ARTICLE

Eye movement desensitisation and reprocessing: part 3 – applications in physical health conditions

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SUMMARY

Eye movement desensitisation and reprocessing (EMDR) is a psychological therapy that addresses trauma, stress and emotional distress. It has been successfully used in the management of various psychiatric disorders. This article shows that it may also be safely used to manage the psychological distress arising from a variety of physical health conditions and in so doing, reduce the illness burden from conditions such as various cancers, traumatic childbirth, tokophobia, pre-eclampsia, myocardial infarction, haemodialysis in end-stage renal disease, and acute postoperative pain. It can be a stand-alone treatment for hyperemesis gravidarum and tinnitus. The article examines the rationale and evidence for its use in these conditions and suggests areas where more research is needed. Adding EMDR therapy to the range of available interventions in general hospitals has the potential to improve the health and well-being of patients in these settings.

KEYWORDS

Eye movement desensitisation and reprocessing; physical health; general hospital; psychological intervention; post-traumatic stress disorder.

LEARNING OBJECTIVES

After reading this article you will be able to:

- identify a variety of physical health conditions in which EMDR has been used to improve health
- understand the rationale for the application of EMDR in physical health treatments
- understand the current evidence in the above areas.

Eye movement desensitisation and reprocessing (EMDR) is a psychotherapeutic approach that has been shown to be effective in the management of post-traumatic stress disorder (PTSD) and associated conditions. The uses of EMDR in mental illness were reviewed in our two earlier articles. Part 1 focused on what EMDR is and appraised the evidence supporting its use in PTSD (Udo 2022). Part 2 reviewed the applications of EMDR in the management of other stress-based and trauma-related conditions Javinsky 2022). In this third part, which is designed to stand alone if necessary, the focus is on how EMDR may be applied in the management of physical health conditions. This focus is important because, for far too long, the dualism of the body and mind has been the hallmark of healthcare and its delivery.

This dualism, which is artificial and not supported by science, does disservice to patients. By factoring the role of the mind in the aetiology and management of physical health conditions, health outcomes may be improved and quality of life optimised. For example, emerging evidence has associated the presence of PTSD with insulin resistance and subsequent development of type 2 diabetes (Goodwin 2005; Kinzie 2008; Boyko 2010, 2013; Lukaschek 2013; Miller-Archie 2014; Vaccarino 2014; Roberts 2015). Some authors propose that PTSD could be a marker of endocrine and metabolic dysregulation, which may lead to type 2 diabetes (Vaccarino 2014).

EMDR is increasingly being used in the management of a variety of medical conditions. This is largely by way of treating or managing the psychological sequelae of the physical health condition in order to improve overall health. However, the evidence presented in this article suggests that EMDR can be a stand-alone treatment for conditions such as tinnitus and hyperemesis gravidarum. This article presents a review of the applications of EMDR in the specialties of oncology, obstetrics, cardiology, renal medicine and otolaryngology, among others. Somatoform disorders including medically unexplained symptoms and chronic pain were discussed in part 2 of this series (Javinsky 2022), so they are not included in this article.

Oncology

The International Psycho-Oncology Society (2010) advocates that psychological distress should be recognised as the sixth vital sign – the others being respiratory rate, pain, pulse rate, temperature and

blood pressure. Carletto & Pagani (2016) state that the brain regions involved in PTSD in patients with cancer appear to be the same as in those with other psychological trauma. Hence, it was reasonable to infer that therapies used in other traumas would also be effective in treating cancer-related psychological distress. Their literature review showed that impairment of the limbic system associated with PTSD and depression in people with cancer responds well to EMDR therapy.

Each phase of cancer and its treatment may be accompanied by distress, so specific steps need to be implemented to enhance the patient's ability to cope (Faretta 2016a). Target memories for each phase are often dependent on the stage of cancer and the physical treatments. Possible targets include the cancer screening and diagnostic process, treatment and related aspects of clinical management, remissions and relapses, as well as the prognosis – including the possibility of recrudescence and death (Faretta 2016a).

Depression, anxiety and PTSD

The most common mental disorders among people with cancer are depression and anxiety, with some individuals meeting criteria for PTSD (Pomeri 2021). Vin-Raviv et al's (2013) study put the prevalence of PTSD among people with breast cancer in the USA at about 23% at the point of diagnosis. This figure tended to reduce along the treatment pathway, with up to 12% having persistent PTSD symptoms.

Pomeri et al's systematic review (2021) investigated the efficacy of EMDR in addressing psychological distress in people with cancer. Their review involved 140 individuals with cancer diagnoses across 7 studies. Three of these studies focused specifically on PTSD and the others considered anxiety and depressive disorders. The types of cancer included breast, head and neck, and gastrointestinal cancers.

