Research Center

ANDREW M. LEEDS, PH.D.

his issue of the Research Corner addresses the question, "What articles would a newly trained EMDR therapist most need to reference when speaking with other professionals?" A common issue involves locating documentation that EMDR therapy is accepted as an evidence-based treatment for PTSD.

For this, clinicians can turn to international trauma treatment guidelines, United States Department of Defense and Department of Veterans Affair clinical practice guidelines, meta-analyses, and review articles. These are listed below. In addition, there are review articles, pilot studies, and randomized controlled trials on emerging applications for EMDR therapy for a range of conditions other than PTSD.

Finally, other professionals often ask, "How does EMDR therapy work?" Two recent articles explore EMDR therapy's unique theoretical model and examine its possible mechanisms of action.

Tip: To quickly access journal articles cited below, put the doi number from the end of the citation into the search window at: https://www.doi.org/ This leads directly to the journal abstract or the full text of open access articles.

TRAUMA TREATMENT GUIDELINES

WHAT DO INTERNATIONAL TRAUMA TREATMENT GUIDELINES SAY ABOUT EMDR THERAPY?

International Society for Traumatic Stress Studies - 2018

(2018). ISTSS PTSD Prevention and Treatment Guidelines Methodology and Recommendations. Open access: https://www.istss.org/treating-trauma/new-istss-prevention-and-treatment-quidelines.aspx

Children and Adolescents

"Strong Recommendation - CBT-T (caregiver and child), CBT-T (child), and EMDR are recommended for the treatment of children and adolescents with clinically relevant post-traumatic stress symptoms."

Adults

Psychological Treatment

"Strong Recommendation - Cognitive Processing Therapy, Cognitive Therapy, EMDR, Individual CBT with a Trauma Focus (undifferentiated), and Prolonged Exposure are recom-

mended for the treatment of adults with PTSD."

Early Psychosocial Intervention Single session

"Intervention with Emerging Evidence - Group 512 PM and Singlesession EMDR

within the first three months of a traumatic event have emerging evidence of efficacy for the prevention and treatment of PTSD symptoms in adults."

Multiple sessions

Standard Recommendation - CBT-T, Cognitive Therapy and EMDR within the first three months of a traumatic event are recommended for the treatment of PTSD symptoms in adults.

National Institute for Health and Clinical Excellence - 2018

National Institute for Health and Clinical Excellence. (2018). Post-traumatic Stress Disorder. https://www.nice.org.uk/guidance/ng116

"1.6.13 Consider eye movement desensitisation and reprocessing (EMDR) for children and young people aged 7 to 17 years with a diagnosis of PTSD or clinically important symptoms of PTSD who have presented more than 3 months after a traumatic event only if they do not respond to or engage with traumafocused CBT. [2018]"

"1.6.18 Consider EMDR for adults with a diagnosis of PTSD or clinically important symptoms of PTSD who have presented between 1 and 3 months after a non-combat-related

trauma if the person has a preference for EMDR. [2018]"

"1.6.19 Offer EMDR to adults with a diagnosis of PTSD or clinically important symptoms of PTSD who have presented more than 3 months after a non-combat-related trauma. [2018]"

World Health Organization - 2013

World Health Organization. Guidelines for the management of conditions specifically related to stress. Geneva: WHO, 2013. Open access: http://www.who.int/mental_health/emergencies/stress_guidelines/en/

Recommendation 14 - Adults with PTSD

Individual or group cognitive-behavioural therapy (CBT) with a trauma focus, eye movement desensitization and reprocessing (EMDR) or stress management should be considered for adults with posttraumatic stress disorder (PTSD).

Strength of recommendation: standard

Quality of evidence:

moderate for individual CBT, EMDR; low for group CBT, stress management

Recommendation 15 - Children and adolescents with PTSD

Individual or group cognitive-behavioural therapy (CBT) with a trauma focus or eye movement desensitization and reprocessing (EMDR) should be considered for children and adolescents with posttraumatic stress disorder (PTSD).

Strength of recommendation: standard

Quality of evidence:

moderate for individual CBT, low for EMDR, very low for group CBT

United States Department of Defense and Department of Veterans Affair - 2017

Department of Veterans Affair & Department of Defense. The Management of Posttraumatic Stress Disorder Work Group. (2017). VA/DoD clinical practice guideline for the management of post-traumatic stress disorder and acute stress disorder [PDF]. Office of Quality and Performance publication. doi:10Q-CPG/PTSD-04 VA/DoD Treatment Guidelines: Post Traumatic Stress Disorder.

Open access: https://www.healthquality.va.gov/guidelines/MH/ptsd/

Psychotherapy

"For patients with PTSD, we recommend individual, manualized trauma focused psychotherapies that have a primary component of exposure and/or cognitive restructuring to include Prolonged Exposure (PE), Cognitive Processing Therapy (CPT), Eye Movement Desensitization and Reprocessing (EMDR), specific cognitive behavioral therapies for PTSD, Brief Eclectic Psychotherapy (BEP), Narrative Exposure Therapy (NET), and written narrative exposure."

Note: "We recommend sertraline, paroxetine, fluoxetine, or venlafaxine as monotherapy for PTSD for patients diagnosed with PTSD who



choose not to engage in or are unable to access trauma-focused psychotherapy."

"We recommend against treating PTSD with divalproex, tiagabine, guanfacine, risperidone, benzodiazepines, ketamine, hydrocortisone, or D-cycloserine, as monotherapy due to the lack of strong evidence for their efficacy and/or known adverse effect profiles and associated risks." {Emphasis added.}

META-ANALYSES

WHAT DO WE KNOW ABOUT THE CONTRIBUTIONS OF EYE MOVEMENTS TO EMDR THERAPY RESULTS?

