

**ANNOTATED BIBLIOGRAPHY OF RESEARCH ON
EMDR IN INDIVIDUAL PSYCHOTHERAPY WITH CHILDREN**

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**REVIEWS OF RESEARCH ON EMDR THERAPY IN INDIVIDUAL PSYCHOTHERAPY
WITH CHILDREN***

*For a comprehensive review of the studies published on EMDR Therapy with children:

Adler-Tapia, R.L. & Settle, C.S. (2009). Evidence of the efficacy of EMDR with children and adolescents in individual psychotherapy: A review of the research published in peer reviewed journals. *Journal of EMDR Practice and Research*, 3(4), 232-247.

In this article the authors apply the Gold Standards from Foa and Meadows to the published studies on EMDR with children. In addition, many studies that have not been published, but instead have been presented at conferences or dissertation research are also noted as EMDR has been applied to many diagnoses of childhood.

Fleming, J. (2012). The Effectiveness of Eye Movement Desensitization and Reprocessing in the Treatment of Traumatized Children and Youth. *Journal of EMDR Practice and Research*, 6(1), 16-26.

This article provides a summary of all the studies that have investigated eye movement desensitization and reprocessing (EMDR) treatment of traumatized children and adolescents. The effectiveness of the treatment is revealed in more than 15 studies. This article considers the differences between Type I and Type II traumas and specifically examines the effects of EMDR on traumatic stress experienced by children and youth following Type I and Type II traumas. There is a considerable body of research evaluating EMDR treatment of Type I traumas, showing strong evidence for its efficacy, but there are few studies that have specifically investigated EMDR treatment of Type II traumas. The effect of EMDR on various symptoms and problem areas is also examined. Recommendations are made for the clinical application of EMDR and for further research.

Rodenburg, R., Benjamin, A., de Roos, C., Meijer, A.M. & Stams, G.J. (In press). Efficacy of EMDR in children: A meta - analysis, *Clinical Psychology Review* (2009).

Rodenburg, et al provide a meta-analytical review of the treatment efficacy of EMDR with children from the perspective of incremental efficacy. This study assesses effect size of EMDR versus CBT. The authors concluded that the efficacy of EMDR with children is supported when EMDR is compared to standard of care or no treatment. When EMDR is compared with CBT, while support for the incremental efficacy of EMDR is evidenced in the research when EMDR is compared with CBT treatment.

STUDIES OF EMDR IN INDIVIDUAL PSYCHOTHERAPY WITH CHILDREN**Adler-Tapia, R.L. & Settle, C.S. (2009). EMDR in the treatment of childhood depression: Findings from a pilot study.**

These researchers conducted a fidelity study on the ability of therapists to demonstrate adherence to the EMDR protocol with children two to ten years who were identified as victims of crime including child abuse or witnesses to homicide. The researchers used a manualized research protocol and on-going consultation with the research therapists who were all fully trained in EMDR and had advanced training on using EMDR with young children. Even though this study was a fidelity study focused on documenting therapists' ability to adhere to the EMDR protocol with young children, pre/post-test measures were implemented. Twelve children ages 3 to 9 years were referred for EMDR psychotherapy in this pilot study and were assessed pre-treatment with the Children's Impact of Events Scale, PTSS and the BASC (Behavioral Assessment System for Children) during intake. The children then participated in EMDR treatment with the full eight stages focused on reprocessing one identified target while containing other potential targets. The children were assessed post-treatment with repeated measures. For the purposes of this pilot study, 12 children were referred with 7 children completing the treatment protocol. All 7 children initially were assessed as displaying significant depressive symptoms prior to treatment and then demonstrated a significant reduction in depressive symptoms following treatment as assessed with the BASC. As noted on the BASC scale, all seven children were assessed by parents and teachers as displaying symptoms in the "At risk" or "Clinically Significant" range pre-treatment, with all 7 children assessed as being in the "Normal range" following 12 sessions of treatment with the EMDR protocol that followed the manualized protocol approved by Dr. Shapiro as being EMDR.

Ahmad, A., Larsson, B., & Sundelin-Wahlsten, V. (2007). EMDR treatment for children with PTSD: Results of a randomized controlled trial. *Nordic Journal of Psychiatry*, 61(5), 349–354.