Within these seven studies, Capezzani et al (2013) used a randomised controlled trial (RCT) to compare EMDR and cognitive–behavioural therapy (CBT) in 32 individuals with mixed cancer diagnoses and PTSD. They found EMDR to be superior to CBT in reducing symptoms of PTSD. Faretta et al (2016b) used a controlled study to compare EMDR and CBT efficacy among 57 individuals with mixed cancer diagnoses experiencing anxiety and depressive disorders. They found that EMDR was superior to CBT in reducing symptoms of psychological distress.

Other included studies were Carletto et al's study (2019) of 30 individuals with breast cancer and PTSD, which found that 10 sessions of EMDR given over 3–4 months reduced symptoms of PTSD, removed PTSD diagnosis and reduced depressive symptoms. Borji et al (2019) used a randomised controlled methodology to study 60 people with gastrointestinal cancer and unspecified psychological distress. They found reduced perceived stress following two sessions of EMDR in the patient's home, delivered by domiciliary nurses. Of note, this study illustrates 'task shifting', defined by the World Health Organization (2008) as the redistribution of tasks from highly qualified healthcare workers to those with fewer qualifications in order to make health services more accessible.

In summary, Pomeri et al's (2021) systematic review concluded that relatively few studies have investigated the use of EMDR in cancer care. It highlighted the potentially useful role of EMDR in reducing psychological distress among people with cancer, especially by reducing PTSD and mood symptoms. EMDR was shown to be superior to CBT in two studies. However, EMDR was administered in various courses within these studies.

EMDR-IGTP

A natural disaster in Mexico in 1997 caused large-scale psychological trauma and so an association of Mexican psychotherapists delivered EMDR to groups of children to meet the demand for therapy (Jarero 2009). This modification of EMDR to accommodate large groups gave rise to the EMDR integrative group treatment protocol (EMDR-IGTP) for early intervention (Passoni 2018). EMDR-IGTP has been successfully applied in other contexts, including with groups of people with cancer suffering psychological trauma. EMDR group therapy in psycho-oncology requires patients to work independently of each other and not disclose their trauma experience to the group (Roberts 2018). Unlike many traditional groups, the EMDR groups do not require patients to have homogeneous challenges, thereby allowing some flexibility (Roberts 2018). EMDR, through its 'blind to therapist' (or 'blind 2 therapist') protocol, accommodates circumstances where the patient is unable or reluctant to disclose details of their trauma. This may be due to shame, fear of reprisal or overwhelming guilt. Farrell et al (2020) demonstrated the effectiveness of EMDR in these situations. This is a major advantage provided by EMDR.

R-TEP and G-TEP

Shapiro et al (2008) developed the recent traumatic episode protocol (R-TEP) by extending early EMDR group protocols into a concise yet complex treatment protocol. This protocol was created for recent episodes of trauma with sequelae, making it

highly relevant to cohorts of oncology patients. In 2013, Shapiro presented her EMDR group traumatic episode protocol (G-TEP), which was borne out of R-TEP (Shapiro 2013). In this protocol, each patient receives a worksheet that includes the traumatic experience that requires processing, a list of coping resources, positive memories and ideal outcome. This development of a group protocol for EMDR is significant as group interventions are less resource-intensive, less expensive and more accessible. Of note, Maxfield (2021) advocates for reconceptualising EMDR group therapy as a low-intensity, guided self-help intervention, as participants work independently and there is little interaction between them and between participants and therapist. Roberts (2018) conducted a case study to see whether the G-TEP protocol was safe and effective for people with cancer. The cohort of patients was heterogeneous with respect to the stage and type of cancer, with recent or recurrent malignancy and regardless of their stage of treatment. The conclusion was that an extended course of EMDR G-TEP was beneficial and safe for people with cancer in psychological distress.

Couples therapy

A diagnosis of cancer can be a major challenge for couples. Cancer in one partner can create a crisis for the other and may have a negative impact on their relationship (Moore 2016). Moore also found that there were very few studies of EMDR therapy in couples experiencing cancer and EMDR therapy can be beneficial to both individuals in addressing the current cancer episode.

Summary

In summary, the brain regions activated in oncology patients with PTSD seem to be the same as those in other psychologically traumatised patients, leading to the application of EMDR for mental trauma associated with cancer. EMDR may be beneficial in both people with cancer and their partners. It reduces not only PTSD symptoms but also mood symptoms and psychological distress. It offers interventions for feared future states or events, including death. Further investigation is required to improve the evidence supporting its efficacy.