Lee, C. W., & Cuijpers, P. (2012). A meta-analysis of the contribution of eye movements in processing emotional memories. Journal of Behavior Therapy and Experimental Psychiatry. Published online first. doi:10.1016/j. jbtep.2012.11.001

Lee and Cuijpers (2012) provides essential reading for EMDR therapists. This historic paper refuted and corrected long standing type II errors

found in the early meta-analysis by Davidson and Parker (2001). The Davidson and Parker meta-analysis led to often repeated denials for any role for eye movement in EMDR therapy in many review articles and textbooks and misleading claims that EMDR therapy was just a variant on exposure therapy. Clinicians may need to address concerns in professionals who are skeptical about EMDR therapy as a result of these misleading claims.

Davidson, P. R., & Parker, K. C. (2001). Eye movement desensitization and reprocessing (EMDR): a meta-analysis. J Consult Clin Psychol, 69(2), 305-316. doi:10.1037//0022-006X.69.2.305

In their 2012 results, Lee and Cuijpers stated that "The data indicated that treatment fidelity acted as a moderator variable on the effect of eye movements in the therapy studies." They concluded that "the processes involved in EMDR are different from other exposure based therapies."

These issues were further clarified in Lee and Cuijpers (2014)

Lee, C. W., & Cuijpers, P. (2014). What does the data say about the importance of eye movement in EMDR? J Behav Ther Exp Psychiatry, 45(1), 226-228. doi:10.1016/j.jbtep.2013.10.002

Clinicians can also refer to the 2012 review by Jeffries and Davis who concluded that: "The results suggest support for the contention that EMs are essential to this therapy and that a theoretical rationale exists for their use. Choice of EMDR over trauma-

Individual or group cognitive-behavioural therapy (CBT) with a trauma focus, eye movement desensitization and reprocessing (EMDR) or stress management should be considered for adults with posttraumatic stress disorder (PTSD).

focused CBT should therefore remain a matter of patient choice and clinician expertise; it is suggested, however, that EMs may be more effective at reducing distress, and thereby allow other components of treatment to take place."

Jeffries, F. W., & Davis, P. (2012). What is the Role of Eye Movements in Eye Movement Desensitization and Reprocessing (EMDR) for Post-Traumatic Stress Disorder (PTSD)? A Review. Behav Cogn Psychother, 41(3), 1-11. doi:10.1017/S1352465812000793

Comments on the importance of teaching and using eye movements rather than alternate forms of bilateral stimulation are found in a 2011 clinical commentary by Elan Shapiro.

Shapiro, E. (2011). Suggestions for Teaching the Application of Eye Movements in EMDR. Journal of EMDR Practice and Research, 5(2), 73-77. doi:10.1891/1933-3196.5.2.73

Two useful meta-analyses supporting a positive role for EMDR therapy treatment of PTSD include:

Bisson, J. I., Roberts, N. P., Andrew, M., Cooper, R., & Lewis, C. (2013). Psychological therapies for

chronic post-traumatic stress disorder (PTSD) in adults. Cochrane Database Syst Rev, 12, CD003388. doi:10.1002/14651858. CD003388.pub4

Moreno-Alcázar, A., Treen, D., Valiente-Gómez, A., Sio-Eroles, A., Pérez, V., Amann, B. L., & Radua, J. (2017). Efficacy of Eye Movement Desensitization and Reprocessing in Children and Adolescent with Post-traumatic Stress Disorder: A Meta-Analysis of Randomized Controlled Trials. Frontiers in Psychology, 1750). doi:10.3389/fpsyg.2017.01750

Systematic Reviews on EMDR for complex childhood trauma

Chen, R., Gillespie, A., Zhao, Y., Xi, Y., Ren, Y., & McLean, L. (2018). The Efficacy of Eye Movement Desensitization and Reprocessing in Children and Adults Who Have Experienced Complex Childhood Trauma: A Systematic Review of Randomized Controlled Trials. Front Psychol, 9, 534. doi:10.3389/fpsyg.2018.00534

Emerging applications

EMDR therapy is best known and has the greatest evidence of efficacy as a treatment for PTSD. There is a growing literature indicating it may also be an effective treatment for other conditions. Valiente-Gómez, et al. (2017) examined randomized controlled trials (RCT) with EMDR therapy for comorbid traumatic events in those with psychosis, bipolar disorder, unipolar depression, anxiety disorders, substance use disorders, and chronic back pain.

Valiente-Gómez, A., Moreno-Alcázar, A., Treen, D., Cedrón, C., Colom, F., Pérez, V., & Amann, B. L. (2017). EMDR beyond PTSD: A Systematic Literature Review. Front Psychol, 8, 1668. doi:10.3389/fpsyg.2017.01668

EMDR therapy for depression

The series of studies by the members of EDEN project represent a crucial new front in the effort to establish wider scientific acceptance of EMDR therapy as an evidence-based approach to psychotherapy with multiple areas of application. The most recent randomized study from the EDEN project supporting the benefits of EMDR therapy for Major Depressive Disorder is Hase, et al., 2018.

Hase, M., Plagge, J., Hase, A., Braas, R., Ostacoli, L., Hofmann, A., & Huchzermeier, C. (2018). Eye Movement Desensitization and Reprocessing Versus Treatment as Usual in the Treatment of Depression: A Randomized-Controlled Trial. Front Psychol, 9, 1384. doi:10.3389/fpsyg.2018.01384

Obsessive Compulsive Disorder

An initial RCT by Marsden, et al. (2017) investigated John Marr's

Adapted EMDR Phobia Protocol (2012) for the treatment of those with obsessive compulsive disorder in comparison with cognitive behavioral therapy using exposure and response prevention and found "comparable completion rates and clinical outcomes."

Marsden, Z., Lovell, K., Blore, D., Ali, S., & Delgadillo, J. (2017). A randomized controlled trial comparing EMDR and CBT for obsessive-compulsive disorder. Clin Psychol Psychother. doi:10.1002/cpp.2120

Marr, J. (2012). EMDR Treatment of Obsessive-Compulsive Disorder: Preliminary Research. Journal of EMDR Practice and Research, 6(1), 2-15.

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"EMDR therapy is best known and has the greatest evidence of efficacy as a treatment for PTSD. There is a growing literature indicating it may also be an effective treatment for other conditions."

doi:10.1891/1933-3196.6.1.2

Panic and Agoraphobia

At least two well designed studies support the efficacy of EMDR therapy for those with Panic Disorder and Panic with Agoraphobia.

