

Pilot Research Study on the Provision of the Eye Movement Desensitization and Reprocessing Integrative Group Treatment Protocol With Female Cancer Patients

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The purpose of this research is to evaluate the effectiveness of the eye movement desensitization and reprocessing (EMDR) Integrative Group Treatment Protocol (EMDR-IGTP) in reducing posttraumatic stress disorder (PTSD) symptoms related to the diagnosis and treatment of different types of cancer in adult women. EMDR-IGTP intensive therapy was administered for 3 consecutive days, twice daily, to 24 adult women diagnosed with different types of cancer (cervical, breast, colon, bladder, and skin) who had PTSD symptoms related to their diagnosis and treatment. The data was analyzed using factorial ANOVA with the effects of the EMDR-IGTP evaluated with the Short PTSD Rating Interview as dependent variable and group (two groups of patients: active phase and follow-up phase of cancer treatment) and time (four time points) as independent variables. Post hoc analyses were carried out. Results showed significant main effects for time and group. No significant interaction was found. Results also showed an overall subjective improvement in the participants. This pilot study suggests that intensive administration of the EMDR-IGTP can be a valuable support for cancer patients with PTSD symptoms related to their diagnosis and treatment. Further research with randomized controlled studies is needed to demonstrate the effectiveness of EMDR-IGTP in this population.

Keywords: eye movement desensitization and reprocessing (EMDR) Integrative Group Treatment Protocol (EMDR-IGTP); posttraumatic stress disorder (PTSD); intensive EMDR therapy; cancer

Cancer is a term used to describe a physical process in which abnormal cells in the body grow uncontrollably and deregulated to the extent that a mass of cells develop as a tumor. Cancer is harmful to the body because it tends to metastasize throughout the body, to invade and damage the nearby tissues and interfere with the normal functioning of that specific region of tissues.

Cancer is a leading cause of death around the world. There were 14.1 million new cancer cases, 8.2 million cancer deaths, and 32.6 million people living with cancer in 2012 worldwide. In the same year, 57% of new cancer cases, 65% of the cancer deaths, and 48% of the 5-year prevalence cancer cases

occurred in the less developed regions (World Health Organization, 2014).

Since the fourth edition of *Diagnostic and Statistical Manual of Mental Disorders*, text revision (DSM-IV-TR; American Psychiatric Association, 2000), the diagnostic criteria for posttraumatic stress disorder (PTSD) specifically includes being diagnosed with cancer—a life-threatening illness—as representative of a traumatic event. Therefore, people with this diagnosis can be considered at risk for PTSD.

Numerous studies have focused on the diagnosis or PTSD symptoms in people with cancer (Pérez et al., 2014). Meanwhile, the PTSD-precipitating factors are usually external and unique events that represent an

immediate threat; cancer represents an internal and external stressor that is extended over time. Hence, people diagnosed with cancer may be at risk of developing pathological stress reactions (Kangas, Henry, & Bryan, 2002).

Experiencing cancer means a peculiar stressor within the infrastructure of PTSD because it involves a potentially chronic and acute debilitating disease. This experience can be accompanied by a wide range of associated adverse events, such as tumor detection, diagnosis, severity of disease and prognosis; aggressive treatment; disfigurement and bodily dysfunction; side effects of treatment; impaired physical, social, and occupational functioning; and sometimes recurrence and diagnosis of terminal illness.

Since 1994, studies have shown that individuals exposed to prolonged, repeated, or multiple stressful events are more likely to show PTSD symptoms compared to individuals who lived one stressful event (e.g., Koopman, Classen, & Spiegel, 1994; McFarlane, 1989; Uddo, Allain, & Sutker, 1996). In addition, multiple stressors (as in cancer) may exacerbate PTSD reactions because of (a) the initial trauma may lower a person's coping resources to address subsequent stressors and (b) that person may be suffering clinical or subclinical PTSD when new stressors appear (Freedman, Brandes, Peri, & Shalev, 1999).

A study conducted by Smith et al. (2011) at Duke Cancer Institute, which had an average of 12.9 years follow-up, showed that PTSD intensifies with time, instead of decreasing. Their conclusion was that time does not heal this disorder. Nowadays, there is not a specific therapeutic approach to treat PTSD symptoms in cancer patients except for EMDR therapy (Capezzani et al., 2013).