Ahmad, et. al., (2007) conducted a randomized control study comparing the treatment efficacy of EMDR versus wait list control for two groups of children diagnosed with PTSD. Children were randomly assigned to either treatment with EMDR or to a wait list control (WLC). From a pool of 170 children referred to the study, 59 children were diagnosed with PTSD with 33 children enrolled in the study. Children were assigned to either EMDR treatment (17 children) or WLC (16 children.) The authors noted that the children in the EMDR treatment group received EMDR with modifications of the EMDR protocol. The authors noted that these modifications were documented in another article by the authors submitted for publication at the time of the publication of this study. In this study, therapists provided eight weekly outpatient sessions for a maximum of 45 minutes per child. The authors concluded that, the children who received EMDR treatment showed significant improvement specifically in the re-experiencing symptoms associated with PTSD

Bronner, M.B., Beer, R., Jozine van Zelm van Eldik, M., Grootenhuis, M.A., and Last, B.F. (2009). Reducing acute stress in a 16-year old using trauma-focused cognitive behaviour therapy and eye movement desensitization and reprocessing. *Developmental Neurorehabilitation*, 12:3,170-174.

Bronner et al used an integrative treatment of trauma-focused cognitive behavioral therapy (TF-CBT) and EMDR to treat a 16-year-old girl with acute stress. In this case study, the authors noted that the girl was experiencing distressing memories, flashbacks, and anxiety following a spinal cord injury resulting from a diving accident. The authors used the Children's Revised Impact of Event Scale to assess the adolescent's symptoms. For the EMDR treatment, the authors noted one 20 minutes session that included the Assessment and Desensitization Phases of EMDR where the child focused on the diving accident. Standardized assessment documented substantial reduction in stress scores following treatment with no flashbacks following the treatment protocol. Recommendations were made for future studies to assess treatment efficacy in a large study of children.

Chemtob, C., Nakashima, J., & Carlson, J. (2002). Brief treatment for elementary school children with disaster-related posttraumatic stress disorder: A field study. *Journal of Clinical Psychology*, 58(1), 99–112.

Chemtob, et al. (2002) used a used an ABA randomized lagged groups design to evaluation the use of three sessions of EMDR to treat forty children who were assessed as meeting the criteria for PTSD three years following a natural disaster. This study conducted assessments for trauma related symptoms with children who continued to display symptoms of PTSD following Hurricane Iniki in Hawaii. Designed to assess the efficacy of clinical treatment for children following a disaster, this was a controlled study aimed at evaluating the use of a brief treatment for post-disaster PTSD in children. This study was not designed to evaluate the efficacy of EMDR, but instead focused on the need for post-disaster treatment for children. The authors explained their rationale for choosing EMDR as the treatment method for this study and concluded that EMDR was manualized allowing for treatment fidelity and evidence of the potential for rapid treatment effects because previous studies on adults indicated the treatment efficacy with single traumatic events. Though not specifically focused on assessing the efficacy of EMDR as a treatment methodology, this study reported improvement in symptom presentation following three sessions of EMDR for children with disaster related PTSD.

Cocco, N., & Sharpe, L. (1993). An auditory variant of eye movement desensitization in a case of childhood post-traumatic stress disorder. *Journal of Behavior Therapy and Experimental Psychiatry*, 24(4), 373–377.

Cocco and Sharpe (1993) recorded a case study on the use of EMDR to treat PTSD in a four year-old boy. The authors reported that they used the “EMD procedure” to treat the child's symptoms and the authors found a reduction in symptoms after three weeks. In this study, the authors documented a single case study in which the therapist used pieces of the EMDR protocol to treat a four year old. This study was one of the first studies to document the application of the EMDR protocol to a very young child.

de Roos, C., & de Jongh, A. (2008). EMDR treatment of children and adolescents with a choking phobia. *Journal of EMDR Practice and Research*, 2(3), 201-211.

De Roos et al. used the phobia protocol to treat choking phobia in 4 children ages 4-18 years. Unlike previous studies on EMDR for children with choking phobia, this is the first study to apply the phobia protocol as written by Shapiro and target the trauma memory rather than symptom. In this case series, these authors noted that the EMDR treated resulted in resolution of all symptoms of choking phobia.

de Roos, C., Greenwald, R., de Jongh, A., and Noorthorn, E.O. (Accepted for review).

EMDR (Eye Movement Desensitization and Reprocessing) versus CBT (Cognitive Behavioral Therapy) for disaster-exposed children: A controlled study.