Horst, F., Den Oudsten, B., Zijlstra, W., de Jongh, A., Lobbestael, J., & De Vries, J. (2017). Cognitive Behavioral Therapy vs. Eye Movement Desensitization and Reprocessing for Treating Panic Disorder: A Randomized Controlled Trial. Front Psychol, 8, 1409. doi:10.3389/fpsyg.2017.01409

Faretta, E. (2013). EMDR and Cognitive Behavioral Therapy in the Treatment of Panic Disorder: A Comparison. Journal of EMDR Practice and Research, 7(3), 121-133. doi:10.1891/1933-3196.7.3.121

Substance Abuse and Addiction

Markus and Hornsveld (2017) published a review of the research on the application of EMDR therapy for addictions. Pilot studies by Hase, et al. (2008) and Tapia, et al., (2018) showed promising results for the CraveEx model of Hase (2010).

Hase, M., Schallmayer, S., & Sack, M. (2008). EMDR reprocessing of the addiction memory: Pretreatment, posttreatment, and 1-month follow-up. Journal of EMDR Prac-

tice and Research, 2(3), 170-179. doi:10.1891/1933-3196.2.3.170 Hase, M. (2010). CravEx: An EMDR approach to treat substance abuse and addiction. In M. Luber (Ed.), Eye Movement Desensitization and Reprocessing (EMDR) Scripted Protocols: Special Populations (pp. 467-488). Springer Pub Co.

Markus, W., & Hornsveld, H. K. (2017). EMDR Interventions in Addiction. Journal of EMDR Practice and Research, 11(1), 3-29. doi:10.1891/1933-3196.11.1.3

Tapia, G., Perez-Dandieu, B., Lenoir, H., Othily, E., Gray, M., & Delile, J.-M. (2018). Treating addiction with schema therapy and EMDR in women with co-occurring SUD and PTSD: A pilot study. Journal of Substance Use, 23(2), 199-205. doi:10.1080/14659891.2017.1378743

The AIP Model of EMDR Therapy and Pathogenic Memories

Hase, M., Balmaceda, U. M., Ostacoli, L., Liebermann, P., & Hofmann, A. (2017). The AIP Model of EMDR Therapy and Pathogenic Memories. Frontiers in Psychology, 8. doi:10.3389/fpsyg.2017.01578

This article summarizes the Adaptive Information Processing (AIP) model, lists recent publications that describe the AIP model, and de-

scribes strengths and limitations of the AIP model. The article proposes that the concept of pathogenic memories and research on memory reconsolidation can help expand the understanding and acceptance of the AIP model.

How Does EMDR Therapy Work? A Systematic Review on Suggested Mechanisms of Action.

Landin-Romero, R., Moreno-Alcazar, A., Pagani, M., & Amann, B. L. (2018). How Does Eye Movement Desensitization and Reprocessing Therapy Work? A Systematic Review on Suggested Mechanisms of Action. Frontiers in Psychology, 9. doi:10.3389/fpsyg.2018.01395

From the abstract (Landin-Romero, et al., 2018): "Eighty-seven studies were selected for review and classified into three overarching models: (i) psychological models (ii) psychophysiological models and (iii) neurobiological models. The evidence available from each study was analyzed and discussed. Results demonstrated a reasonable empirical support for the working memory hypothesis and for the physiological changes associated with successful EMDR therapy. Recently, more sophisticated structural and functional neuroimaging studies using high resolution structural and temporal techniques are starting to provide preliminary evidence into the neuronal correlates before, during and after EMDR therapy." ΑL

Recent Articles

ANDREW M. LEEDS, PH.D.

his regular column appears in each quarterly issue of the EMDRIA Newsletter and the EMDR Europe Newsletter. It lists citations, abstracts, and preprint/ reprint information—when available—on all EMDR therapy related journal articles. The listings include peer reviewed research reports and case studies directly related to EMDR therapy—whether favorable or not—including original studies, review articles and meta-analyses accepted for publication or that have appeared in the previous six months in scholarly journals. Authors and others aware of articles accepted for publication are invited to submit pre-press or reprint information. Listings in this column will exclude: published comments and most letters to the editor, non-peer reviewed articles, non-English articles unless the abstract is in English, dissertations, and conference presentations, as well as books, book chapters, tapes, CDs, and videos. Please send submissions and corrections to: aleeds@theLeeds.net.

Note: a comprehensive database of all EMDR therapy references from journal articles, dissertations, book chapters, and conference presentations is available in The Francine Shapiro Library hosted by the EMDR International Association at: https://emdria.omeka.net/items/search?collection=1

Previous columns from 2005 to the present are available on the EMDRIA web site at: https://www.emdria.org/page/emdrarticles

Behnammoghadam, M., Kheramine, S., Zoladl, M., Cooper, R. Z., & Shahini, S. (2019). Effect of eye movement desensitization and reprocessing (EMDR) on severity of stress in emergency medical technicians. Psychol Res Behav Manag, 12, 289-296.

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ABSTRACT

BACKGROUND & OBJECTIVES:

People working in health care centers and hospitals, especially the emergency departments, often experience severe stresses due to the



nature of their jobs. The current study was aimed at determining the effect of eye movement desensitization and reprocessing (EMDR) on severity of stress of medical emergency technicians. Materials and methods: In the current field trial, 50 emergency medical technicians working in emergency medical centers were selected by convenience sampling method and randomly assigned to either the intervention or control group; each group had 25 subjects. In the intervention group, EMDR training was provided during five consecutive sessions, while in the control group the subjects did not receive any intervention. The data collection instrument in the study, in addition to the demographic questionnaire, was the Alken stress scale. Data had normal distribution and were analyzed using independent t, the Mann-Whitney, or chi-squared tests, and their withingroup comparisons were performed by paired t and marginal homogeneity tests.

