IMPLEMENTATION OF EMDR® WITH CANCER PATIENTS

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SUMMARY

Eye movement desensitization and reprocessing (EMDR®), developed in 1987 and proved highly effective in treating psychological disturbances rooted in traumatic memories. It was hypothesised that EMDR® would enhance coping in patients traumatised by a cancer diagnosis and/or treatment, as indicated by their subjective responses and levels of depression, anxiety, satisfaction with life, positive-negative affect balance and sense of coherence. A descriptive multiple case-study method was implemented. Three cases were treated by EMDR® and three by a supportive method. Data collection was triangulised in terms of semi-structured interviews, quantitative measuring instruments and interviews by an external validator. Findings were consistently in favour of EMDR®. The results confirmed EMDR®'s efficacy in terms of beneficial clinical outcomes on both objective and subjective measures of change.

OPSOMMING

Oogbeweging desensitisering en herprosessering (EMDR®) is sedert 1987 as hoogs effektief bewys in die behandeling van psigologiese versteurings gewortel in traumatiese herinneringe. Daar is gehipotetiseer dat EMDR® pasiënte wat weens 'n kankerdiagnose en/of -behandeling getraumatiseer is, kon help om dit te hanteer, soos aangedui deur hul subjektiewe ervaringe en vlakke van depressie, angstigheid, lewenstevredenheid, positief-negatiewe affek balans en koherensiesin. 'n Beskrywende meervoudige gevallestudiemetode is geïmplementeer. Drie gevalle is met EMDR® behandel en drie ander deur 'n ondersteunende intervensie. Data-insameling is getrianguleer in terme van semi-gestruktureerde onderhoude, kwantitatiewe meetinstrumente en onderhoude deur 'n eksterne valideerder. Bevindinge was deurgaans ten gunste van EMDR®. Die resultate het EMDR® se effektiwiteit in terme van voordelige kliniese uitkomste op beide objektiewe en subjektiewe maatstawwe van verandering bevestig.

LITERATURE REVIEW

Eye movement desensitization and reprocessing (EMDR®) emerged in 1987 when psychologist Francine Shapiro observed spontaneous relief from upsetting thoughts, associated with unintentional rapid bilateral eye movements. It was refined into a complex, multiphasic cognitive therapy, utilising images, cognitions, emotions and bodily sensations in targeting disturbing material. It consists of eight phases (Shapiro, 1995:67; Parnell, 1997:59) and is based on desensitisation, through rapid, rhythmic eye movements, hand taps, or auditory stimuli in place of muscle relaxation. Patients are requested to track the therapist's finger visually as it moves rapidly from side to side 10 - 20 times, while maintaining an image of the anxiety-evoking situation and internally

repeating the associated irrational cognition or negative self-statement (Pellicer, 1993:73). Various hypotheses for the effectiveness of EMDR® have been proposed, centring around procedural elements (Shapiro, 1995:28; Wilson, Covi, Foster & Silver, 1995) and eye movements or alternative stimuli (Coleman, 1999; Armstrong & Vaughan, 1994; Dyck, 1993: 201; Nicosia, 1994).

EMDR® was found highly effective in treating psychological disturbances and stress-related sequelae of traumatic memories, e.g. Post-Traumatic Stress Disorder (PTSD) (Levin, Lazrove, & Van der Kolk, 1999:159; Cheaper, 1996:209; Cocco & Sharpe, 1993:373; Kleinknecht & Morgan, 1992:43; Lipke & Botkin, 1992:591) or its predecessor, Acute Stress Disorder (ASD). It is primarily used to access and neutralise upsetting memories underlying current psychological disturbances (Greenwald, 1994:18).

While EMDR® has been harshly criticised (Richards, 1999:13; Renfrey & Spates, 1994:231; Greenwald, 1994:30; Allen & Lewis, 1996:238; Acierno, Hersen, Van Hasselt, Tremont & Mueser, 1994:287; Metter & Michelson, 1993:413), evidence of positive outcomes, especially with PTSD patients (Foa, 2000:43; Boudewyns, Hyer, Peralme, Touze & Kiel, 1994; Carlson, Chemtob, Rusnak, Hedlund & Muraoka, 1995; Ten Broeke & De Jongh, 1995:459) cannot be dismissed.