Obstetrics and gynaecology

Childbirth trauma

Much of the research into EMDR's use in obstetrics and gynaecology has focused on women who have experienced traumatic childbirths. de Bruijn et al (2020) conducted a systematic review into treatment options for PTSD following childbirth. Their search uncovered two EMDR studies. Stramrood et al's study (2012) was a case series presenting the management of three pregnant women who had experienced trauma in previous deliveries: prolonged labour ending in an emergency Caesarean section, second-degree vaginal rupture and severe pre-eclampsia postpartum. All three met criteria for PTSD. Post-traumatic stress symptoms were reduced in all cases following two to four EMDR treatment sessions. Sandstrom et al (2008) presented a case series of the management of four women who experienced PTSD following childbirth. All four ceased to meet criteria for PTSD after therapy. At follow-up (1–3 years after the study), three of the participants continued to not meet criteria for disorder. For the person who did, the severity of symptoms was the same as before treatment. They concluded that EMDR might be a useful tool in the treatment of non-pregnant women severely traumatised by childbirth.

Since that review was published, Baas et al (2020) presented a case of a multipara woman who had experienced perinatal traumas in previous childbirth. Her high scores for PTSD and fear of childbirth were significantly reduced following three sessions of EMDR therapy. This improvement persisted at the 1-year follow-up.

Chiorino et al (2020) conducted a pilot RCT comparing the effectiveness of a single session of EMDR with treatment as usual (supportive therapy) for women who had recently experienced traumatic childbirth and were presenting with post-traumatic stress symptoms. EMDR was more effective in reducing the proportion of women with post-traumatic stress symptoms at 6 weeks postpartum. Reduction in symptoms continued at 12 weeks postpartum but there was no significance difference between the groups. Women treated with EMDR experienced fewer flashbacks and less distress. No significant difference was found between treatments on mother–infant bonding and postpartum depressive symptoms. The study was limited by the absence of a power calculation, the small number of participants (40) and the relatively short intervention period. The participants did not include women who had experienced stillbirth or had a child in paediatric intensive care. However, this study does demonstrate the potential usefulness of EMDR in early intervention for childbirth trauma and in brief form.

Treatment safety

Traditionally, trauma therapies are to be used with caution in pregnancy. Baas et al (2020) examined existing evidence, via systematic review, to determine the safety of treatments for PTSD in pregnant women. They concluded that treatment of PTSD in pregnancy, including the use of EMDR, is probably

safe but, owing to the poor methodological quality of most studies, it was impossible to draw inferences on the effects of any particular treatment on PTSD during pregnancy.

National Institute for Health and Care Excellence (NICE) guidelines on antenatal and postnatal mental health recommend that EMDR (or trauma-focused CBT) should be offered to women who develop PTSD from a traumatic birth, miscarriage, stillbirth or neonatal death (National Collaborating Centre for Mental Health 2014). It does not support the provision of single-session high-intensity psychological interventions with an explicit focus on 're-living' trauma for women who have experienced traumatic childbirth.

Tokophobia

Baas et al (2022) sought to determine the safety and effectiveness of EMDR therapy for pregnant women with tokophobia (fear of childbirth) using a single-blind RCT (OptiMUM study). A sample of 141 pregnant women with tokophobia and a gestational age between 8 and 20 weeks were randomly assigned to EMDR ($n = 70$) or care as usual (CAU). CAU comprised standard antenatal care with routine obstetric checks where EMDR therapy or other interventions to reduce tokophobia were not routinely offered. It was expected that, if necessary, patients would be referred for any adjunctive treatments as usual. Safety was measured by worsening of tokophobia symptoms, drop-out, serious adverse events or increased suicide risk. No differences were found between groups regarding safety. Both groups showed large reductions of tokophobia symptoms but this was not statistically significantly different. Post-treatment, which was at 32–34 weeks' gestational age, 72% of the EMDR group and 60% of the CAU group no longer met the criteria for tokophobia. The authors concluded that even though EMDR was a safe and effective treatment for tokophobia, their study did not justify EMDR provision as additional treatment in their setting. This was a high-income country (The Netherlands) where participants had access to public health services, some had received prior EMDR treatment and some arranged treatment for themselves post-study.

Zolghadr et al (2019) conducted an RCT to study the effect of EMDR therapy on tokophobia among multiparous women in their next normal pregnancy following a previous stillbirth. In total, 30 women were randomised to treatment as usual ($n = 15$) or EMDR ($n = 15$). EMDR treatment involved a 90 min session in a quiet part of the labour ward when the women were admitted to hospital for delivery. The control group received usual midwifery care. Comparatively, they found a statistically significant reduction in the mean total anxiety scores in the EMDR group. The authors concluded that one session of EMDR therapy reduced tokophobia in pregnant women during normal pregnancy following previous stillbirth.