De Roos et al (accepted for review) compared the treatment of EMDR versus TF-CBT for the treatment of disaster related PTSD symptoms for 52 children exposed to a fireworks explosion. In this study, 38 children ages 4-18 were randomly assigned to either EMDR or TF-CBT where the children received 4 sessions of up to 60 minutes each, with specific criteria established for completing the research protocol. Even though participants in both active treatments demonstrated a decrease in posttraumatic stress symptoms, the authors noted that the EMDR treatment was more efficient overall than the TF-CBT treatment. Participants in the EMDR group (N=18) completed the treatment protocol in fewer sessions (mean 3.17) as compared to the TF-CBT group (N=20) (mean 4.0 sessions).

de Roos, C., Greenwald, R., de Jongh, A., and Noorthorn, E.O. (2004, November).

EMDR (Eye Movement Desensitization and Reprocessing) versus CBT (Cognitive Behavioral Therapy) for disaster-exposed children: A controlled study. Poster session presented at the annual meeting of the International Society for Traumatic Stress Studies, New Orleans.

In this study, the researchers conducted a comparative study of EMDR versus CBT with fifty-two children 4-18 years following a fireworks factory explosion in Enschede, the Netherlands on May 13, 2000. The children were referred to the Mental Health Disaster After Care Center Mediant in Enschede and randomly assigned to either EMDR or CBT with 28 children referred to each treatment condition. Upon follow up, the researchers reported that 20 children in the CBT condition and 18 in the EMDR condition completed treatment. The researchers concluding that statistically, both treatment protocols were effective with EMDR statistically demonstrating a larger mean change per session requiring fewer sessions of treatment. The authors of this study noted that all therapists were fully trained in both EMDR and CBT and a manualized treatment protocol was used and evaluated by independent raters. The researchers also reported that the children in the EMDR group received a mean number of 3.2 sessions while the CBT group received a mean number of 4.0 sessions. Upon follow up, treatment results were maintained.

Greenwald, R. (1994). Applying eye movement desensitization and reprocessing (EMDR) to the treatment of traumatized children: Five case studies. *Anxiety Disorders Practice Journal*, 1(2), 83–97.

Greenwald documented five case studies of EMDR with children. The author provided two sessions of psychotherapy to five children referred to the writer following Hurricane Andrew that hit Florida in 1992. The author reportedly administered a Structured Interview to the mother one two weeks following the hurricane and just prior to treatment. In addition, the Problem Rating Scale (PRS) was administered to the mothers to assess the child's disturbance on each symptom as an estimate one week before the hurricane, the second week after the hurricane, and the week after treatment was completed, and measured Subjective Units of Disturbance (SUD) were administered during treatment. The author also wrote that follow-up telephone interviews were conducted one week and four weeks after the final treatment session noting that the children displayed improvement following treatment.

Hensel, T. (2009). EMDR with Children and Adolescents after Single-Incident Trauma – An Intervention Study. *Journal of EMDR Practice and Research* 3, (1).

Hensel randomly assigned 36 children and adolescents ages 1-18 years referred to the author's private practice to either EMDR training or wait-list control (WLC). The author noted that all children were assessed as having exposure to single-incident trauma only. Hensel found that all 36 children demonstrated significant and rapid improvement, as reported by parents at post-treatment with effects maintained at six month follow-up. He also noted that there was no significant difference between the treatment response of preschoolers and school-age children. Hensel used the CROPS/PROPS for pre/post-treatment assessment.

Jaberghaderi, N., Greenwald, R., Rubin, A., Dolatabadim, S., & Zand, S. O. (2002). A comparison of CBT and EMDR for sexually abused Iranian girls. *Clinical Psychology and Psychotherapy*, 11, 358-368.

Jaberghaderi, et al. (2002) compared EMDR with Cognitive Behavioral Therapy (CBT) in treating Iranian girls who had been sexually abused. The researchers randomly assigned fourteen girls ages twelve to thirteen years to CBT or EMDR treatment and then compared treatment outcomes between the two groups. The researchers conducted pre and post test measures including the CROPS, PROPS, Rutter Teacher Scale, and SUD that were administered pre-treatment and two weeks post-treatment. The researchers concluded that "Both treatments showed large effect sizes on the post-traumatic symptoms outcomes and a medium effect size on the behaviorally outcome, all statistically significant. A non-significant trend on self-reported post-traumatic stress symptoms favoured EMDR over CBT."