RESULTS:

The mean score of stress before and after the intervention in the inter-

vention and control groups was 32.2±7.8 and 33.6±13.8, respectively. However, after EMDR implementation, the intensity of stress in the intervention and control groups was 25.9 ± 7.3 and 33 ± 13.1 , respectively and the difference between the groups was statistically significant (P<0.05). Chi-squared test showed that after the intervention, the degree of stress intensity in the experimental group was lower than that of the control group, and there was a significant difference between the groups in terms of stress intensity (P<0.05).

CONCLUSION:

The current study results indicated that EMDR technique significantly reduced the intensity of stress in the intervention group and can be helpful to control stress experienced by emergency medical staff.

Carletto, S., Porcaro, C., Settanta, C., Vizzari, V., Stanizzo, M. R., Oliva, F. et al. (2019). Neurobiological features and response to eye movement desensitization and reprocessing treatment of posttraumatic stress disorder in patients with breast cancer. European Journal of Psychotraumatology, 10(1), 1600832.

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ABSTRACT

BACKGROUND:

Breast cancer (BC) is one of the

most common invasive types of cancer among women, with important consequences on both physical and psychological functioning. Patients with BC have a great risk of developing posttraumatic stress disorder (PTSD), but few studies have evaluated the efficacy of psychological interventions to treat it. Furthermore, no neuroimaging studies have evaluated the neurobiological effects of psychotherapeutic treatment for BC-related PTSD.

OBJECTIVE:

The study aimed to evaluate the efficacy of Eye Movement Desensitization and Reprocessing therapy (EMDR) as compared to Treatment as Usual (TAU) in BC patients with PTSD, identifying by electroencephalography (EEG) the neurophysiological changes underlying treatments effect and their correlation with clinical symptoms.

METHOD:

Thirty patients with BC and PTSD diagnosis were included, receiving either EMDR (n = 15) or TAU (n =15). Patients were assessed before and after treatments with clinical questionnaires and EEG. The proportion of patients who no longer meet criteria for PTSD after the intervention and changes in clinical scores, both between and within groups, were evaluated. Two-sample permutation t-tests among EEG channels were performed to investigate differences in power spectral density between groups. Pearson correlation analysis was carried out between power bands and clinical scores.

RESULTS:

At post-treatment, all patients treated with EMDR no longer met criteria for PTSD, while all patients treated with TAU maintained the diagnosis. A significant decrease in depressive symptoms was found only in the EMDR group, while anxiety remained stable in all patients. EEG results corroborated these findings, showing significant differences in delta and theta bands in left angular and right fusiform gyri only in the EMDR group.

CONCLUSIONS:

It is essential to detect PTSD symptoms in patients with BC, in order to offer proper interventions. The efficacy of EMDR therapy in reducing cancer-related PTSD is supported by both clinical and neurobiological findings.

Chen, J.-y., Yu, J.-c., Cao, J.-p., Xiao, Y., Gu, H., Zhong, R.-l. et al. (2019). Abstinence Following a Motivation-Skill-Desensitization-Mental Energy Intervention for Heroin Dependence: A Three-year Follow-up Result of a Randomized Controlled Trial. Current Medical Science, 39(3), 472-482.

Corresponding author, Zeng-Zhen Wang, Department of Epidemiology and Biostatistics, School of Public Health, Tongji Medical College, Huazhong University of Science and Technology, Wuhan 430030, China. E-mail: zzhwang@hust.edu.cn

ABSTRACT

The high rate of relapse among heroin users remains a significant pub-

lic concern in China. In the present study, we utilized a Motivation-Skill-Desensitization-Mental Energy (MSDE) intervention and evaluated its effects on abstinence and mental health. Eighty-nine male heroin users in a drug rehabilitation center were enrolled in the study. The participants in the MSDE intervention group (n=46) received MSDE intervention, which included motivational interviewing, coping skills training, eve movement desensitization and reprocessing, and mindfulness-based psychotherapy. The participants in the control group (n=43) received a series of lectures on skills training. A significant increase in Contemplation Ladder score (P<0.001) and decreases in scores on the Obsessive Compulsive Drug Use Scale (P<0.001), Beck Depression Inventory (P<0.001), and Aggression Questionnaire (P=0.033) were found immediately after intervention. Compared to the control group, the MSDE intervention group reported significantly higher abstinence rates (P=0.027) and retention rates (P<0.001) at follow-up. Overall, the MSDE intervention, which uses a combined strategy for relapse prevention, could be a promising approach for preventing relapse among heroin users in China.

de Bruijn, L., A I Stramrood, C., Lambregtse-van den Berg, M. P., & Rius Ottenheim, N. (2019). Treatment of posttraumatic stress disorder following childbirth. J Psychosom Obstet Gynaecol, 1-10.

Lisa de Bruijn PIeter de la Courtstraat

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ABSTRACT

AIM:

The aim of this systematic review is to give an overview of the literature on treatment options for posttraumatic stress disorder (PTSD) following childbirth and to assess their efficacy. Method: PubMed, Embase, Web of Science, Cochrane and PsycINFO were searched using "PTSD", "childbirth" and "therapy" as terms for studies in English language published between 2000 and 2017. Additional studies were identified by checking reference lists. Studies were included when presence of PTSD was confirmed prior to treatment and childbirth was the traumatic event focused on. All studies were reviewed on sample size, study design, used instruments, sample characteristics, type of treatment and the result of treatment regarding PTSD (symptoms).

RESULTS:

Six studies met the inclusion criteria. One study on debriefing, three studies on cognitive behavioral therapy (CBT) and two studies on eye movement desensitization and reprocessing (EMDR) were identified. Both EMDR and CBT appear to be promising therapies for PTSD following childbirth. Debriefing seems to be beneficial when women request it themselves.

