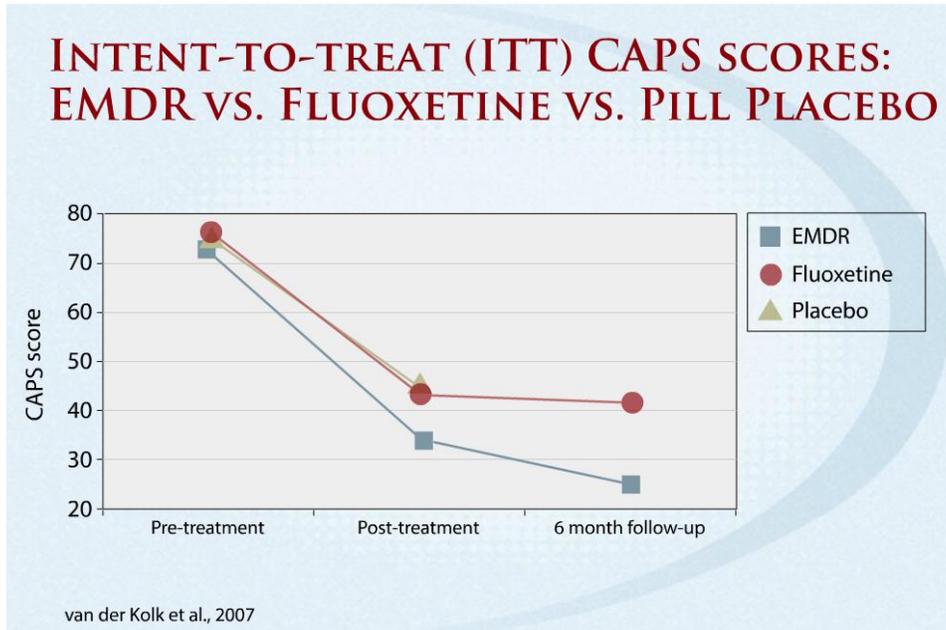
EMDR VS. FLUOXETINE VS. PILL PLACEBO

- ▶ 88 men and women with PTSD from various traumas
 - 72% were interpersonal traumas
 - 50% had trauma onset before age 18
- ▶ 8 sessions EMDR vs. Fluoxetine vs. pill placebo

van der Kolk et al., 2007



The third study was conducted by Bessel van der Kolk, and colleagues, in 2007, and this involved a comparison of EMDR with the medication Fluoxetine and also with a pill placebo comparison condition. Individuals with PTSD from various traumas, both men and women were used as subjects in the study, 88 of them. 72 percent of them had interpersonal traumas and 50 percent of them had trauma onset before age of 18. So, this is a mixed group of various kinds of traumatic experiences. And, 8 sessions of EMDR was the dose of EMDR and that was compared with Fluoxetine and pill placebo.



Now this slide shows a graphical representation of the results of the trial. And, we can see here that all three conditions at pre-treatment showed high levels of PTSD symptomatology, greater than 70 on the CAPS interview. But, that, as treatment took place, all three conditions, the EMDR, Fluoxetine and the pill placebo, showed a marked reduction in PTSD symptoms. And, it was only at 6 month follow-up that EMDR was better than Fluoxetine at that point.