Muris, P., Merckelbach, H., Holdrinet, I., & Sijsenaar, M. (1998). Treating phobic children: Effects of EMDR versus exposure. *Journal of Consulting and Clinical Psychology*, 66, 193–198.

Muris, P., Merckelbach, H., van Haaften, H., & Mayer, B. (1997). Eye movement desensitization and reprocessing versus exposure in vivo: A single-session crossover study of spider-phobic children. *British Journal of Psychiatry*, 171, 82–86.

In two different studies, *Muris, et al. (1997 & 1998)* compared the use of EMDR versus exposure therapy in the treatment of children with spider phobias. The researchers concluded that there was not significant improvement from the use of EMDR. This study was the first to compare the use of exposure therapy and EMDR to the treatment of spider phobia in children; however, in the EMDR treatment the researchers noted that they used EMDR to target the symptoms of spider phobia rather than treating the traumatic memories associated with the phobic behaviors/symptoms of the children. The researchers randomly assigned 26 children identified as "spider phobic" to three treatment conditions. The first phase of treatment consisted of either one, 1.5 hour session of EMDR (that reportedly followed the protocol recommended by Shapiro), computerized in vivo, or in vivo exposure therapy and then the children's symptoms were evaluated. A second phase of treatment included having all the children participate in a 2.5 hours group session of exposure in vivo. The researchers then administered a second series of assessments to all participants and concluded that exposure in vivo remains the treatment of choice for childhood spider phobia (pp. 193). This study is methodologically limited by the

number of subjects in each treatment condition; the use of one, 1.5 hour session of EMDR for the treatment of 9 children, the multiple conditions including individual and group treatment.

Oras, R., Cancela De Ezpeleta, S., & Ahmad, A. (2004). Treatment of traumatized refugee children with eye movement desensitization and reprocessing in a psychodynamic context. *Nordic Journal of Psychiatry*, 58, 199–203.

Oras, et al, (2004) used EMDR to treat 13 children ages eight to sixteen years of age who were residing in a refugee camp in Sweden with their families between 1996 and 1999. All of the children had been exposed to terrorism and were placed in the refugee camp waiting to find out the status of their applications to be granted asylum in Sweden. The children were referred to The Department of Child and Adolescent Psychiatry at Uppsala University Hospital in Sweden. The authors reported that EMDR was combined with talk therapy, play therapy and other treatment modalities depending on the needs of the child. Treatment sessions ranged from five to twenty-five sessions with EMDR focused therapy varying from one to five sessions per child client. The authors summarized the EMDR eight phase protocol in the article; however, a manualized treatment protocol and fidelity were not assessed. The authors initially assessed the children's symptoms with the PTSS-C, GAF and then re-assessed following treatment completion. The authors found a significant improvement in functioning and PTSD symptoms, especially in re-experiencing. On the PTSS-C and the GAF scales that were administered pre/post treatment, the therapists concluded that the children's PTS symptoms improved or abated, but that the children who presented with no symptoms following treatment were children whose families had been granted asylum and were living in permanent housing. The researchers concluded that the children demonstrated the most significant progress in symptoms associated with re-experiencing, but less on avoidance. This study is the first outcome study of individual treatment of EMDR with children to document the use of EMDR for children living in extreme uncertainty and difficult conditions in a refugee camp. Even though the authors included an overview of the EMDR eight phase treatment protocol in their article, the authors did not use a manualized treatment protocol nor was fidelity assessed. The authors reported that they integrated talk therapy, play therapy, and psychodynamic treatment into the treatment of the children. In this study, the treating psychologist did not administer the pre/post measurements in order to allow for improved validity from independent raters.

Pellicer, X. (1993). Eye movement desensitization treatment of a child's nightmares: A case report. *Journal of Behavior Therapy and Experimental Psychiatry*, 24(1), 73-75.

In one of the first published articles on EMD with children, *Pellicer* documented the use of EMD to treat the nightmares of a 10-year-old girl. The author wrote that the child's nightmares were alleviated following one session of EMD. (At the time this treatment documented in this article was documented, the "R" in EMDR was not yet included.)