CONCLUSIONS:

EMDR and CBT seem to be effective as therapy for PTSD following child-

birth. However, evidence is still limited and more controlled trials are needed to draw conclusive results.

de Roos, C., Rommelse, N., Donders, R., Knipschild, R., Bicanic, I., & de Jongh, A. (2019). Response to "Comparing the Effectiveness of EMDR and TF-CBT for Children and Adolescents: a Meta-Analysis. Journal of Child & Adolescent Trauma, 1-3. https://doi.org/10.1007/s40653-019-00257-1

Carlijn de Roos. E-mail <u>c.deroos@debascule.com</u>

ABSTRACT

With interest we read the article by Lewey and colleagues describing the results of a meta-analysis, entitled "Comparing the Effectiveness of EMDR and TF-CBT for Children and Adolescents: A Meta-Analysis" (Lewey et al. 2018). In this article, the authors presented the available evidence on the effectiveness of Trauma Focused-Cognitive Behavioral Therapy (TF-CBT) and Eye Movement Desensitization and Reprocessing (EMDR) therapy for children and adolescents with symptoms of Posttraumatic Stress Disorder (PTSD). The authors included studies from 1989 until 2015 that applied TF-CBT and/or EMDR therapy in children and adolescents with full or subclinical PTSD, and compared these treatments to waiting list, head to head or other active treatment control conditions. Based on the results of this meta-analysis, the authors concluded that both TF-CBT and EMDR therapy were effective in treating PTSD, and that

TF-CBT was marginally more effective than EMDR. We are highly concerned that the...

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ABSTRACT

OBJECTIVES:

Posttraumatic stress disorder (PTSD) and pain often co-occur, introducing clinical challenges and economic burden. Psychological treatments are considered effective for each condition, yet it is not known which therapies have the potential to concurrently address PTSD and pain-related symptoms.

METHODS:

To conduct a systematic review and meta-analysis, databases were searched for articles published between January 2007 and December 2017 describing results from clinical trials of interventions addressing PTSD and pain-related symptoms in adults. Two independent reviewers finalized data extraction and risk of bias assessments. A random effects model was used for me-

ta-analysis and to calculate pooled and subgroup effect sizes (ESs) of psychological-only (single modality) and multimodal interventions.

RESULTS:

Eighteen trials (7 uncontrolled, 11 randomized controlled trials, RCTs), totaling 1,583 participants, were included in the systematic review. RCT intervention types included exposure-based, cognitive-behavioral, and mindfulness-based therapies. Data from 10 RCTs (N=1,435) were available for meta-analysis, which demonstrated moderate effect for reduced PTSD severity (ES=-0.55, CI: -0.83, -0.26) and non-significant effect for pain intensity (ES=-0.14, CI: -0.43, 0.15) and pain interference (ES=-0.07, CI: -0.35, 0.20) outcomes. Findings from uncontrolled trials supported meta-analytic results from RCTs. Using GRADE assessment, the quality of evidence was deemed as moderate for RCTs and low for non-RCTs.

DISCUSSION:

Findings indicated that the majority of the interventions appeared to have greater impact on reducing PTSD rather than pain-related symptoms. There remains a need to further develop interventions that consistently impact PTSD and pain-related outcomes when these two conditions co-occur.

Guido, C. A., Zicari, A. M., Duse, M., & Spalice, A. (2019). Eye movement desensitisation and reprocessing (EMDR) treatment associated with parent management training (PMT) for the acute symptoms in a patient

with PANDAS syndrome: a case report. Italian Journal of Pediatrics, 45(1). doi:10.1186/s13052-019-0667-1

Open access:

https://ijponline.biomedcentral.com/ articles/10.1186/s13052-019-0667-1

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ABSTRACT

BACKGROUND:

The purpose of this report was to present the results of eye movement desensitisation and reprocessing (EMDR) therapy associated with parent management training (PMT) in a child with paediatric autoimmune neuropsychiatric disorder associated with streptococcus (PANDAS), who had previously only been treated with pharmacological treatment.

CASE PRESENTATION:

The case concerns an 11-year-old boy who presented with simple and complex vocal tics, motor tics, obsessive-compulsive traits and irritability from the age of 6 years, in addition to a positive result for streptococcal infection. The course of symptoms followed a relapsing-remitting trend with acute phases that were contingent on the infectious episodes.

CONCLUSIONS:

Following eight sessions of EMDR,

preceded by training sessions with the parents, the child showed a significant reduction in symptoms and disappearance of the exacerbation. These results indicate the possibility of improving the treatment outcomes of patients with PANDAS by a combined approach using both antibiotic and EMDR therapies.

Lee, C. W., de Jongh, A., & Hase, M. (2019). Lateral eye movements, EMDR, and memory changes: A critical commentary on Houben et al. (2018). Clinical Psychological Science, 2167702619830395.

https://journals.sagepub.com/ doi/10.1177/2167702619830395

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NO ABSTRACT

Maddox, S. A., Hartmann, J., Ross, R. A., Ressler - Neuron, K. J., & 2019. (2019). Deconstructing the gestalt: Mechanisms of fear, threat, and trauma memory encoding. Neuron, 102(1), 60-74.

https://doi.org/10.1016/j.neu-ron.2019.03.017

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ABSTRACT

Threat processing is central to understanding debilitating fear- and trauma-related disorders such as posttraumatic stress disorder (PTSD). Progress has been made in understanding the neural circuits underlying the "engram" of threat or fear memory formation that complements a decades-old appreciation of the neurobiology of fear and threat involving hub structures such as the amygdala. In this review, we examine key recent findings, as well as integrate the importance of hormonal and physiological approaches, to provide a broader perspective of how bodily systems engaged in threat responses may interact with amygdala-based circuits in the encoding and updating of threat-related memory. Understanding how trauma-related memories are encoded and updated throughout the brain and the body will ultimately lead to novel biologically-driven approaches for treatment and prevention.

Merz, J., Schwarzer, G., & Gerger, H. (2019). Comparative Efficacy and Acceptability of Pharmacological, Psychotherapeutic, and Combination Treatments in Adults With Posttraumatic Stress Disorder: A Network Meta-analysis. JAMA Psychiatry.

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ABSTRACT

IMPORTANCE:

Posttraumatic stress disorder (PTSD) is a prevalent mental disorder, with a high risk of chronicity, comorbidity, and functional impairment; PTSD is complicated to treat, and the debate on the best treatment approach is ongoing.