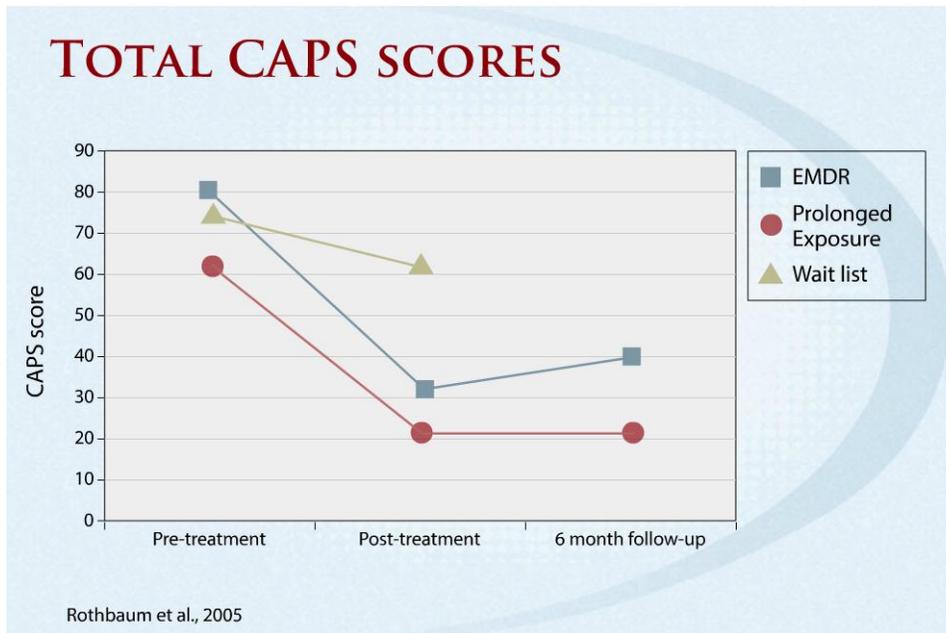
EMDR VS. PROLONGED EXPOSURE VS. WAITLIST

- ▶ 74 female rape victims with PTSD
- ▶ Randomized to EMDR, Prolonged Exposure (PE), or waitlist
 - EMDR protocol was modified to be more consistent with standard PE protocol
 - Both groups were equated and had 9, twice-weekly, 90 minute sessions.

Rothbaum et al., 2005



The final study that I'll mention was conducted by Barbara Rothbaum, and colleagues, and published in 2005. And, this involved the comparison of EMDR with Prolonged Exposure treatment and a waitlist control condition. Subjects in the study were homogeneous. They were all female rape survivors with PTSD. And, the 74 women were randomized to EMDR, Prolonged Exposure, to waitlist. All the groups had nine 90-minute sessions every 2 weeks.



So, this graph shows the results of Rothbaum study. On the left part of the graph we can see the total CAPS scores, the PTSD symptoms, ranging from 0 to 90. On the bottom of the graph we see the three assessment time points, pre-treatment, post-treatment and 6-month follow-up. We can see that at the beginning of the study, at pre-treatment, people in all conditions have a lot of PTSD symptoms, ranging from 60 to 80 on the total CAPS scores.

We see that the waitlist control group falls very little from pre- to post-treatment, whereas the Prolonged Exposure and EMDR conditions show very steep, significant changes in CAPS, showing significant reduction in symptomatology. From post-treatment to 6 month follow-up assessment, we see that the Prolonged Exposure condition maintained the gains hovering around a score of 20 on the CAPS. But the EMDR group actually showed a slight increase in symptoms, moving from around 30 to around 40 points on the CAPS tool. So, in this study we see that both EMDR and Prolonged Exposure were associated with improvements in PTSD symptomatology. And, the results of the study have also showed that depression anxiety symptoms and symptoms association all showed significant improvement with PE and EMDR being more effective than the waitlist control.

However, Prolonged Exposure was significantly better than EMDR at the 6 month follow-up assessment. But it should be noticed, as you can see from this graph, that in, fact the randomization of individuals to conditions was not entirely effective in the study. And, the individuals in the EMDR condition actually started out with higher PTSD symptom severity scores on the CAPS than individuals in the exposure condition. So, it makes it a little bit difficult to interpret the results of the study.

RESEARCH ON EYE MOVEMENTS

- Models/theories of why eye movements are useful:
 - working memory model, reassurance reflex models, orienting response theory
- Numerous lab studies show horizontal eye movements decrease vividness, emotionality, and arousal in memories
- Movements may also increase retrieval/recollection of memories and improve attention flexibility
- However, most studies are using “normal” participants in labs, and participants do not have PTSD

Now, one of the most novel things about EMDR, of course, is its inclusion of these eye movements. And, there has been some research on eye movements, both in conjunction as part of EMDR, and also in terms of their impact on emotional experience more generally. And, there are a number of different kinds of theoretical ideas about why eye movements might be useful, in some way, and might have an impact on emotional experiences.