Puffer, M., Greenwald, R., & Elrod, D. (1997). A single session EMDR study with twenty traumatized children and adolescents. *International Electronic Journal of Innovations in the Study of the Traumatization Process and Methods for Reducing or Eliminating Related Human Suffering*, 3(2), Article 6. Retrieved February 28, 2008 from <http://www.fsu.edu/~trauma/v3i2art6.html>

Puffer et al. (1997) used a lag time design to assess the efficacy of one session of EMDR for children identified as having “a single traumatic memory.” In this study, twenty two children ages eight to seventeen years were “evenly split into treatment and delayed-treatment groups on a convenience basis (they could choose to start before or after school vacation.)” The children were all administered the Children’s Manifest Anxiety Scale (CMAS), Impact of Events Scale (IES), Subjective Units of Distress Scale (SUD), and, Validity of Cognition Scale (VoC) prior to starting treatment, which consisted of a single 90 minute session of EMDR provided by a doctoral student who had completed “the first half of the training available through the EMDR Institute.” (pp. 4). The researchers concluded that “...the measures which focused directed on the traumatic memory (IES, SUD, VoC) all showed a stronger response to the EMDR treatment than did the CMAS, a more global measure of anxiety. (pp. 5). In this study again, since no manualized treatment protocol was used, it is difficult to determine what treatment the children received. This further compounds the study in that the doctoral student providing the therapy had not completed basic training in EMDR and that it would be difficult to imagine how a therapist could complete eight phases of treatment adhering to the EMDR protocol in ninety minutes.

Rubin, A., Bischofshausen, S., Conroy-Moore, K., Dennis, B., Hastie, M., Melnick, L., et al. (2001). The effectiveness of EMDR in a child guidance center. *Research on Social Work Practice*, 11(4), 435–457.

Rubin et al. (2001) randomly assigned 39 children ages 6-15 years in sibling sets to either the treatment or control group in an effort to compare treatment outcomes for children treated at a child guidance center. Forty-one percent of the children in this study had a parent with a diagnosable mental illness. The researchers gave one of the child’s parents the Child Behavioral Checklist to complete. At pre-test 33 of the 39 participants in the study had clinically elevated scores on the CBCL. In this study, the control group of children consisted of 16 children who received the center’s standard of care treatment with the treatment group of 23 children receiving the same treatment as the control group along with the addition of three sessions of EMDR. The children in the study reportedly received a combination of individual play therapy, group therapy, and family therapy with the median number of sessions 21 for the experimental group and 22 for the control group with the range of therapy sessions not noted in the researcher study. The researchers concluded that no statistically significant findings were noted on post-test scores with either the treatment or control groups in this research study. The researchers concluded that more research needs to be conducted, but that no statistically significant findings were noted on post-test scores with either the treatment or control groups in this research study. The researchers noted that the children presented with mixed mental health diagnoses, 33% were taking psychotropic medications, and 41% had a parent diagnosed with a mental health disorder. Since the children demonstrated a range of clinical diagnoses and 41% of the children lived with a parent with a diagnosed mental health disorder, it is difficult to determine what variables may have impacted treatment outcomes.

Scheck, M., Schaeffer, J.A., & Gillette, C. (1998). Brief psychological intervention with traumatized young women: The efficacy of eye movement desensitization and reprocessing. *Journal of Traumatic Stress, 11, 25-44.*

Scheck, et al studied the efficacy of EMDR with traumatized young women, 60 women between the ages of 16 and 25 were randomly assigned to two sessions of either EMDR or an active listening (AL) control. Factorial ANOVA (analysis of variance) interaction effects and simple main effects for outcome measures (*Beck Depression Inventory, State-Trait Anxiety Inventory, Penn Inventory for Posttraumatic Stress Disorder, Impact of Event Scale, Tennessee Self-Concept Scale*) indicated significant improvement for both groups and significantly greater pre-post change for EMDR-treated participants. Pre-post effect sizes for the EMDR group averaged 1.56 compared to 0.65 for the AL group. Despite treatment brevity, the post treatment outcome variable means of EMDR-treated participants compared favorably with non-patient or successfully treated norm groups on all measures.

Soberman, G., Greenwald, R., & Rule, D. (2002). A controlled study of eye movement desensitization and reprocessing (EMDR) for boys with conduct problems. *Journal of Aggression, Maltreatment and Trauma, 6(1), 217-236.*

Soberman et al. conducted a study where the researchers added three sessions of EMDR to the treatment protocol to 29 boys ages ten-to-sixteen years of age diagnosed with conduct disorder who were being treated at a mental health program that included both inpatient and outpatient treatment services. The boys were randomly assigned to either standard care or standard care “plus 3 trauma focused EMDR sessions.” Soberman, et al. (2002) used EMDR to treat the suspected trauma underlying the overt presentation of conduct problems. This study found a significant reduction in “memory-related distress, as well as trends towards reduction of post-traumatic symptoms.” The study also found that the boys who received the EMDR sessions also “showed large and significant reduction of problem behaviors by 2-month follow-up.” (pp. 217). This is the first study to use EMDR to treat children diagnosed with conduct problems and conceptualize the children as having underlying trauma driving the overt behavioral symptoms.