However, research on its application to patients with cancer is lacking. Although the aetiology of cancer varies, prognosis (Lazarus, 1991; Simonton, Simonton & Creighton, 1981), quality of life (Belletieri, 1993) and management of pain (Corcoran, 1995:23; Benoliel & Crowley, 1979:320) are largely influenced by psychological factors, including subjective appraisals, beliefs and expectations concerning cancer (Jacobson & Holland, 1991:147; Simonton *et al.* 1981).

Due to cancer's potentially dramatic impact, patients' response to diagnosis ranges from escalations of anxiety and fear to mobilising their fighting spirit and will to live (David, 1995:19). Emotional responses to diagnosis and/or treatment can additionally produce traumatic memories (Omdahl, 1995), resulting in lowered quality of life and depletion of psychological resources (Hughes, 1987; Lazarus, 1991). The same applies to the influence of surgery, chemotherapy or radiotherapy on a patient's psyche (Belletieri, 1993).
Since medical treatment has been complemented by psychotherapy, the latter (or combination) might augment quality and possibly duration of life (Moorey & Greer, 1989).

It was hypothesised that EMDR® treatment of newly diagnosed cancer patients, traumatised by diagnosis and/or treatment, might reduce psychological morbidity i.e. anxiety and depression, and possibly improve patients' psychological well-being.

METHOD

Design

A descriptive multiple case-study method of research, involving 3 patients treated by EMDR® and 3 others by a Supportive Method, was implemented. The case-study method was applicable, as it focused on complex situations involving self-contained, critical segments of persons' lives (Bromley, 1986).

Descriptive comparisons were made between results from EMDR® and the Supportive Intervention, utilised as control for attention. Triangulation was utilised in method of data collection, including semi-structured interviews, quantitative measuring instruments and an interview by an external validator, a social worker.

Researchers

Although the research was conducted while the first author was an intern clinical psychologist at Weskoppies Psychiatric Hospital in Pretoria, she had already completed advanced training in EMDR® and was thus familiar and comfortable with the technique. The second author, knowledgeable about research methodology, psychotherapy and the theory of EMDR® was the research supervisor.

Participants

Six persons recently diagnosed with cancer, who perceived their diagnoses as traumatic, were identified in co-operation with CANSA. The first 3 were individually treated with EMDR®, and the second 3 with individual Supportive Therapy.

Inclusion criteria were: (i) identification in terms of clinical impressions by a CANSA social worker at Tipuana (interim home); (ii) no prior cancer-related psychotherapy; (iii) no concurrent Tipuana group therapy attendance, (iv) Subjective Units of Disturbance (SUD)-ratings of at least 5 concerning diagnosis-related disturbance, and (v) willingness and informed consent to participate in the study.

Data collection

Semi-structured interview

The interview determined whether being diagnosed with cancer was experienced as a trauma as indicated by an SUD-rating of at least 5. Additionally, it aimed at determining subjective thoughts and feelings concerning the cancer diagnosis and/or treatment, the phase of trauma processing, and, in the post-treatment interview, the subjective experience of psychotherapy. The interview was characterised by open-ended questions and a flexible process.

Measuring instruments

Qualitative data were supplemented by data from the following measuring instruments: State-Trait Anxiety Inventory (STAI-A) (Spielberger, Gorsuch & Lushene, 1970), Beck Depression Inventory (BDI) (Beck, Ward, Mendelson, Mock & Erbaugh, 1961:53; 1974:151), Sense of Coherence Scale (SOC-29) (Antonovsky, 1987; 1993:725), Affectometer 2 (short form) (AFM2) (Kammann & Flett, 1983:259) and Satisfaction with Life Scale (SWLS) (Diener, Emmons, Larsen & Griffin, 1985:71). All scales have favourable reliability and validity indices, and the last four had been demonstrated in several studies to be applicable to the South African context (Du Plessis, 1982; Strümpfer & Wissing, 1998; Wissing & Van Eeden, 1998:379).

Interviews by the external validator

The social worker at Tipuana provided pre- and post-treatment impressions of the patients, without knowing the kind of intervention for a particular patient. During the post-treatment interview she asked the participants:"What did therapy mean to you?", "What difference did therapy make in your life?" and "What negative comments do you have regarding therapy?".

The purpose of these interviews was to enhance the internal validity of the study.

Therapeutic intervention

Similarity in general processes for EMDR® and Supportive Therapy

Despite the diversity of the therapeutic interventions, similarity in treatment conditions was pursued to ensure that changes could be attributed to EMDR® and nothing else. After establishing rapport, patients were taught progressive relaxation to facilitate containment of disturbances between sessions.