They all have to do with ideas about cognitive processes, the working memory model, reassurance reflex model and orienting response theory. And, in fact, numerous lab studies do show that horizontal eye movements are associated with a decrease in the vividness, the emotionality and the levels of arousal associated with memories. And, there are some suggestion that eye movements may also increase the retrieval of memories and attentional flexibility. But, most of the studies on the function of eye movements on emotion are using normal participants in laboratory studies, not individuals with clinically significant disorder or PTSD.

DISMANTLING STUDIES

- Numerous studies have demonstrated that eye movements/kinesthetic stimulation do not significantly contribute to the efficacy of EMDR
 - Of those showing eye movements are beneficial, most used analog populations or clinical populations without full PTSD
 - Spates et al. ISTSS practice guideline review (2009): “the best provisional conclusion so far is that the bilateral stimulation component of EMDR does not incrementally influence treatment outcome”
 - Similar conclusion in Davidson & Parker (2001) meta-analysis

And, when we turn our attention to the studies of EMDR, that have dismantled the intervention methodologically so that the comparison could be made between EMDR as a full battery, that includes the eye movements, and the rest of the elements of EMDR, with the eye movements removed, those studies have not shown the utility of the eye movement component; so that numerous studies have demonstrated that the eye movements, or kinesthetic stimulation, do not significantly contribute to the efficacy of EMDR.

There are some studies that do show that eye movements are beneficial, but most have used analog populations or clinical populations without full PTSD symptomatology. And, a variety of authors, including Spates, and colleagues, who were the authors of the EMDR section of the ISTSS practice guideline, published in 2009, have said that the best provisional conclusion, so far, is that the bilateral stimulation component of EMDR does not incrementally influence treatment outcome. Davidson and Parker in 2001 drove a similar conclusion based on the meta analysis of studies.

IMPORTANT CONSIDERATIONS FOR EMDR

- ▮ EMDR is a controversial treatment in some quarters, in part because of overstated early claims and unanswered questions around mechanisms of action
- ▮ Also, is it a Cognitive Behavioral Therapy (CBT)?
 - Similar: exposure, focus on cognitions, process memory
 - Differences: way a person is encouraged to process memory, intensity of cognitive work

Now, EMDR remains a controversial treatment in some circles, in part, because very early in its development there were, perhaps, overstated claims about its effectiveness, its impact based on one session or two sessions; and, also on the unanswered questions around the mechanisms of action, particularly in the light of findings that, of the dismantling studies, that in fact the eye movements are not seeming to add to the effectiveness of the treatment. And, there are some individuals, some thinkers, have wondered whether EMDR is, in fact, another form of CBT, which is accomplishing its effects in ways similar to those of other CBTs.

Now, it's interesting, EMDR does address some of the major factors that are also addressed by a range of cognitive behavioral therapies, like exposure or like cognitive therapy, in that it focuses on cognitions, and it also focuses on a person processing the traumatic memory. However, it should be noted that there are significant differences between the way that EMDR deals with these variables and what would take place in a traditional CBT. So, the way in which a person would be encouraged to process their memory would be something that would be quite different and more extended, for example, in exposure therapy. And, the way in which cognitions are dealt with in cognitive therapy is through a much more sustained systematic ongoing process involving learning about cognitions, challenging them and so on.

So, what I think all of this illustrates, for us, is that we do need a better understanding of the processes of change that occur in all of the efficacious treatments that we have currently, and that will lead us to have perhaps, to better resolve some of these controversies as well as better understand how to improve our treatments.