OBJECTIVE:

To examine comparative outcomes and acceptability of psychotherapeutic and pharmacological treatments and their combinations in adults with PTSD.

DATA SOURCES:

Embase, MEDLINE, PsycINFO, Cochrane Controlled Trials Register, and PSYNDEX were searched for studies published from January 1, 1980, to February 28, 2018. Reference lists of included studies and of previously published guidelines and systematic reviews were also searched.

STUDY SELECTION:

Of 11 417 records identified, 12 published randomized clinical trials (RCTs) comprising 922 participants, contributing 23 direct comparisons between psychotherapeutic and pharmacological treatments or their combinations were included.

DATA EXTRACTION & SYNTHESIS:

Standardized mean differences (SMDs) and odds ratios were aggregated using random-effects network and pairwise meta-analyses. Risk of bias and indirectness was rated for each study, and network confidence was rated using the Confidence in

Network Meta-Analysis framework.

MAIN OUTCOMES & MEASURES:

The primary outcome was the comparative benefit between 2 treatment approaches to PTSD symptom improvement, and secondary outcome was the comparative acceptability of the treatment approaches, as indicated by patient dropout rates before treatment termination.

RESULTS:

No treatment approach was found to be superior at the end of treatment (for all, 95% CI included 0). At the last follow-up, psychotherapeutic treatments showed greater benefit than pharmacological treatments in both network (SMD, -0.83; 95% CI, -1.59 to -0.07) and pairwise (SMD, -0.63; 95% CI, -1.18 to -0.09, 3 RCTs) meta-analyses. No difference was found between combined treatments and psychotherapeutic treatments at long-term follow-up, and combined treatments were associated with better outcomes than pharmacological treatments in the network meta-analysis (SMD, -0.96; 95% CI, -1.87 to -0.04), but not in the pairwise meta-analysis, which included 2 RCTs (SMD, -1.02; 95% CI, -2.77 to 0.72). No evidence was found for differential acceptability of the 3 treatment approaches.

CONCLUSIONS AND RELEVANCE:

These results suggest superiority of psychotherapeutic treatments over pharmacological treatments; network, but not pairwise, meta-analyses suggest superiority of combined treatments over pharmacological treatments in improving PTSD symp-

tom severity in the long term. The scarcity of reported long-term findings hampers definite conclusions and demonstrates the need for robust evidence from large-scaled comparative trials providing long-term follow-up data.

Opheim, E., Andersen, P. N., Jakobsen, M., Aasen, B., & Kvaal, K. (2019). Poor quality in systematic reviews on PTSD and EMDR—an examination of search methodology and reporting. Frontiers in Psychology, 10, 1558. https://www.frontiersin.org/articles/10.3389/fpsyg.2019.01558/abstract

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ABSTRACT

BACKGROUND:

Different user groups regard systematic reviews as reliable and valuable sources for answering research questions. For systematic reviews to fulfill their purpose, methodological quality in all stages are of importance. The studies identified in a systematic search form the basis of the review. thus the search process methodology is important for both performing and reporting the search. The purpose of the present study was to evaluate the quality of non-Cochrane systematic reviews by analyzing how they perform and report the search. The focus of this article is eye movement desensitization and reprocessing (EMDR), a trauma-focused therapy commonly used for post-traumatic stress disorder (PTSD).

METHODS AND RESULTS:

We examined the method chapters of 20 systematic reviews on the subject, and rated their searches and reporting using relevant elements from the Cochrane Handbook and PRISMA. We found inadequacies in the methods employed for searching and reporting the search strategy, which could have been avoided by greater adherence to guiding documents for performing systematic reviews.

CONCLUSIONS:

Our findings raise important questions for future debate on the risk of omitting studies, thus impairing the conclusions in a systematic review. For clinical purposes, researchers should investigate if, and how, the search strategy in a systematic review affects the body of knowledge and the results.

Peregrinova, L., & Jordan, J. (2017). Psychotherapy for posttraumatic stress disorders among cardiac patients after implantable cardioverter defibrillator shocks. Feasibility and implementation of a psychocardiological therapy manual in inpatient cardiac rehabilitation. Heart and Mind, 1, 42.

http://www.heartmindjournal.org/text.asp?2017/1/1/42/206963

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ABSTRACT

CONTEXT:

The reported psychopathological symptoms in patients following im-

plantable cardioverter defibrillator (ICD) shocks differ. Reports concern mostly psychosocial distress with trauma-related symptoms: high hyperarousal, re-experiencing, and avoidance behavior. Patients suffering from these impairments require targeted therapy. Until now, only a few publications report psychological treatment for patients with ICD shocks. The aim of the present work was to examine whether the implementation of the specific psychotherapy, including eye movement desensitization and reprocessing (EMDR), during inpatient cardiac rehabilitation is safe and feasible (health-care study) and to explore whether this intervention leads to a reduction of psychopathology in cardiac patients after ICD shocks. As we have no control group design, we can only describe the change but we do not know whether the health status would be the same without our intervention.

METHODS:

Twenty cardiac patients who were distressed after receiving ICD shocks were included in this study. Before and after the 3-5-week psychocardiological inpatient treatment (cardiac rehabilitation including psychotherapy) as well as 6 and 12 months after discharge, the patients were assessed for the following psychological variables: posttraumatic stress, depression, anxiety, and various measures of vital exhaustion and self-efficacy (Structured Clinical Interview for Diagnostic and Statistical Manual of Mental Disorders-4th Edition Disorders [SCID], Impact of Events Scale-Revised

[IES-R], Beck Depression Inventory [BDI], Hospital Anxiety and Depression Scale [HADS] [Hospital Anxiety and Depression Scale-Anxiety (HADS [A])/Hospital Anxiety and Depression Scale-Depression (D)], Shortened Maastricht Exhaustion Questionnaire [MQ], and General Self-Efficacy Scale [SE]).