EMDR Therapy

The World Health Organization (2013) and numerous international guidelines, such as Cochrane Review, recommend eye movement desensitization and reprocessing (EMDR) therapy for treatment of PTSD in children, adolescents, and adults (Bisson, Roberts, Andrew, Cooper, & Lewis, 2013). This therapy, developed by Shapiro (2001), is a comprehensive approach to treatment of trauma, adverse life experiences, or psychological stressors.

EMDR Therapy Administered to Cancer Patients

In a pilot study conducted by Capezzani et al. (2013) in patients with cancer and PTSD, the results showed that EMDR therapy was significantly more

effective than cognitive behavioral therapy (CBT). Its effectiveness was observed in reducing the scores on the Impact of Event Scale Revised and on the Clinician-Administered PTSD Scale (CAPS) for both patients in the active phase of cancer treatment and patients in the follow-up phase of cancer treatment. The most significant result obtained from this study is that most of the patients, both in the active and in the follow-up phase, of cancer treatment treated with EMDR therapy could overcome their PTSD diagnosis after eight sessions of therapy. On the contrary, most patients in the same phase of active cancer treatment treated with CBT maintained the PTSD diagnosis a month after finishing therapy.

EMDR Integrative Group Treatment Protocol

The EMDR Integrative Group Treatment Protocol (EMDR-IGTP) for early intervention was developed by members of the Mexican Association for Mental Health Support in Crisis when they were overwhelmed by the extensive need for mental health services after Hurricane Pauline ravaged the coasts of Oaxaca and Guerrero in 1997 (Jarero & Artigas, 2009). The protocol combines the eight phases of the EMDR individual therapy treatment (Shapiro, 2001) in a group therapy model and an art therapy format (e.g., drawings). It uses the butterfly hug method (BH; Artigas & Jarero, 2014) as a self-administered bilateral stimulation to process traumatic material. To perform the BH method, participants are asked to cross their arms over their chest so that the tip of the middle finger from each hand is placed below the clavicle or the collarbone, and the other fingers and hands cover the area that is located under the connection between the collarbone and the shoulder and the collarbone and sternum or breastbone. Hands and fingers must be as vertical as possible so that the fingers point toward the neck and not toward the arms. Next, the participants interlock their thumbs to form the butterfly's body and the extension of their other fingers outward will form the butterfly's wings. Their eyes can be closed or partially closed. In the next step, they alternate the movement of their hands like the flapping wings of a butterfly and let their hands move freely and breathe slowly and deeply while they observe what is going through their mind and body such as thoughts, images, sounds, odors, feelings, and physical sensation without changing, judging, or pushing their thoughts away.

The EMDR-IGTP is also known as the Group Butterfly Hug Protocol, the EMDR Group Protocol, and the Children's EMDR Group Protocol. This protocol was originally designed to work with children

(Artigas, Jarero, Alcalá, & López Cano, 2014) and was later modified for its use on adults (Jarero & Artigas, 2014). The protocol has shown favorable results when compared to other group treatment models in terms of time, resources, and outcomes (Adúriz, Knopfler, & Bluthgen, 2009). It has been used in its original format or with adaptations to suit cultural circumstances in numerous settings around the world (Gelbach & Davis, 2007; Maxfield, 2008) and with thousands of survivors of natural or man-made disasters (Jarero & Artigas, 2012).

Nine pilot studies with children and adults after natural disasters in Mexico, Nicaragua, El Salvador, Colombia, and Venezuela (Artigas, Jarero, Mauer, López Cano, & Alcalá, 2000; Jarero, Artigas, & Hartung, 2006; Jarero, Artigas, Mauer, López Cano, & Alcalá, 1999), and case reports and field studies have documented the effectiveness of the EMDR-IGTP. It has been provided to children and adults survivors of natural or man-made disasters, during war trauma, ongoing geopolitical crisis, refugee children in ongoing war, people who have suffered work-related accidents and are diagnosed with acute stress disorder, children and adolescent victims of severe interpersonal violence, and with Latin American armed forces (Jarero, Roque-López, & Gómez, 2013; Mehrotra, 2014; Zaghrou-Hodali, Alissa, & Dodgson, 2008).