Objective 3: Describe Stress Inoculation Training (SIT) and the Research Literature Supporting Its Use for PTSD

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Describe Stress Inoculation Training (SIT) and the research literature supporting its use for PTSD



So, I'm going to move on now to Objective 3 of this presentation, which is this, to describe the non-trauma-focused psychotherapy that also receives a level A rating, Stress Inoculation Training. And, also, briefly review the research literature that supports its use for PTSD.

STRESS INOCULATION TRAINING

- Not categorized as trauma-focused
- Meichenbaum developed originally for anxiety disorders; modified for rape victims and PTSD
- Distinct from trauma-focused interventions, but
 - Often include components of cognitive restructuring or *in-vivo* exposure
 - Some SIT techniques (e.g. breathing retraining, relaxation) are incorporated into trauma-focused psychotherapies
 - Somewhat difficult to disentangle the relative contribution of SIT techniques in the efficacy of the other trauma-focused psychotherapy treatments

Now, as I noted a little bit earlier, SIT differs from EMDR, exposure, cognitive therapy in that it is not categorized as a trauma-focused psychotherapy. Instead, it is helping a person to develop tools for managing anxiety and does not go about systematically revealing or confronting traumatic memories.

Stress Inoculation Training was developed, originally, by Donald Meichenbaum for anxiety disorders, and it was used a great deal in the treatment of anxiety, but then gradually was modified for rape victims in PTSD, as it was recognized that it might be efficacious for PTSD as well as other kinds of anxiety problems. And, although we would categorize Stress Inoculation Training as distinct from trauma-focused interventions, it should be noticed that SIT includes some components, like cognitive restructuring or in vivo exposure, that are, in fact, included in some of the trauma focused interventions.

Although the trauma-focused interventions would look at cognitions and exposure to situations that were directly trauma related, whereas that it might not be so much the case in Stress Inoculation Training. Some Stress Inoculation Training techniques, such as breathing retraining, for example, are incorporated, as well, into the trauma-focused psychotherapies. PE or Prolonged Exposure includes a breathing retraining component. So, it can be a little bit difficult, sometimes, to separate out what these treatments are doing since they have some overlapping elements.

SIT PROTOCOL

- Focus on anxiety management and coping skills training
- Toolbox of skills:
 - Relaxation training: teaching patients to control fear and anxiety through the systematic relaxation of the major muscle groups
 - Breathing retraining: teaching slow, abdominal breathing to help the patient relax and/or avoid hyperventilation with its unpleasant and often frightening physical sensations

The Stress Inoculation Training protocol focuses on anxiety management by giving the client a toolbox of skills for managing anxiety. All of these things increase the person's sense of control over their anxiety and help them manage it more effectively. The toolbox includes things like relaxation training, teaching patients to control fear and anxiety through systematically relaxing their muscle groups, aggressive muscular relaxation training, for example.

Breathing retraining is another tool, teaching slow abdominal breathing that helps the patient slow down and avoid the kind of rapid, shallow breathing, or hyperventilation, that can go along with trauma exposure and go along with exposure to trauma memories or trauma situations, trauma reminder situations. And, then elicit unpleasant or frightening physical sensation.

SIT PROTOCOL

- ▶ **Positive thinking and self-talk:** teaching the person how to replace negative thoughts (e.g., 'I'm going to lose control') with positive thoughts (e.g., 'I did it before and I can do it again'), often combined with *in-vivo* exposure
- ▶ **Assertiveness training:** teaching the person how to express wishes, opinions, and emotions appropriately and without alienating others
- ▶ **Thought stopping:** distraction techniques to overcome distressing thoughts by inwardly shouting 'stop' (Foa et al., 1999)
- ▶ Many SIT protocols also include **cognitive restructuring** and other **elements of exposure** therapy (fear hierarchy construction)

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SIT APPROACH TO TREATMENT

- ▶ Anxiety management techniques for all 3 response systems
 - Cognitive
 - Physiological
 - Behavioral
- ▶ Goal: Manage anxiety
 - Applied trans-situationally
- ▶ Anxiety becomes cue to use skills



So, the Stress Inoculation Training approach to treatment actually incorporates anxiety management techniques which address all three of the major response systems in which we might see the effects of anxiety: the cognitive system, that is, it challenges self-talk and negative appraisals, the physiological system, by directly inducing a reduction in arousal or increase in relaxation, and the behavioral systems, by helping people, for example, deal with interpersonal conflict situations more effectively.