Hyperemesis gravidarum

Kavakci & Yenicesu (2014) presented the use of EMDR for the management of hyperemesis gravidarum. This condition has been associated, in some instances, with clinical depression and anxiety disorders (Mitchell-Jones 2017). The rationale for using EMDR is that it can have desensitisation effects on the triggers for nausea and vomiting. To illustrate this, they presented a case series of five gynaecology in-patients with hyperemesis gravidarum who had electrolyte imbalances from excessive vomiting. Tapping was the employed method of bilateral stimulation. Only one patient had a standard diagnosis of PTSD. Although four of the five women rapidly responded to EMDR therapy following one or two sessions, one had recurrent symptoms and was later found to have gall bladder disease. The authors conclude that EMDR may be an effective treatment option for symptoms of hyperemesis gravidarum, providing rapid relief that facilitates hospital discharge.

Pre-eclampsia/hypertension

Pre-eclampsia and other hypertensive disorders of pregnancy have been associated with cognitive impairment, psychological complaints and disorders such as anxiety, depression and PTSD (Srajer 2022). Poel et al (2009) carried out a service evaluation of postpartum women who had experienced pre-eclampsia, eclampsia and/or haemolysis, elevated liver enzymes and low platelet count (HELLP syndrome) and were referred to the medical psychology service in a tertiary obstetrics centre. Out of 24 women, 5 were found to have PTSD. EMDR was provided to 7 of the 24. Other interventions provided included psychoeducation (18 individuals), supportive therapy (10 individuals) and assertiveness training (8 individuals). No details were provided of the particular cases or their outcomes. The most common indication for EMDR was PTSD and related complaints. EMDR may be potentially applicable in these circumstances.

Summary

Existing evidence and NICE guidelines support the use of EMDR for postpartum PTSD. Its effectiveness in tokophobia is likely, but yet to be established. It is likely to be a useful intervention in hyperemesis gravidarum and following

pre-eclampsia. It is easily delivered in a maternity ward and likely to be safe during pregnancy, although each case has to be assessed on its own merits.

Cardiology

Studies have shown that not only are anxiety and depression independent risk factors for the development of heart disease but that people with heart disease who have anxiety and depression have poorer outcomes than those who do not (Roest 2010; Meijer 2011; Gan 2014; Celano 2015). Therefore, treatment of anxiety and depression in this population offers an opportunity to improve quality of life and mortality rates. Multiple studies have examined whether EMDR in people with heart disease may be beneficial.

Anxiety and depression in myocardial infarction

A pilot study by Arabia et al (2011) explored EMDR in survivors of life-threatening cardiac events who had developed PTSD, depression and anxiety. Their study randomised 42 patients to 4 weeks of either EMDR or imaginal exposure. The EMDR group had reduced PTSD, anxiety and depressive symptoms and performed better than the imaginary exposure group on all variables at 6-month follow-up. The authors concluded that EMDR is an effective treatment for psychiatric symptoms that occur following life-threatening cardiac events.

Studying anxiety in people with myocardial infarction, Moradi et al (2016) randomised 60 patients either to receive two 45–90 min sessions of EMDR or to a control group who received no treatment. Their results showed a significant reduction in scores on the Beck Anxiety Inventory post-treatment and at 12-month follow-up in the EMDR group compared with the control group, suggesting that EMDR was effective in treating anxiety in people with myocardial infarction.

Behnammoghadam et al (2015) investigated the effects of EMDR on depression in people with myocardial infarction by randomising 60 patients either to receive three 45–90 min sessions of EMDR or to a control group with no intervention. The EMDR group experienced a significant decrease in scores on the Beck Depression Inventory, whereas those in the control group experienced a statistically significant increase in scores. The authors concluded that EMDR is an effective and efficient method for treating depression in people with myocardial infarction.

Two studies compared EMDR with CBT in treating anxiety and depression in people with myocardial infarction. Both Zeighami et al (2018) and Karimi et al (2020) described a study that randomised 90 patients to receive either 8 sessions of EMDR, 10 sessions of CBT or a control group condition of a prescription for 10 mg of oxazepam at night. Zeighami et al (2018) presented the results of the Beck Anxiety Inventory and Karimi *et* al (2020) presented the results of the Beck Depression Inventory. Questionnaires were administered before and after completion of the interventions. Both studies found that, although both intervention groups experienced a significant reduction in anxiety and depression scores, those who underwent EMDR showed significantly greater reductions compared with those who received CBT. The authors concluded that EMDR is more effective than CBT in reducing anxiety and depression in people with myocardial infarction.

Quality of life

Salehian et al (2016) assessed the impact of EMDR on quality of life in people with myocardial infarction. They randomly allocated 60 participants who had experienced a myocardial infarction to receive either five 90 min sessions of EMDR or routine care only. Participants completed the MacNew Heart Disease Health-Related Quality of Life Questionnaire before and after intervention. Those who received EMDR experienced significant improvements in the physical, psychological, social and total quality of life domains of the questionnaire compared with controls.

