

**Eye Movement Desensitization and Reprocessing:  
Evaluating its Effectiveness in Reducing Trauma Symptoms in  
Adult Female Survivors of Childhood Sexual Abuse**

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Statement of the Research Problem

The purpose of this study was to conduct a randomized experimental evaluation of the effectiveness of Eye Movement Desensitization and Reprocessing (EMDR) by examining its ability to reduce trauma symptoms among adult female survivors of childhood sexual abuse. These survivors, who suffer a variety of symptoms that are persistent and at times debilitating, comprise a large target population for social workers.

While the literature is replete with information on the prevalence and effects of childhood sexual abuse, and on practice wisdom about its treatment, very little information is available that examines treatment efficacy. Numerous clinical accounts of treatment with adult survivors of childhood sexual abuse have been published, but controlled treatment research has rarely been conducted with this population (Gordon & Alexander, 1993). Of the studies found that examined treatment efficacy exclusively with this population, none involved the use of random assignment (Alexander et al., 1989; Apolinsky & Wilcoxon, 1991; Jehu, 1988, 1989; Roberts & Lie, 1989).

Eye Movement Desensitization and Reprocessing (EMDR) is a relatively new treatment approach, which has from its beginning, been fraught with controversy, largely due to its unusual use of eye movements and dramatic claims of rapid efficacy with severely traumatized individuals. According to Shapiro, the developer of the intervention, EMDR is "an interactive, intrapsychic, cognitive, behavioral, body-oriented therapy" whose goal is "to rapidly metabolize the dysfunctional residue from the past and transform it into something useful" (1995, pp. 52-53). Although EMDR emerged from the cognitive behavioral therapies, as yet, it is unknown what might account for the putative effects of EMDR.

Speculative explanations for its results have included overcoming blocked neural patterns, mimicking REM sleep, and reciprocal inhibition (Greenwald, 1994). Shapiro (1995) has developed a working hypothesis for an Accelerated Information Processing Model that she believes represents an innate information processing system. She posits that trauma or stress blocks the information system, which prevents trauma resolution and leads to the development of pathologies. Accessing the traumatic material and activating the Information Processing System is accomplished through the EMDR protocol, which provides an opportunity for information to be processed to a point of

adaptive resolution in an accelerated manner.

Nonetheless, uncertainty remains as to why EMDR works. While some still question the necessity of its bilateral stimulation component, sufficient empirical evidence has accumulated regarding its efficacy with PTSD to warrant an evaluation of its efficacy with other traumatized target groups. Even though adult survivors of childhood sexual abuse have been included in EMDR research, no EMDR study to date has been comprised exclusively of this difficult treatment population.

Although there appears to be substantial support for EMDR in the literature, most of the existing studies have methodological problems that significantly weaken the ability to draw inferences about the efficacy of EMDR. Given its claims of dramatic successes within relatively few treatment sessions in this era of managed care, the promise of the early experimental studies of its effectiveness with traumatized individuals, and its compatibility with existing practice wisdom about trauma work, testing the effectiveness of EMDR with adult survivors of childhood sexual abuse is both important and timely.

### Research Questions

Four research questions guided the study: 1) Can EMDR significantly reduce trauma symptoms in adult female survivors of childhood sexual abuse? (2) Are there any significant differences between the effectiveness of EMDR and eclectic therapy in reducing trauma symptoms? and (3) Are there any significant differences between the effectiveness of EMDR and eclectic therapy in maintaining therapeutic gains as measured at a three-month follow-up?

### Methodology

The effectiveness of EMDR was evaluated through the use of a randomized experimental design that included a comparison and a control group. Fifty-nine survivors were randomly assigned to one of three groups: (1) individual EMDR treatment (n=20); (2) individual eclectic therapy (n=20); or (3) delayed treatment control group (n=19). Eclectic therapy in this study was defined as a variety of methods, techniques, and theories incorporated into a treatment approach designed to resolve sexual abuse trauma. Four female therapists with Master's degrees (two in social work and two in psychology) participated in the study.

Each therapist and the principal investigator completed level-two (advanced) EMDR training prior to participating in the study. The therapists were each randomly assigned ten survivors to work with, five of whom received EMDR and five of whom received eclectic therapy. The delayed therapy control group survivors received therapy from other community therapists following a six week wait. Each survivor received six, 90-minute individual sessions of EMDR or eclectic therapy, focused on resolving a specific, survivor chosen issue or memory related to the sexual abuse.

Participants' trauma symptomology was measured in pretests, posttests, and a three month follow-up on four standardized instruments that comprised the primary outcome measures: (1) the state anxiety scale of the State-Trait Anxiety Inventory (STAI) that assesses anxiety related to any specific issue of concern; (2) the Impact of Events Scale (IES) that assesses posttraumatic stress symptoms for any specific trauma; (3) the Beck Depression Inventory (BDI) that assesses five components of depression and (4) the Belief Inventory (BI) that identifies and measures common distorted beliefs among adult survivors of childhood sexual abuse. Two in-session process measures were also used, the Subjective Units of Disturbance Scale (SUDS) that obtains a verbal report from survivors about their level of emotional distress associated with a traumatic experience and the Validity of Cognition Scale (VOC) that rapidly assesses the client's cognitive beliefs associated with the trauma.