The goal here is to give the person tools that they can use across all different kinds of anxiety eliciting situations. That is, they can apply these skills, trans-situationally. And, in fact, anxiety, itself, rather than just being a source of distress now becomes a cue to employ the toolbox of SIT skills.

RATIONALE FOR SIT AS A PTSD TREATMENT

- ▶ Trauma-related anxiety can be generalized to many situations
- ▶ A Cochrane meta-analysis found that stress management protocols were as effective as other Trauma Focused – Cognitive Behavioral Therapy interventions and EMDR
- ▶ Relaxation protocols that do not include all of the SIT components have also demonstrated very encouraging results in several studies

Marks et al., 1998; Taylor et al., 2003; Vaughan et al., 1994

The rationale for Stress Inoculation Training as a PTSD treatment is compelling. Trauma-related anxiety is, of course, what we see in PTSD as a core feature, and that anxiety shows itself not only in specific trauma-related situations but also in many other situations over time.

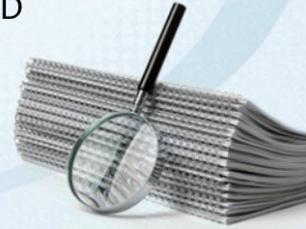
Anxiety often generalizes for PTSD patients to a whole host of situations that originally had nothing to do with the trauma, so that we will sometimes see our patients, who really actually have trouble leaving the house and basically have their movements very largely restricted because so many different kinds of situations now elicit anxiety.

The Cochrane review meta analysis, a systematic analysis of the research literature, concluded that stress management protocols, like SIT, were, in fact, as effective as other types of efficacious interventions for PTSD, most notably, the trauma-focused cognitive behavioral therapy interventions like exposure therapy and cognitive therapy and EMDR. And, in fact, some relaxation protocols that don't even include all of the various elements of SIT have also looked positive and demonstrated some encouraging results in some studies.

RESEARCH FINDINGS FOR SIT

- ▶ Level A in VA/DoD Clinical Practice Guideline
- ▶ Institute of Medicine grouped treatments differently, and SIT falls under “Coping Skills Treatment”
 - 2 studies found methodologically sound were not SIT studies. Overall, concluded evidence is inadequate to determine efficacy of coping skills treatment.
- ▶ 2 Randomized Controlled Trials for PTSD
 - Both found SIT to be effective with women who have survived sexual assault
 - No trials with Veterans

Foa et al., 1991; 1999



So, that as we look at the research findings for Stress Inoculation Training, we see, again, that like EMDR, SIT was given a level A rating in our VA Department of Defense Clinical Practice Guideline. This is the strongest recommendation that we have for treatments.

Again, the Institute of Medicine review, which was extremely methodologically rigorous, and set a high standard, grouped SIT under coping skills treatment and did not find it to be efficacious. Again, the conclusion here was the evidence at present is inadequate to determine the efficacy of coping skills treatment.

But, there are two randomized controlled trials for PTSD that used Stress Inoculation Training and obtained good results. Both found SIT to be effective with women who have survived sexual assault. So, there are no trials of Stress Inoculation Training with Veterans