RESULTS:

At baseline, 84.2% (n = 16) of the participants suffered from posttraumatic stress symptoms as assessed by the SCID (68.4% [n = 13] measured by the IES-R). Symptoms of depression were observed in 72.2% (BDI) or in 63.2% (HADS [D]) of patients and anxiety in 78.9% of patients (HADS [A]). The measurements confirm a significant reduction in the symptoms of posttraumatic stress (IES-R: P =0.000), depression (BDI: P = 0.009; HADS [D]: P = 0.000), anxiety (HADS [A]: P =0.000), and vital exhaustion (MQ: P = 0.006), 1 year after patients underwent treatment. No significant changes were observed in perceived SE (P = 0.194). No significant correlations between medical variables and psychopathology were found (adequate/inadequate shocks; number of shocks; primary/secondary prevention). No appropriate/inappropriate shocks were delivered within the treatment period.

CONCLUSION:

Our results suggest that an inpatient cardiac rehabilitation program with intensive targeted psychotherapy including EMDR is a safe intervention for posttraumatic stress in patients who are distressed after receiving ICD shocks. In particular, patients accepted the EMDR treatment, emotional arousal was tolerable, and no cardiac complications occurred during EMDR confrontation. Future strategies could be investigating the impact of intervention on long-term effect, stability, and mortality in this population. In addition, our study showed that some patients had a very long time between ICD shocks and the beginning of the professional therapy. Hence, this leads to the finding that a waiting control group could be acceptable by the ethical commission.

Rahimi, F., Rejeh, N., Bahrami, T., Heravi-Karimooi, M., Tadrisi, S. D., Griffiths, P. et al. (2019). The effect of the eye movement desensitization and reprocessing intervention on anxiety and depression among patients undergoing hemodialysis: A randomized controlled trial. Perspectives in Psychiatric Care.

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ABSTRACT

PURPOSE:

This study examined the effect of the eye movement desensitization and reprocessing intervention on depression and anxiety in patients undergoing hemodialysis.

DESIGN AND METHODS:

In this randomized controlled trial, 90 patients were enrolled. The intervention group received six sessions of the eye movement desensitization and reprocessing intervention. Data

were collected before and 2 weeks after the intervention using the Hospital Anxiety and Depression Scale. Findings: Measured levels of anxiety and depression were significantly reduced in the intervention group compared with preintervention levels and to the control group.

Practice implications: Nurses can use the eye movement desensitization and reprocessing intervention in clinical practice in combination with psychotropic drugs for the reduction of depression and anxiety in patients undergoing hemodialysis.

Rousseau, P. F., El Khoury-Malhame, M., Reynaud, E., Zendjidjian, X., Samuelian, J. C., & Khalfa, S. (2019). Neurobiological correlates of EMDR therapy effect in PTSD. European Journal of Trauma & Dissociation, 3(2), 103-111.

http://dx.doi.org/10.1016/j.ejtd.2018.07.001

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ABSTRACT

OBJECTIVE:

Posttraumatic stress disorder (PTSD) is a trouble that arises in the aftermath of a traumatic event. The overwhelming resulting stressful memory can be desensitized by a brief therapy, Eye Movement Desensitization and Reprocessing (EMDR). The aim of the present study is to explore the functional brain correlate of such an

effective treatment (EMDR) in PTSD.

METHODS:

Sixteen PTSD patients underwent fMRI during negative emotional face recognition task, before and after EMDR treatment. Brain activity changes at test and retest (P < 0.005) were compared to those of 16 healthy controls matched for age, gender, and education.

RESULTS:

In PTSD patients, EMDR therapy elicited significant functional decreases in deep gray matter (including the amygdala, thalamus, and caudate nucleus) and cortical activities (including notably the precuneus, and the ventromedial and dorsolateral prefrontal cortex), as compared to healthy controls (P < 0.005). The right thalamic activity decrease was positively correlated with PTSD symptom reduction as assessed by PCL-S (r = 0.62, n = 16, P < 0.01).

CONCLUSION:

The healing process of traumatic memory desensitization by EMDR would act through a functional decrease in brain regions shown to be disrupted in PTSD. Given the role of these structures in memory, self-perception, fear extinction, REM sleep, reward, and attention, we discuss possible explanations of EMDR mechanisms of action in PTSD that may help further improve this therapy.

Rousseau, P. F., Malbos, E., Verger, A., Nicolas, F., Lançon, C., Khalfa, S. et al. (2019). Increase of precuneus metabolism correlates with reduction of PTSD symptoms after EMDR therapy in mili-

tary veterans: an 18F-FDG PET study during virtual reality exposure to war. European journal of nuclear medicine and molecular imaging, 1-5. https://dx.doi.org/10.1007/s00259-019-04360-1

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ABSTRACT

PURPOSE:

The prevalence of posttraumatic stress disorder (PTSD) is higher among veterans, and can lead to disastrous consequences such as suicide. Eye movement desensitization and reprocessing (EMDR) is recommended in first-line psychotherapies for PTSD. Virtual reality exposure (VRE) coupled with 18F-FDG PET imaging can highlight the activated brain regions during stress exposure. The objective of this study is to identify, after EMDR therapy, the regions of brain metabolism that evolve during the stress exposure of a war scene with symptomatic remission in a group of military veterans suffering from PTSD, and to secondarily search for predictive metabolic features.

METHODS:

We recruited 15 military veterans suffering from PTSD who performed an 18F-FDG PET sensitized by the exposure to a virtual war scene, before (T0) and after (T1) EMDR therapy. Statistical parametric mapping was used to compare brain metabolism before and after treatment and to

study correlations between metabolism and evolution scores on PTSD clinical scales (PTSD Checklist Scale, PCLS; Clinician-Administered PTSD Scale, CAPS).

RESULTS:

The metabolic activity of the precuneus was increased after EMDR therapy (p < 0.005 uncorrected, k>180) and correlated with clinical improvement with the CAPS scale (r=-0.73 and p<0.001). Moreover, the precuneus metabolic value before therapy predicted the clinical improvement on the PCLS scale (T1-T0) after EMDR (r=-0.667 and p<0.006).

CONCLUSION:

The clinical improvement in military patients with PTSD after EMDR is related to increased precuneus metabolism upon VR stress exposure.