Multivariate analysis of variance (MANOVA) was used to test the overall significance of the differences in posttest scores among the three groups across all four standardized outcome measures (STAI, IES, BDI, and BI). MANCOVA had been considered but is not recommended if the covariates have little or no effect. The analysis was run with and without the pre-test scores used as covariates, however, no appreciable improvement was noted with the inclusion of the covariates so they were eliminated. In this situation, MANOVA is a more powerful analytic procedure than MANCOVA. Pillai-Bartlett trace was used as the test statistic since it is the most conservative measure for protecting against Type I errors.

Similarly, MANOVA (rather than MANCOVA) was used to test the overall significance of the differences in follow-up scores between the EMDR and eclectic therapy groups. When statistically significant differences between groups were found through MANOVA, separate univariate analysis of variance was conducted for each measure at posttest and at follow-up to determine which dependent variables contributed to the multivariate significance.

## Results

### Sample

The sample consisted of fifty-nine adult female survivors of childhood sexual abuse who were predominately white (85%), with a mean age of 35 and a mean of 15 years of education. The survivors reported severe abuse histories. The mean age at which the abuse began was 6.5, and the mean age at which it stopped was 13. Nearly 50 percent were abused for five or more years. For 61 percent of the participants, the abuse occurred between three-four times a month to three-five times a week. Men accounted for the vast majority of perpetrators.

Most of the survivors also experienced childhood physical abuse (58%) and some form of adult revictimization such as domestic violence and/or rape (66%). Pretest scores revealed that the sample had sufficient symptomology to warrant seeking clinical

treatment. No significant differences were found between groups based on treatment or therapist assignment on any of the demographic characteristics, abuse specific variables or pretest scores.

#### Outcome measures

Multivariate analysis of variance (MANOVA) was used to test the overall significance of the differences in posttest scores among the three treatment groups across all four standardized outcome measures. At posttest, both EMDR and eclectic therapy were significantly different than the control group ( $p < .01$ ) on the objective and subjective measures. While the control group survivors' level of anxiety, depression, stress and negative beliefs about their abuse were virtually unchanged from pretest to posttest, the survivors who received EMDR or eclectic therapy experienced significant reductions in trauma symptoms.

The results indicated that both treatments were effective and there were no significant differences in the effectiveness between EMDR and eclectic therapy at posttest. However, a statistically significant difference ( $p < .001$ ) between EMDR and eclectic therapy was found on the subjective process measures at posttest. In fact, 65 percent of the EMDR group versus 25 percent of the eclectic group reported scores on the SUDS and VOC scales indicative of trauma resolution. Thus, based on data from the subjective measures, a significantly ( $p < .05$ ) higher number of EMDR than eclectic group members reported resolution of their targeted memories or issues.

Multivariate analysis of the standardized measures revealed that at the three-month follow-up, EMDR was significantly better at maintaining therapeutic gains or further reducing trauma symptoms, than was eclectic therapy ( $p < .05$ ). The mean scores for the EMDR group were lower than they had been at posttest on all four standardized measures reflecting that trauma symptoms had been further diminished. Conversely, the eclectic group experienced an increase in mean scores on the anxiety and stress scales with only slight decreases found on depression or negative self-beliefs about the abuse.

Analysis of the subjective measures at the three month follow-up also revealed a significant difference ( $p < .001$ ) between EMDR and eclectic therapy. Additionally, the SUDS and VOC scales indicated that while 61 percent of the EMDR group still had resolution of the original trauma target three months after completing the study, this was true for only 12.5 percent of the eclectic group, a difference that was significant ( $p < .01$ ). Thus, not only does EMDR appear to be effective at reducing trauma symptoms in adult female survivors of childhood sexual abuse, the therapeutic gains achieved through EMDR appear more stable over time than do those obtained through eclectic therapy.

#### Utility for Social Work Practice

Given the large number of adult sexual abuse survivors in the general and clinical populations, and the length of time usually required for treatment, the development of an

effective brief treatment approach would be of great benefit to social work practitioners and their clients. In this study, both EMDR and eclectic therapy were found to be effective brief treatment approaches. After only six 90-minute sessions of individual therapy, both treatments significantly reduced trauma symptoms related to a specific sexual abuse issue. Furthermore, the results of the three-month follow-up revealed that EMDR was more effective in maintaining therapeutic gains than was eclectic therapy. Consequently, social workers can feel comfortable using either method in treating adult female survivors of childhood sexual abuse, but should keep in mind that EMDR may be more effective in maintaining therapeutic gains.

It is also important to note that the findings regarding the efficacy of EMDR were significant despite the fact that the therapists in the study had limited experience using EMDR. The demonstrated efficacy of two interventions that can be used effectively within a short-term treatment model means that social workers have at their disposal clinical tools that could be used in agency settings where money and time are in short supply while demand for resources continues to climb.

## References

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