Adaptation of EMDR-IGTP for Cancer Patients

Within the context of psychooncology literature, Morasso (2002) considers people with cancer interconnected to a series of crises that occur during the course of the disease and/or that involve changes in the environmental ecosystem surrounding the patient. For this reason, the EMDR-IGTP for early intervention with adults was adapted to treat an adult population living continued traumatic stress related to the diagnosis and treatment of cancer. The adaptations had the objective of treating in a group therapy format an original critical incident (cancer diagnosis), where stressful events (treatments) had continued for a long period of time with no posttrauma safety period (no participant had been discharged). The core adaptation consisted in the Phase 3 (assessment) instruction's modification. Instead of asking the participants to remember what happened during the event (e.g., hurricane, earthquake), the team leader ask the participants to close their eyes and run a mental movie of everything that happened just before the cancer diagnosis until the present moment.

To Jarero and Uribe (2011, 2012), acute trauma situations are not only related to a time frame (days, weeks, or months) but also to a posttrauma safety

period as well. Their hypothesis is that the continuum of stressful events with similar emotions and somatic, sensorial, and cognitive information does not give the state-dependent traumatic memory sufficient time to consolidate into an integrated whole. Thus, the memory networks remain in a permanent excitatory state, expanding with each subsequent stressful event to the original critical incident, analogous to ripples from a rock falling in the middle of a lake. The risk of PTSD and comorbid disorders would therefore grow with the number of exposures.

Method

The purpose of our research is to evaluate the effectiveness of the EMDR-IGTP to reduce the symptoms of PTSD related to the diagnosis and treatment of different types of cancer in adult women. The research protocol was reviewed and approved by the Latin American and Caribbean Foundation for Psychological Trauma Research review board to ensure that the research quality of this study fulfilled the following Revised Gold Standard scale (Maxfield & Hyer, 2002) items: GS1: clearly defined target symptoms, GS2: reliable and valid measures, GS3: use of a qualified not blind independent evaluator, GS4: assessor reliability, GS5: manualized treatment, GS6: there was not a random assignation of participants, GS7: treatment fidelity, GS8: no confounded conditions, GS9: self-report measure only, and GS10: length of treatment for participants with single trauma (civilians). All participants gave written informed consent.

Participants

This pilot study was conducted in the city of Monterrey, Mexico, in the Pink Cross shelter facilities where low-income adult women live during their cancer treatment. Participants included 24 adult women diagnosed with different types of cancer (cervical, breast, colon, bladder, and skin) and with PTSD symptoms related to their diagnosis and cancer treatment. Participants' age ranged from 36 to 68 years old (mean = 54.16 years). Time since diagnosis was from July 2006 to October 2013.

Inclusion criteria were (a) 18 years old or older, (b) diagnosis of cancer, (c) be in the active or follow-up phase of cancer treatment, (d) with PTSD symptoms related to the diagnosis and cancer treatment, (e) had not received or were not receiving specialized trauma therapy, and (f) had not received or were not receiving drug therapy for the PTSD symptoms. Exclusion criteria were (a) ongoing suicidal or homicidal ideation, (b) diagnosis of psychotic or bipolar disorder,

(c) organic mental disorder, (d) substance abuse, and (e) significant cognitive impairment. Participation in this study was voluntary, and there were no dropouts.

Measures

Short PTSD Rating Interview. The Short PTSD Rating Interview (SPRINT; Connor & Davidson, 2001; Vaishnavi, Payne, Connor, & Davidson, 2006) is an eight-item interview or self-rating questionnaire with solid psychometric properties that can serve as a reliable, valid, and homogeneous measurement of PTSD illness severity and global improvement as well as a measure of somatic distress; stress coping; and work, family, and social impairment.

Each item is rated on a 5-point scale: 0 (*not at all*), 1 (*a little bit*), 2 (*moderately*), 3 (*quite a lot*), and 4 (*very much*). Scores between 18 and 32 correspond to marked or severe PTSD symptoms, from 11 to 17 to moderate symptoms, from 7 to 10 to mild symptoms, and scores of 6 or less indicate either minimal or no symptoms.