Schwarz, J. E., Baber, D., Barter, A., & Dorfman, K. (2019). A Mixed Methods Evaluation of EMDR for Treating Female Survivors of Sexual and Domestic Violence. Counseling Outcome Research and Evaluation, 1-15. https://doi.org/10.1080/21501378.2018.1561146

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ABSTRACT

This study assessed the efficacy of eye movement desensitization and reprocessing (EMDR) for women who experienced trauma due to sexual or domestic violence. Twentv-one adult female clients at a nonprofit agency participated in this mixed-methods study during which they completed 8 sessions of EMDR, pre- and post-assessments, and an in-person interview (four counselors were also interviewed). Levels of depression, anxiety, posttraumatic stress, and overall wellness were assessed through the Beck Depression Inventory-II, Generalized Anxiety Disorder-7, PTSD Checklist (PLC-5) for DSM-5, and the Outcome Questionnaire-45.2. Paired sample t tests revealed statistically significant improvement for each measure. Qualitative analysis of individual interviews with clients and counselors further corroborated these results and indicated that engaging in EMDR accelerated and enhanced the therapeutic process and client progress, decreased depression, and increased confidence and hope in clients. These results support EMDR as an effective treatment modality for survivors of sexual and domestic violence and highlight the need for its inclusion in counselor education programs.

Slotema, C. W., van den Berg, D. P. G., Driessen, A., Wilhelmus, B., & Franken, I. H. A. (2019). Feasibility of EMDR for posttraumatic stress disorder in patients with personality disorders: a pilot study. Eur J Psychotraumatol, 10(1), 1614822.

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ABSTRACT

RESULTS:

Trauma and posttraumatic stress disorder (PTSD) are prevalent in patients with personality disorders. Despite the established efficacy of eye movement desensitisation and reprocessing (EMDR) for PTSD, EMDR has barely been examined in patients with comorbid PTSD and personality disorders.

OBJECTIVE:

The aim of this study was to explore what changes occur in symptom severity of PTSD, dissociative symptoms, insomnia, non-suicidal self-injurious behaviour and auditory verbal hallucinations in patients with personality disorders during treatment with EMDR. Method: This uncontrolled open feasibility study on EMDR for PTSD was an addition to treatment-asusual for personality disorders. The outcome measures were the severity of PTSD symptoms, dissociation, insomnia, non-suicidal self-injury, and auditory verbal hallucinations.

RESULTS:

Forty-seven participants (22 with a borderline personality disorder, 25 with other personality disorders) were included. A significant reduction in the severity of symptoms of PTSD, dissociation and insomnia was observed after EMDR treatment (median of four sessions), and 40% of the participants scored below the threshold for PTSD diagnosis. No differences in efficacy were found between patients with borderline personality disorder and other personality disorders. EMDR

treatment was completed by 68% of the participants.

CONCLUSIONS:

The addition of EMDR techniques to treatment, as usual, may be beneficial in the treatment of PTSD in patients with personality disorders in order to reduce symptoms of PTSD, dissociation and insomnia. Although one-third of these patients did not complete the additional EMDR treatment, no severe complications (e.g. suicidal behaviour or hospitalisation) occurred. Controlled studies are needed to further investigate the validity of these findings.

Taylor, A., & McLachlan, N. H. (2019). Treating a 16 Year Old with a History of Severe Bullying: Supplementing Cognitive Behavioural Therapy with EMDR within the Context of a Case Formulation Approach. Journal of Child & Adolescent Trauma. 1-10.

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ABSTRACT

This article describes the use of a case formulation approach, integrating evidence-based treatment in the context of individual clinical traits. It focuses on the supplementation of cognitive behavioural therapy (CBT) with eye movement desensitization and reprocessing (EMDR) in the treatment of a young person, presenting with an initial diagnosis of obsessive-compulsive disorder (OCD). A case

formulation suggested the possibility of a differential diagnosis of Adjustment Disorder, indicating the usefulness of the addition of EMDR sessions to process memories of severe bullying. Previous studies promote the idea of using EMDR in cases that do not meet the threshold for Post-Traumatic Stress Disorder (PTSD), in order to reduce the presentation of anxiety. Earlier research suggests that each of these models has specific strengths and attributes in the treatment of mental health difficulties and, whilst based within the context of a wellestablished case conceptualisation, can be effectively integrated.

van Veen, S. C., Kang, S., & van Schie, K. (2019). On EMDR: Measuring the working memory taxation of various types of eye (Non-) Movement conditions. Journal of Behavior Therapy and Experimental Psychiatry, 101494. https://doi.org/10.1016/j.jbtep.2019.101494

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ABSTRACT

BACKGROUND & OBJECTIVE:

A recent large randomized controlled trial employing different forms of eye (non-)movements in Eye Movement Desensitization and Reprocessing (EMDR) showed that fixating eyes on a therapist's moving or non-moving hand led to equal reductions in symptoms of post-traumatic stress disorder (PTSD). However, numerous EMDR lab analogue studies found

that eye movements produce larger memory effects than eyes stationary. These beneficial effects are typically explained by differences in working memory (WM) taxation. We tested the degree of WM taxation of several eye (non-) movement conditions used in the clinical trial.

METHODS:

All participants (N = 40) performed: (1) eyes moving by following the experimenter's moving finger, (2) eyes fixed on the experimenter's stationary finger, (3) eyes closed, or (4) looking unfocused into the room. Simultaneously they performed a simple reaction time task. Reaction times are an objective index of the extent to which different dual attention tasks tax WM.

RESULTS:

Eyes moving is more taxing than eyes fixed, while eyes fixed did not differ from eyes unfocused. All conditions were more taxing than eyes closed.

LIMITATIONS

We studied WM taxation in a laboratory setting; no clinical interventions were applied.

CONCLUSIONS

In line with previous lab studies, making eye movements was more taxing than eyes fixed. We discuss why this effect was not observed for reductions in PTSD symptoms in the clinical trial (e.g., differences in dependent variables, sample population, and intervention duration). For more comprehensive future insights, we recommend integration of mechanistically focused lab analogue studies and patient-oriented clinical studies. **AL**