Tufnell, G. (2005). Eye movement desensitization and reprocessing in the treatment of pre-adolescent children with post-traumatic symptoms. *Clinical Child Psychology and Psychiatry, 10(4), 587-600.*

Tufnell treated 4 children ages 4 years, 5 years, 10 years, and 11 years of age with EMDR. All 4 children were referred for psychotherapy after experiencing motor vehicle accidents and demonstrating post-traumatic stress symptoms. This case series is the first research to document the use of EMDR with children following motor vehicle accidents. In this case series, no standardized measures were used to assess the children’s symptoms or functioning. All symptoms were based on parent report and therapist assessment. The author noted that treatment consisted of narrative EMDR sessions for the younger children and 3 sessions of EMDR for the two older children with a maximum 7 sessions for the children. In this article, the Tufnell concluded that treatment was rapid and efficacious. This study is the first published study documenting the use of EMDR for young children who had experienced motor vehicle accidents through the therapist’s narrative of the treatment.

Wanders, F., Serra, M., & de Jongh, A. (2008). *EMDR versus CBT for children with self-esteem and behavioral problems: A randomized controlled trial. Journal of EMDR Practice and Research*, 2(3), 180-189.

Wanders et al. conducted a comparative study of EMDR versus CBT with 26 children with behavioral problems were randomly assigned either four sessions of EMDR or CBT prior to standard of care in inpatient or outpatient clinics. On post-treatment assessment and six month follow-up, EMDR and CBT were found to have significant positive effects on behavioral and self-esteem problems with EMDR treatment more rapid and without homework as needed with CBT.

RESEARCH ON THE EMDR GROUP/BUTTERFLY HUG PROTOCOL WITH CHILDREN

Adúriz, M., Bluthgen, C., Gorrini, Z., Maquieira, S., Nofal, S., & Knopfler, C. (in press). *Journal of Psychotraumatology for Iberoamérica. The flooding in Santa Fé, Argentina.*

Artigas, L., Jarero, I., Alcalá, N., & López Cano, T. (2015). *The EMDR Integrative Group Treatment Protocol (IGTP) for Early Intervention with Children.*

This protocol combines the eight standard EMDR treatment phases (Shapiro, 2001) with a group therapy model and an art therapy format and uses the Butterfly Hug (Artigas & Jarero, 2014) as a form of a self-administered bilateral stimulation. The justification for modifying the individual EMDR protocol was to provide mental health services in a disaster aftermath circumstances and fulfill the mental health population's needs. The protocol was originally designed for working with children (Artigas, Jarero, Alcalá & López Cano, 2014) and was later modified for use with adults (Jarero & Artigas, 2014). This protocol compares favorably with group treatment of other models in terms of time, resources, and results (Adúriz et al., 2009).

Fernandez, I., Gallinari, E., & Lorenzetti, A. (2004). *A school-based eye movement desensitization and reprocessing intervention for children who witnessed the Pirelli Building airplane crash in Milan, Italy. Journal of Brief Therapy, 2(2), 129–135.*

Fernandez, et al. (2004) illustrated the use of EMDR with 236 school children between the ages of six and eleven years who had witnessed an airplane crash. This study included the largest population of children in a study of the EMDR group protocol. “The ‘butterfly hug’ is an “intervention that uses dual attention stimulation along with various aspects of the standard EMDR protocol” Jarero, et al (1999). Based on teacher reports thirty days after the treatment, the researchers concluded that all but two children had returned to pre-disaster functioning.

Ignacio, J. & Artigas, L. (2015). *EMDR INTEGRATIVE GROUP TREATMENT PROTOCOL ADAPTED FOR ADOLESCENTS (BETWEEN 14 AND 17 YEARS) AND ADULTS LIVING WITH ONGOING TRAUMATIC STRESS.*

This protocol combines the eight standard EMDR treatment phases (Shapiro, 2001) with a group therapy model and an art therapy format and uses the Butterfly Hug (Artigas & Jarero, 2014) as a form of a self-administered bilateral stimulation.