Summary

High-level studies show that EMDR is not only effective in treating anxiety, depression and PTSD symptoms in people who have experienced a myocardial infarction but also that it can improve quality of life in these circumstances.

Nephrology

Anxiety and depression in end-stage renal disease

Rahimi et al (2019) investigated the effectiveness of EMDR in treating anxiety and depression in people undergoing haemodialysis for end-stage renal disease for at least 6 months, three times a week. Using a randomised control methodology, which was sufficiently powered, 90 participants were assigned to either EMDR or a control group. The EMDR group received six sessions of EMDR over a 2-week period. Those who received EMDR showed a significant reduction in anxiety and depression scores 2 weeks following intervention, assessed with the Hospital Anxiety and Depression Scale. This study is important because it showed that with an intervention of just 2 weeks' duration, significant reduction in anxiety and depression could be achieved in patients with end-stage renal

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disease, compared with the longer treatment durations typical of other psychological therapies, such as CBT. This offers an alternative treatment modality for people whose renal function limits possible pharmacological interventions.

Rahimi et al (2016) carried out another RCT involving patients receiving haemodialysis in which 90 individuals were randomised to either a treatment as usual group, which received routine care, or an experimental group that received treatment as usual and EMDR. The level of anxiety in the intervention group was much reduced following EMDR. The mean score on the Hemodialysis Stressor Scale showed a significant difference in the EMDR group, although differences in reduction of stress were not significant between both groups.

Summary

Limited studies suggest that EMDR may be a helpful intervention for people with end-stage renal disease undergoing haemodialysis who are experiencing anxiety, depression and stress-related distress.

Otolaryngology

Tinnitus

Several studies have investigated the utility of EMDR in the treatment of tinnitus, a relatively common and distressing condition whose aetiology is poorly understood. As tinnitus can be considered a form of phantom auditory perception, and EMDR has been shown to be efficacious in phantom limb pain, researchers hypothesised that EMDR may be similarly effective in treating tinnitus (de Roos 2010). It is thought that EMDR reduces the intensity of and distress associated with tinnitus through desensitisation and reprocessing of tinnitus-associated memories.

Luyten et al (2020a) conducted a systematic review of the use of EMDR in tinnitus. Their comprehensive search found two experimental studies involving a total of 49 patients. The first study (Rikkert 2018) saw 35 participants with high levels of chronic tinnitus distress undergo six 90 min EMDR sessions. Scores on measures of tinnitus distress were significantly reduced following completion of EMDR therapy, with these results maintained at the 3-month follow-up. The second study (Phillips 2019) had 14 participants undergo 10 sessions of an EMDR protocol developed specifically for tinnitus (tEMDR). Scores on the Tinnitus Handicap Inventory (THI) and Beck Depression Inventory improved significantly following EMDR, improvements that were maintained 6 months later. The authors of the systematic review concluded that although research is still in an early stage, both studies support EMDR as an effective treatment for tinnitus (Luyten 2020a).

Since the above review was published, two further studies have examined EMDR's use in tinnitus. Luyten et al (2020b) compared a bimodal therapy for tinnitus, consisting of tinnitus retraining therapy (TRT) combined with EMDR, with the prevailing bimodal therapy, which combines TRT with CBT. They randomised 89 participants to receive either TRT and EMDR or TRT and CBT, with evaluations at baseline, at the end of treatment and 3 months later. Scores on the Tinnitus Functional Index and on all secondary measures improved significantly in both groups, with no significant differences between the two. Treatment outcomes remained stable at 3 months in both groups. The authors concluded that both therapies are effective in the treatment of tinnitus. Next, D'Andréa et al (2022) completed an observational study where 38 participants who had failed classic treatment completed five 60 min sessions of EMDR. Results revealed a significant reduction in THI scores and in tinnitus-related discomfort scores on the Visual Analogue Scale after treatment, leading the authors to conclude that EMDR is an effective alternative after failure of first-line treatments.

Summary

Multiple studies support the use of EMDR in treating the intensity and distress of tinnitus, including where patients have failed first-line treatments. More studies are needed to further substantiate this indication.

Acute pain

Postoperative pain

Most research on the use of EMDR in pain focuses on chronic pain conditions, which are discussed in part 2 of this series (Javinsky 2022). Only one study has investigated EMDR's use in acute pain, the theory behind which lies in the idea that physical pain seems to have substantial psychological and emotional components (Keefe 2004). Maroufi et al (2016)'s RCT explored the efficacy of EMDR in treating postoperative pain in adolescents undergoing emergency abdominal surgery. They randomly assigned 56 adolescents to receive either a single 60 min session of EMDR or a 60 min control group activity 2 h post-surgery. In the control group, participants were asked emotionally neutral, open-ended interview questions to mimic a similar level of interaction with health professionals. Target cognitions in the EMDR group included negative beliefs (e.g. 'I am in danger' or 'It will be painful') and negative images (e.g. a visual representation of the surgical procedure) associated with

surgery. The EMDR group experienced a significant reduction in pain intensity, whereas the control group did not. The authors suggested that EMDR should be considered as a supplementary treatment for postoperative pain, particularly in patients who cannot tolerate pain medications or who experience significant pain despite being on medication. Although the results of this study are promising, more research is needed to further investigate EMDR's use in acute pain.