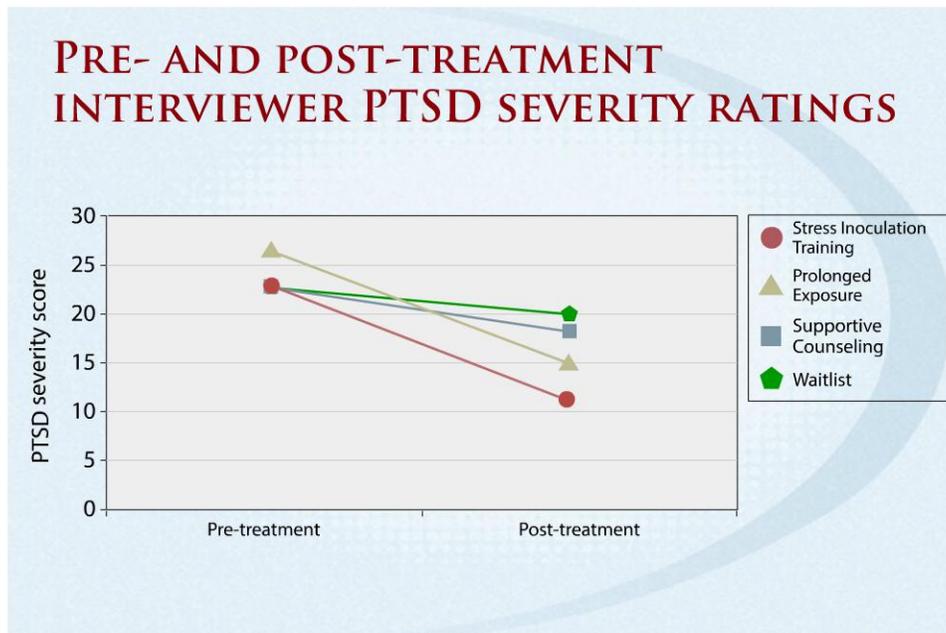
SIT VS. PE VS. SUPPORTIVE COUNSELING VS. WAITLIST

- ▶ 45 female sexual assault victims
- ▶ 9 bi-weekly 90 minute sessions
- ▶ PTSD outcome measure: PTSD symptom severity score rated by interviewer

Foa et al., 1991



In 1991, Dr. Edna Foa, and her colleagues, published a study looking at 45 female sexual assault victims with PTSD. And, the comparison here was SIT versus Prolonged Exposure, versus supportive counseling only, versus a waitlist control group. All the treatments were equivalent in terms of their intensity. All had nine 90-minute sessions conducted on a biweekly basis. The measure of PTSD outcome here was a PTSD symptoms severity score rated by an interviewer.



In this graph, we can see a visual depiction of the results of Dr. Foa's study. And, we see that on the left hand part of the graph, we have the PTSD interviewer severity rating ranging from 0 to 30, and on the bottom of the graph we show the two time points, pre-treatment assessment and post-treatment assessment. And, we can see that all of the conditions started out with high levels of PTSD severity, all showed some reduction in symptoms but, the graph shows us that the waitlist control improved the least in symptomatology.

In fact, the statistical analyses showed that all conditions of treatment were more effective than the waitlist control. The Stress Inoculation Training was the most effective treatment, immediately post-treatment, more effective than Prolonged Exposure. But at a longer term follow-up, not shown on this graph, in fact, Prolonged Exposure was more effective than Stress Inoculation Training. And, what happened was that the individuals who had received Prolonged Exposure therapy continued to improve post-treatment to follow-up, whereas the individuals receiving Stress Inoculation Training showed no such continuing improvement trend.