Jarero, I., Artigas, L., & Hartung, J. (2006). *EMDR integrative group treatment protocol: A postdisaster trauma intervention for children and adults. Traumatology, 12(2), 121–129.*

Jarero, et al. (2006), conducted a study on the EMDR Group Protocol with children in Piedras Negras, Mexico where a flood killed residents and destroyed many homes. The research team treated forty-four children ages 8-15 years with twenty-two boys and twenty-two girls

participating in the study. The researchers used the EMDR Group Protocol created by the authors (Jarero, et. al, 1999) to treat the children. The researchers in this study conducted pretest and post-test assessments using the Children's Reaction to Traumatic Events Scale (CRTES) by Jones (2002) and found a significant drop in CRTES scores at a four week follow up with the group.

Korkmazlar-Oral, U., & Pamuk, S. (2002). Group EMDR with child survivors of the earthquake in Turkey. In J. Morris-Smith, Ed., EMDR: Clinical applications for children. Association for child psychology and psychiatry: Occasional Papers Series, 19, 47-50. William Yule, Ed. ACPP Occasional Paper Series Editor.

Korkmazlar-Oral and Pamuk (2002) treated two groups of children after an earthquake in Turkey with the EMDR group protocol. In this study, sixteen children ages ten and eleven were provided EMDR as a group activity. In order to be included in the study, the child had to have lost an immediate family member and had their home demolished, but the child could “no opportunity to share his/her experiences with anyone.” The entire treatment was reportedly provided in 3.5 hours. As the authors note, this article was written to document a humanitarian project to treat traumatized children and was not designed as a research study; therefore, it was only possible to report anecdotal data. This study was a field study where research methodology was secondary to treating the children who had experienced a disaster situation.

Wilson, S., Tinker, R., Hofmann, A., Becker, L., & Marshall, S. (2000, November). A field study of EMDR with Kosovar-Albanian refugee children using a group treatment protocol. Paper presented at the annual meeting of the International Society for the Study of Traumatic Stress, San Antonio, TX.

Wilson, Tinker, Hofmann, Becker, & Marshall (2000, November) presented a paper entitled *A field study of EMDR with Kosovar-Albanian refugee children using a group treatment protocol* at the annual meeting of the International Society for the Study of Traumatic Stress, San Antonio, Texas. The researchers conducted a field study of children in a refugee camp for ethnic Albanians from Kosovo in Hemar, Germany. Dr. Tinker reported that he and Dr. Wilson treated two groups of children with the Butterfly Hug Group Protocol. The younger group included seventeen children ages 6-10 years and an older group of nine children ages 11-13.

In this study, the children's symptoms were measured pre and post treatment with the Saigh Children's PTSD Inventory measure, and the Children's Brief Psychiatric Rating Scale. In this field study, the children had experienced high levels of distress and trauma in their lives albeit not necessarily the same traumatic event. Valid pre and post treatment measures were used for both groups of children; however, the older group had already participated in treatment for six months prior to participating in the group protocol. The researchers were responding to the needs of the children and conducted the study secondary to meeting the mental health needs of the children.

Zaghrout-Hodali, M., Alissa, F., Sahour, B. & Dodgson, P.W. (2008). Building resilience and dismantling fear: EMDR group protocol with children in an area of ongoing

trauma. *Journal of EMDR Practice and Research*, 2(2), 106-113.

Zahrout-Hodali, et al., 2008 conducted a field study of children who had experienced a shooting in Bethlehem. Researchers noted that in addition to treating the children's reactions to traumatic events in their homes and communities, the EMDR Group Protocol treatment contributed to the children demonstrating increased resiliency when the children encountered new traumatic events. Zahrout-Hodali, et al. (2008), reported that seven children, ages 8-12 years were referred by their parents for psychological help following a shooting in which four of the children were injured and another child who was playing with the group was more seriously injured and received individual EMDR later when he was well enough to participate. The seven children were treated by two, fully trained EMDR therapists who had also been trained in the group protocol and had extensive clinical experience. The treatment included four sessions and a follow up session completed "between four and five months after the fourth consultation. (pp. 13). Zahrout-Hodali, et al., reported using the Butterfly Hug protocol as described by Wilson et. al. (2000) that includes the eight phases of the EMDR protocol.

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