Discussion

Our review shows that EMDR is a credible treatment for people with comorbid physical and mental disorders. Its most common application in this area is in the treatment of psychological symptoms (trauma, stress, anxiety and depressive symptoms) associated with physical health conditions. The specialties with evidence for this are oncology, obstetrics and gynaecology, cardiology, nephrology, otolaryngology and acute pain. EMDR has shown potential as a stand-alone treatment for hyperemesis gravidarum and tinnitus. In the studies covered in this review, EMDR was administered in general hospital and home settings and was considered safe. Although usually administered one-on-one, protocols have also been developed for group settings. Not only has EMDR been shown to be effective, but some studies have even demonstrated potential superiority to CBT. Furthermore, EMDR may aid partners, caregivers and families in addition to patients themselves (Maxfield 2021). In line with the World Health Organization's recommendations to adopt task shifting to improve access to health services (WHO 2008), EMDR has the potential to be delivered by non-specialists and in low-intensity or self-help modalities, providing a valuable opportunity to build trauma resolution capacity around the world (Blenkinsop 2018).

Although there is emerging evidence supporting EMDR's use in these conditions, this has yet to be reflected in many guidelines. NICE guidelines on depression in adults with a chronic physical health problem establishes the use of CBT in management of comorbid depression (National Institute for Health and Care Excellence 2009). Our review shows that this guideline might now be limited in content and in need of updating to reflect the evidence supporting EMDR therapy in these situations.

Modifications of EMDR in cancer treatment

Some stressors are unique to oncology and modifications can be made to the standard EMDR therapy protocol to support clinical management through different stages of cancer treatment. The traumatic memories to be targeted are determined during the assessment phase of the therapy. These distressing memories usually depend on the stage of cancer and its treatment. Hence, EMDR can be a flexible intervention in cancer care. The types of cancer are many and varied and patients will be at different treatment stages. Carletto & Pagani (2016) cautioned that since breast cancer in women was the most prevalent of all malignancies, most of the studies done in oncology were restricted to this cohort. The duration of EMDR sessions as well as the number of sessions varied across studies. This variation in numbers, quality and heterogeneity of available studies limits the quality of guidance that may be issued for EMDR use in oncology.

Results from the studies discussed here could encourage further studies of EMDR's use in several medical specialties. This may be particularly beneficial in areas that have few available evidence-based treatments. For example, expert consensus opinion on the treatment of tokophobia acknowledges the complexity of this condition and the limited range of available interventions (Jomeen 2021). This is a potential area where further studies could be carried out to expand the evidence base. Other notable areas in obstetrics where evidence for EMDR is limited include the management of miscarriage and stillbirth.

Implications

The implication of our findings is that where mental health professionals and treatments are not provided in general hospitals, optimum health is compromised. Liaison mental health services need to provide a range of treatments and therapies to meet the complex needs of patients in those settings. Our study highlights EMDR therapy as a potential useful intervention. We hope that this article encourages mental health professionals to train to deliver EMDR therapy and to educate hospital colleagues about the potentials for treatments with this therapy so that timely referrals can be made. We also hope that healthcare professionals can continue to research the use of EMDR in the treatment of comorbid mental and physical illnesses.

Conclusions

EMDR therapy is a potentially useful treatment modality that can reduce psychological distress associated with a variety of physical health conditions, improving overall health and quality of life. Not only does it reduce post-traumatic stress symptoms associated with physical illness but it can also treat associated mood and anxiety symptoms. It is a potential stand-alone treatment for a few conditions such as hyperemesis gravidarum and tinnitus.

Supplementary material

Supplementary material is available online at https://doi.org/10.1192/bja.2023.32.

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References

Arabia E, Manca ML, Solomon RM (2011) EMDR for survivors of life-threatening cardiac events: results of a pilot study. *Journal of EMDR Practice and Research*, **5**: 2–13.

Baas MAM, van Pampus MG, Braam L, et al (2020) The effects of PTSD treatment during pregnancy: systematic review and case study. *European Journal of Psychotraumatology*, **11**(1): 1762310.

Baas MAM, van Pampus MG, Stramrood CAI, et al (2022) Treatment of pregnant women with fear of childbirth using EMDR therapy: results of a multi-center randomized controlled trial. *Frontiers in Psychiatry*, **12**: 798249.