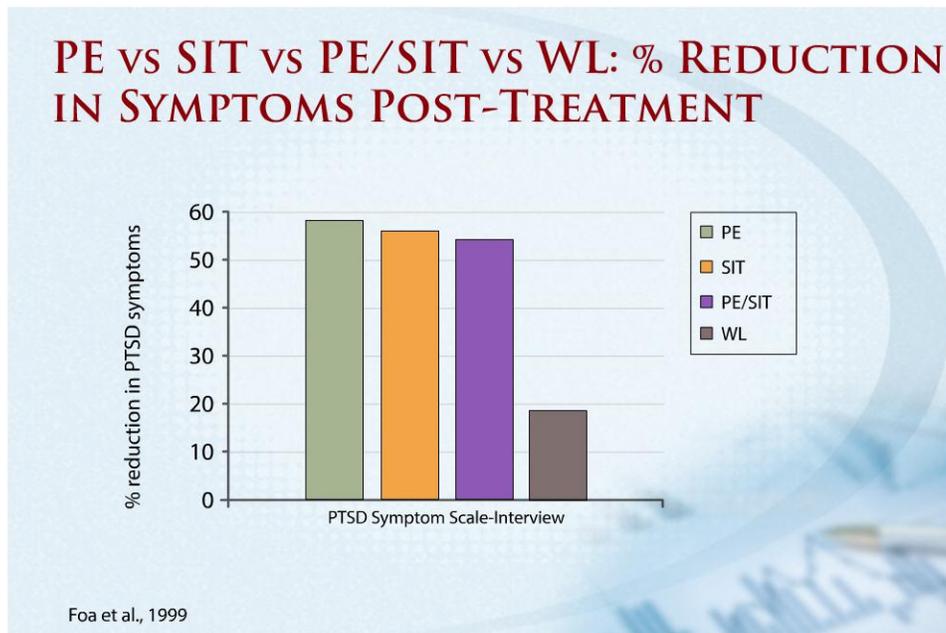
SIT VS. PE VS. COMBINED SIT/PE VS. WAITLIST

- ▶ 96 female sexual assault victims
- ▶ 9 bi-weekly sessions; 2 sessions were 120 minutes, 7 sessions were 90 minutes

Foa et al., 1999



The second study on Stress Inoculation Training was also conducted by Foa, and colleagues, this one published in 1999, again focusing on sexual assault victims, 96 female assault victims. Again, the treatments delivered over 9 biweekly session.

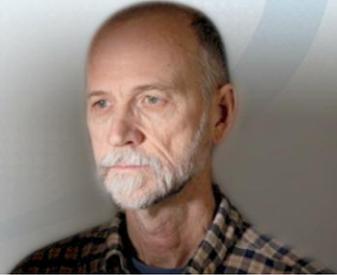


Now, the results are shown on this graph, which shows the percent reduction in PTSD symptoms from pre- to post-treatment. And, we can see on this graph that all three treatments, Stress Inoculation Training, Prolonged Exposure, or a combination of Stress Inoculation Training and Prolonged Exposure, were equally efficacious in reducing symptoms.

Each of them showed greater than 50 percent reduction in symptoms by post-treatment. And, these improvements in treatment, that we see here, from pre- to post-treatment were maintained at 6 month follow-up. And, in this study, by the way, the combination of Stress Inoculation Training and Prolonged Exposure was not more effective than Stress Inoculation Training or Prolonged Exposure delivered as individual treatments. The waitlist control groups showed much less change in symptoms averaging between 10 and 20 percent reduction in symptoms between pre and post treatment.

SUMMARY

- ▶ EMDR and SIT received a Level A rating by the VA/DoD Clinical Practice Guideline, although research support is not as strong as other evidence-based treatments for PTSD
- ▶ EMDR is a manualized, trauma-focused treatment that may not require full disclosures or homework
- ▶ SIT is a skills-based treatment that teaches patients how to manage anxiety and PTSD symptoms



So, to summarize the talk today, we can conclude that EMDR and Stress Inoculation Training are both efficacious in treating PTSD. Both have received a level A, the highest rating, for their effectiveness in our Department of Veterans Affairs and Department of Defense Clinical Practice Guideline.

Although some of the research indicates that the level of support and number of methodologically rigorous studies is not yet as strong as we would find for exposure therapy. That was the conclusion of the IOM.

EMDR itself is a manualized trauma-focused treatment that may not require full disclosure or as much of a long emotional account or as much homework, and that way may sometimes be very attractive to patients. Stress Inoculation Training gives us an alternative, potentially efficacious, treatment for PTSD which does not focus as much on trauma memories itself, but instead, is a skills-based treatment that teaches patients how to manage their anxiety and their PTSD symptoms. Thank you.