SPRINT also contains two additional items to measure global improvement according to percentage of change and severity rating. SPRINT performs similarly to the CAPS in the assessment of PTSD symptoms clusters and total scores. It can be used as a diagnostic instrument (Vaishnavi et al., 2006). It was found that in the SPRINT, a cutoff score of 14 or more carried out a 95% sensitivity to detect PTSD and 96% specificity for ruling out the diagnosis, with an overall accuracy of correct assignment being 96% (Connor & Davidson, 2001).

Procedure

The recruitment of participants took place from February 1 to February 21, 2014 at the Pink Cross shelter facility in Monterrey, Mexico. This process was held in two stages. In the first stage, a qualified not blind independent assessor explained the purpose of the research to the interested women as well as inclusion and exclusion criteria. In the second stage, the same assessor obtained the informed consents, obtained the clinical history of each participant (Phase 1 of the EMDR therapy treatment), and applied the SPRINT (pre-post treatment and two follow-up measurement) to all the participants who learned about the research and met the inclusion criteria ($N = 24$).

From February 27 to March 1, 2014, the EMDR-IGTP was administered on six occasions, twice daily. Between March 10 and March 13, 2014, the posttreatment assessment was conducted. The first follow-up assessment was performed 30 days after posttreatment, from April 2 to April 5, 2014. The second

follow-up was conducted 90 days after treatment, from June 2 to June 4, 2014.

Treatment

In this study, intensive EMDR therapy (Abel, 2011; Grey, 2011; Jarero, Roque-López, Gómez, & Givaudan, 2014; Wesson & Gould, 2009) was administered to one group with all 24 participants for 3 consecutive days, twice daily. The first group session lasted 1 hour and 42 minutes. The next five group sessions had an average duration of 45 minutes since they started in Phase 3 of the protocol, as it was not necessary to repeat Phases 1 and 2.

After the first follow-up assessment, EMDR individual therapy was administered to two participants from the follow-up phase of the cancer treatment group, who obtained scores higher than the SPRINT cutoff of 14 (15 and 18 respectively). The first participant received one individual therapy session, and the second participant received five individual therapy sessions with the standard EMDR protocol. Their scores have been removed in the analyses of the follow-up means.

The administration of the EMDR-IGTP was provided by two EMDR Institute and EMDR-Ibero America senior trainers of trainers and one trainer also including an approved consultant and a certified EMDR therapist. The EMDR-IGTP for early intervention with adults (Jarero & Artigas, 2014) recommends a ratio of 1 team member for 8–10 participants. The decision to have five EMDR clinicians for this pilot study was made to have enough clinicians to be aware of all of the participant's emotional reactions and help them when necessary. The certified EMDR therapist administered the individual protocol to two participants following the EMDR Institute manual. Treatment fidelity was fulfilled by strict observance to all steps of the scripted EMDR-IGTP and the EMDR therapy standard protocol.

Statistical Analysis

The data was analyzed using factorial ANOVA with the effects of the EMDR-IGTP evaluated with the SPRINT as dependent variable and group (two groups of patients: active phase and follow-up phase of cancer treatment) and time (four time points) as independent variables. Post hoc analyses using the Scheffé post hoc criterion for significance were carried out.

Results

Results are presented in two sections. The first section describes the qualitative and clinical information. The second section presents the statistical data analysis.

Pretreatment Phenomenological Data

Symptoms. During the phase of history taking (Phase 1), participants described disturbances associated with the following symptoms:

1. Flashbacks and intrusive images (e.g., when a patient realized she did not have breasts after the surgery, the first time she received chemotherapy, the discussion of her case between doctors, the face of her friends feeling pity for her, the real event of seeing her husband abandoning her, lying on the street on her way home, suffering the side effects of chemotherapy, her son's tears after seeing her shaved and thin as a corpse)
2. Flash-forwards (e.g., visualizing being unable to walk in the future, receiving the diagnosis of the cancer coming back, fear that the wound would be infected and worms coming out from it, imagining receiving chemotherapy again and suffering its side effects, imagining herself dying alone)
3. Nightmares (e.g., seeing her mother who is already dead, asking the patient to come with her; seeing her dead husband mocking her; being at the hospital in a pool of blood flowing from her vagina; the cancer returns, and she receives chemotherapy again; seeing her face in a mirror as a corpse because she has little time left to live)
4. Cognitive symptoms: repetitive thoughts (e.g., "I'm crippled," "people want to see the surgery of my breast," "people see me as a freak," "I'm disfigured," "I have little time to live"), catastrophic thoughts (e.g., doctor informing her that the cancer has metastasized, the disease returns with more strength, or to die with great suffering), wishes to be dead (e.g., "I want to die so I can stop suffering," "If I die now, my children will not suffer so much"), difficulty concentrating and memory problems
5. Avoidance: of disturbing memories, of places or people that evoke their illness or its consequences, of the removal of their breasts, or the loss of hair (e.g., "I try not to think of cancer," "I don't want to be seen with my head bald," "I do not want to be seen with pity," "I don't want to be asked to show my mutilated breast because of morbid curiosity," "I avoid my friends because they ask me a lot of questions about how I feel," "I avoid thinking that the cancer may return," "I don't want to remember when I was bald")
6. Emotional symptoms (e.g., fear, anguish, sadness, despair, loneliness, anger, guilt, worry, anxiety, uncertainty, hopelessness, helplessness)
7. Physical symptoms (e.g., dizziness, headaches, pain in the arm where the chemotherapy was

applied, pain in the surgery wound, exhaustion, loss of taste, loss of appetite, significant weight loss, shortness of breath, choking, nausea, vomiting, diarrhea, inflammation, atrophy in the legs, insomnia, sleep without rest, irregular heartbeat)

8. Behavioral symptoms (e.g., uncontrollable crying; compulsively seeing in the mirror the place of the breast surgery; compulsive avoidance of all mirrors to elude seeing herself bald; isolation of all people, even the loved ones; fear that any food can cause the return of cancer; not wanting to bathe; increased consumption of cigarettes; avoidance of sex because of shame to be seen mutilated)
9. Spiritual symptoms (e.g., believe that illness is a punishment from God, getting away from God and religion, anger at God, questioning the existence of God, spiritual approach in the search for solutions, maladaptive increase in her faith in God)

Negative Beliefs. Negative beliefs were also expressed by the participants during history taking phase (Phase 1) of the study, such as the following: "I am different," "I am insignificant," "I should have done something," "I did something bad," "I'm not lovable," "I'm a bad person and that's why I've got cancer," "I should have known," "I am ruined forever," "I'm stupid, so I didn't noticed the disease," "I'm ugly because my body is disgusting," "I deserve only bad things," "I'm not good enough and so I haven't healed," "Everybody feels pity for me."

EMDR Therapy Treatment Effects

ANOVA results indicated a significant main effect for the time factor, $F(3, 80) = 41.68, p < .000$. SPRINT's scores were significantly different across time showing the effects of the EMDR therapy through time. There was also a significant effect by group, $F(1, 80) = 4.711, p < .03$. We can observe that patients in the follow-up phase of cancer treatment group showed lower scores than the patients in the active phase of cancer treatment group (Table 1 and Figure 1). The two main effects, however, do not represent a significant interaction between the two factors (time and group), $F(3, 80) = .212, p < .88$, indicating that the intervention effects follow the same pattern for both factors.

Post hoc analyses using the Scheffé post hoc criterion for significance showed two homogenous subgroups with significant mean differences, $p = .05$. Scores at base line (Time 1, $M = 16.31, SD = 5.03$) were significantly higher than scores in the other subgroup containing the other three measurements (Time 2,

TABLE 1. Mean Scores (and Standard Deviations) on the Short PTSD Rating Interview Scale

Group	n	Time 1	Time 2	Time 3	Time 4
Active cancer treatment	17	16.59 (5.12)	6.00 (2.96)	4.47 (2.92)	4.41 (4.29)
Follow-up cancer treatment	5	15.40 (5.18)	3.40 (1.34)	3.00 (1.73)	1.40 (1.14)
Total	22	16.32 (5.04)	5.41 (2.87)	4.14 (2.73)	3.73 (3.99)

$M = 5.40$, $SD = 2.87$; Time 3, $M = 4.13$, $SD = 2.73$; and Time 4, $M = 3.72$, $SD = 3.99$). See Table 1.