Behnammoghadam M, Alamdari AK, Behnammoghadam A, et al (2015) Effect of eye movement desensitization and reprocessing (EMDR) on depression in patients with myocardial infarction (MI). *Global Journal of Health Science*, **7**: 258–62.

Blenkinsop C, Carriere R, Farrell D, et al (2018) *White Paper – Eye Movement Desensitization and Reprocessing Early Intervention (EMDR EI).* EMDR Early Intervention and Crisis Response Summit Organizing Committee.

Borji M, Tarjoman A, Abdi A, et al (2019) Efficacy of implementing home care using eye movement desensitization and reprocessing in reducing stress of patients with gastrointestinal cancer. *Asian Pacific Journal of Cancer Prevention*, **20**: 1967–71.

Boyko E, Jacobson I, Smith B, et al (2010) Risk of diabetes in U.S. military service members in relation to combat deployment and mental health. *Diabetes care*, **33**: 1771–7.

Boyko E, Seelig A, Jacobson I, et al (2013) Sleep characteristics, mental health, and diabetes risk: a prospective study of U.S. military service members in the millennium cohort study. *Diabetes care*, **36**: 3154–61.

Capezzani L, Ostacoli L, Cavallo M, et al (2013) EMDR and CBT for cancer patients: comparative study of effects on PTSD, anxiety, and depression. *Journal of EMDR Practice and Research*, **7**: 134–43.

Carletto C, Pagani M (2016) Neurobiological impact of EMDR in cancer. *Journal of EMDR Practice and Research*, **10**: 153–61.

Carletto S, Porcaro C, Settanta C, 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.

Celano CM, Millstein RA, Bedoya CA, et al (2015) Association between anxiety and mortality in patients with coronary artery disease: a meta-analysis. *American Heart Journal*, **170**: 1105–15.

Chiorino V, Cattaneo MC, Macchi EA, et al (2020) The EMDR recent birth trauma protocol: a pilot randomised clinical trial after traumatic childbirth. *Psychology & Health*, **35**: 795–810.

D'Andréa G, Giacchero R, Roger C, et al (2022) Evaluation of eye movement desensitization and reprocessing in the management of tinnitus: an observational study. *European Annals of Otorhinolaryngology Head and Neck Diseases*, **139**: 65–71.

de Bruijn L, Stramrood CA, Lambregtse-van den Berg MP, et al (2020) Treatment of posttraumatic stress disorder following childbirth. *Journal of Psychosomatic Obstetrics and Gynaecology*, **41**: 5–14.

de Roos C, Veenstra A, de Jongh A, et al (2010) Treatment of chronic phantom limb pain using a trauma-focused psychological approach. *Pain Research and Management*, **15**: 65–71.

Faretta E, Borsato T (2016a) EMDR therapy protocol for oncological patients. *Journal of EMDR Practice and Research*, **10**: 162–75.

Faretta E, Borsato T, Civilotti C, et al (2016b) EMDR and CBT: a comparative clinical study with oncological patients. *Journal of EMDR Practice and Research*, **10**: 215–28.

Farrell D, Kiernan MD, de Jongh A, et al (2020) Treating implicit trauma: a quasi-experimental study comparing the EMDR therapy standard protocol with a 'Blind 2 Therapist' version within a trauma capacity building project in Northern Iraq. *International Journal of Humanitarian Action*, **5**(3): 1–13.

Gan Y, Gong Y, Tong X, et al (2014) Depression and the risk of coronary heart disease: a meta-analysis of prospective cohort studies. *BMC psychiatry*, **14**(1): 371.

Goodwin R, Davidson J (2005) Self-reported diabetes and posttraumatic stress disorder among adults in the community. *Preventive Medicine*, **40**: 570–4.

Jarero I, Artigas L (2009) EMDR integrative group treatment protocol. *Journal of EMDR Practice and Research*, **3**: 287–8.

Javinsky TR, Udo I, Awani T (2022) Eye movement desensitisation and reprocessing: part 2 – wider use in stress and trauma conditions. *BJPsych Advances*, this issue [Epub ahead of print: 27 Jun 2022. Available from: https://doi.org/10.1192/bja.2022.31].

Jomeen J, Martin C, Jones C, et al (2021) Tokophobia and fear of birth: a workshop consensus statement on current issues and recommendations for future research. *Journal of Reproductive and Infant Psychology*, **39**: 2–15.

Karimi Z, Behnammoghadam M, Moazamfard M, et al (2020) Comparison of efficacy of eye movement desensitization and reprocessing and cognitive behavioral therapy on depression in patients with myocardial infarction. *Journal of Clinical Care and Skills*, **1**: 11–5.

Kavakci O, Yenicesu GI (2014) Eye movement desensitization and reprocessing (EMDR) for hyperemesis gravidarum: a case series. *Journal of Psychiatry and Neurological Sciences*, **27**: 335–41.

Kinzie J, Riley C, McFarland B, et al (2008) High prevalence rates of diabetes and hypertension among refugee psychiatric patients. *Journal of Nervous and Mental Disease*, **196**: 108–12.

Lukaschek K, Baumert J, Kruse J, et al (2013) Relationship between posttraumatic stress disorder and type 2 diabetes in a population-based cross-sectional study with 2970 participants. *Journal of Psychosomatic Research*, **74**: 340–5.

Luyten T, van Rompaey V, van de Heyning P, et al (2020a) EMDR in the treatment of chronic subjective tinnitus: a systematic review. *Journal of EMDR Practice and Research*, **14**: 135–49.

MCQ answers
1 e 2 d 3 d 4 b 5 b

Luyten TR, Jacquemin L, Van Looveren N, et al (2020b) Bimodal therapy for chronic subjective tinnitus: a randomized controlled trial of EMDR and TRT Versus CBT and TRT. *Frontiers in Psychology*, **11**: 2048.

Maroufi M, Zamani S, Izadikhah Z, et al (2016) Investigating the effect of eye movement desensitization and reprocessing (EMDR) on postoperative pain intensity in adolescents undergoing surgery: a randomized controlled trial. *Journal of Advanced Nursing*, **72**: 2207–17.

Maxfield L (2021) Low-intensity interventions and EMDR therapy. *Journal of EMDR Practice and Research*, **15**: 86–98.

Meijer A, Conradi HJ, Bos EH, et al (2011) Prognostic association of depression following myocardial infarction with mortality and cardiovascular events: a meta-analysis of 25 years of research. *General Hospital Psychiatry*, **33**: 203–16.

Miller-Archie S, Jordan H, Ruff R, et al (2014) Posttraumatic stress disorder and new-onset diabetes among adult survivors of the World Trade Center disaster. *Preventive Medicine*, **66**: 34–8.

Mitchell-Jones N, Gallos I, Farren J, et al (2017) Psychological morbidity associated with hyperemesis gravidarum: a systematic review and meta-analysis. *BJOG*, **124**: 20–30.

Moore M (2016) Couple therapy when one spouse has cancer: integration of EMDR and relationship enhancement therapies. *Journal of EMDR Practice and Research*, **10**: 208–14.

Moradi M, Zeighami R, Moghadam MB, et al (2016) Anxiety treatment by eye movement desensitization and reprocessing in patients with myocardial infarction. *Iranian Red Crescent Medical Journal*, **18**(12): 1–5.

National Collaborating Centre for Mental Health (2014) *Antenatal and Postnatal Mental Health: Clinical Management and Service Guidance: Updated Edition (NICE Guideline CG192)*. British Psychological Society/Royal College of Psychiatrists (https://www.ncbi.nlm.nih.gov/books/NBK305023/).

National Institute for Health and Care Excellence (2009) *Depression in Adults with a Chronic Physical Health Problem: Recognition and Management (NICE Guideline CG91)*. NICE (https://www.nice.org.uk/guidance/cg91).

Owing to space constraints the Reference list is continued in the Supplementary material, available online at https://dx.doi.org/10.1192/bja.2023.32l.

MCQs

Select the single best option for each question stem

1 EMDR has been applied in the management of:
- a tokophobia
- b myocardial infarction
- c tinnitus
- d renal failure
- e all of the above.

2 EMDR has been used for the following indications in the management of myocardial infarction:
- a anxiety
- b depression
- c post-traumatic stress disorder
- d all of the above
- e none of the above.

3 Which of the following is true regarding the use of EMDR in the treatment of pain?
- a the majority of research has focused on its use in chronic pain rather than acute pain
- b EMDR has been shown by multiple studies to be effective in treating acute pain
- c the theory behind the use of EMDR in treating pain lies in the notion that physical pain has substantial psychological and emotional components
- d a and c
- e b and c.

4 Which of the following is false regarding EMDR's use in treating tinnitus?
- a bimodal therapy involving EMDR plus tinnitus retraining therapy (TRT) is just as effective as CBT plus TRT
- b EMDR was not found to be effective in patients who have already failed first-line treatments
- c EMDR has been shown to be more effective long-term in patients with a history of trauma
- d EMDR can reduce the distress associated with tinnitus through desensitisation and reprocessing of tinnitus-associated memories
- e a specific EMDR protocol for tinnitus has been developed.

5 Which of the following is true regarding EMDR group therapy in psycho-oncology?
- a it requires patients to disclose their trauma experience to the group
- b it discourages patients from disclosing their trauma experience to the group
- c it encourages patients to disclose their trauma experience to the group only after the introductory session
- d a and c
- e none of the above.