Discussion

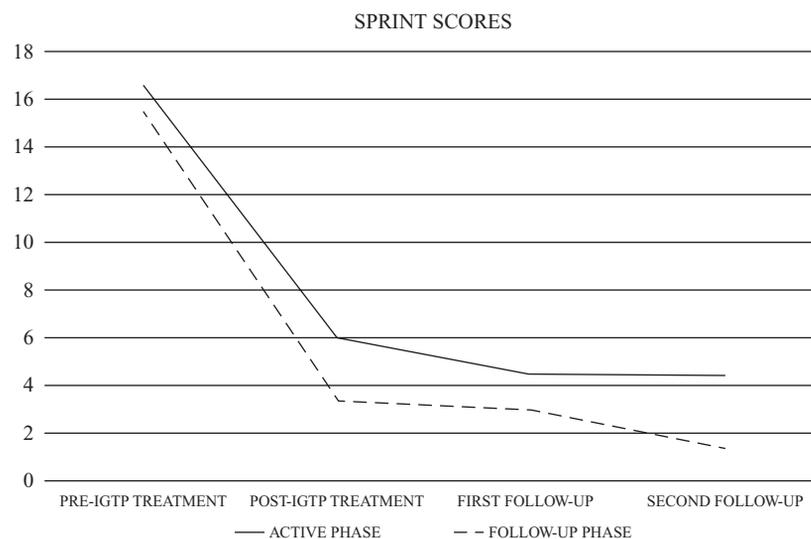
The purpose of this study is to evaluate the effectiveness of the EMDR-IGTP to reduce PTSD symptoms related to the diagnosis and treatment of different types of cancer in adult women. Data analyzed through a factorial ANOVA with two groups of patients (active phase and follow-up phase of cancer treatment) and four time repeated points of evaluation showed a significant statistically effect for both time and group with no significant interaction. Results also showed an overall subjective improvement in the participants.

In the pretreatment measures, both group means were higher than the SPRINT cutoff score of 14 (16.58 for the active cancer treatment group and 17.14 for the follow-up cancer treatment group). In the second and final study follow-up, 90 days after treatment, only one of the four participants in the active cancer treatment group, who had received the diagnosis that the cancerous tumor had grown back, showed scores higher than the SPRINT cutoff score (16 points).

Results showed that the effect of the therapeutic treatment was maintained over time. There was a nonsignificant trend, visible in Figure 1 of further symptom decrease at the fourth assessment, for participants in the follow-up cancer treatment group who were no longer experiencing stressful cancer treatment.

As notice in the preceding text, EMDR individual therapy was administered to two participants from the follow-up phase of the cancer treatment group who were excluded from the data analysis and who presented complex trauma histories. In the first follow-up, these women obtained scores higher than the SPRINT cutoff of 14 (15 and 18 respectively). The first participant received one individual therapy session, and the second participant received five individual therapy sessions with the standard EMDR protocol. In the second follow-up, both participants obtained scores lower than the SPRINT cutoff of 14 (12 and 6 respectively).

It is important to mention that the EMDR-IGTP does not rule out the EMDR individual treatment because it is a therapy protocol and also a screening tool. Therefore, EMDR clinicians do not have to choose between group and individual administration

**FIGURE 1.** Short PTSD Rating Interview means by time and group.

when facing a large amount of people needing treatment. We recommend to first use the EMDR-IGTP and administer individual EMDR treatment only to those who require additional support based on the protocol's Phase 8 (reevaluation and follow-up) recommendations. The authors' clinical observations have shown that one or two applications of the EMDR-IGTP protocol are not enough to achieve the best clinical results. Therefore, we suggest six applications in an intensive EMDR treatment format with fidelity to the protocol and using validated measures to obtain reliable results.

Being diagnosed with cancer represents a distinctive stressor within the acute stress disorder/PTSD framework because it can involve a chronic and debilitating illness that may be accompanied by aversive associated events, including noxious treatments, disfigurements, dysfunctions, and disruptions to one's functioning (Kangas, Henry, & Bryant, 2007). This pilot study suggests that intensive administration of the EMDR-IGTP can be a valuable support for cancer patients with PTSD symptoms related to their diagnosis and treatment. Further research and randomized controlled studies are required to demonstrate the effectiveness of EMDR-IGTP in this population.

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