By having interviewed all participants, rapport was established. Thereafter participants were taught a progressive relaxation technique (Rooth, 1995:152) to aid with containment of patients should disturbing material surface in-between therapy sessions. Chronological hierarchies of disturbing events concerning diagnosis and treatment were elicited from participants and the events clustered, to obtain focal points.

EMDR® intervention

The EMDR® procedure consists of eight essential phases (Shapiro, 1995:67; Parnell, 1997:59) which will be mentioned briefly. Firstly, case histories were obtained during the initial semi-structured interview. Patient preparation implied imparting information about the method, constructing "safe places" and signs to signal desire to terminate reprocessing.

Before reprocessing commenced, phase 3, assessment, was completed. It involved patients identifying negative images, cognitions, emotions and bodily sensations associated with the cluster of disturbing events targeted for that specific session. Levels of distresses were indicated on the SUD-scale, positive cognitions to be installed in place of negative cognitions clarified and their validity rated on the Validity of Cognition (VoC)-scale.

Desensitisation (phase 4) of negative experiences followed. Patients received hand taps while focusing on these negative experiences. When reaching an SUD-rating of 0, 1 or 2, positive cognitions were installed (phase 5). It was conducted like desensitisation, except that patients paired negative targets with positive cognitions agreed upon. This proceeded until VoC-ratings of 6 or 7 were reached.

Following reprocessing, covert discomforts were screened by body scans and further desensitised. Finally participants were debriefed (phase 7) by revisualising their "safe place", and asked to keep a log of any disturbing thoughts, feelings or dreams experienced. Where anything emerged, it was targeted and reprocessed. Finally revaluation of the effect of therapy occurred during the following session.

Supportive Therapy Intervention

Supportive Therapy progressed like EMDR® until phase 3. Subsequent to establishing chronological hierarchies, patients were encouraged to focus on their feelings, by creating an atmosphere conducive to emotional expression, in accordance with Rogers' (1951) concepts of congruence, unconditional positive regard and accurate empathic understanding. Where appropriate, feelings were reflected.

Procedure

Six recently diagnosed cancer patients were identified, screened for suitability and assigned, first to EMDR®- (n = 3) and Supportive Therapy (n = 3).

Next they were interviewed in a semi-structured context. Interviews ranged from 45 to 60 minutes, and were audio taped. The test battery was administered during session 2.

Progressive relaxation (Rooth, 1995) was taught to be applied whenever necessary. Next, personal chronological hierarchies of disturbing events concerning diagnoses and treatment were elicited to tailor therapy to individual needs.

The following three sessions were devoted to the therapeutic intervention. Since EMDR® was completed in 3 sessions, Supportive Therapy was also limited to 3 sessions.

Post-treatment interviews and tests were conducted in the same fashion as pre-treatment. For participants in Supportive Therapy, EMDR® treatment was available afterwards. Two made use of the offer.

A week after completion of therapy, final interviews were conducted by the social worker.

Data analysis

A phenomenological approach, as described by Patton (1990), was followed, as the study aimed to inductively and holistically understand human experience in context of a specific setting. Initially literature on EMDR® and psychological aspects of cancer was surveyed, and domains of enquiry for this study determined. Thereafter raw data (interview-, questionnaire responses and field notes) were assembled. Interviews were transcribed and questionnaires scored. Data obtained from interviews and observations were displayed in session descriptions, while data obtained from objective psychometric testing were displayed in table format. Case records were constructed from interview material, questionnaire scores, and field notes. Content analysis (Green, 1995:126) was performed on the interview transcriptions, taking the field notes into account. In the analysis of each case the specific facets focused on in this study, were kept in mind, namely the experience of diagnosis, experience of therapy, indications of symptomatology and indices of well-being. Pre-/post-treatment scores were also compared within cases. Rich, descriptive case study narratives (Patton, 1990) were then written, integrating essentials of qualitative and quantitative results. Finally the narratives of the six participants were compared to elicit pervasive themes, similarities and differences between cases, also comparing the experience of EMDR® with that of Supportive Therapy.

Assurance of the reliability and validity of the findings

According to Stiles (1993:593) reliability of qualitative research equals procedural trustworthiness and can be ensured by disclosure and explication of investigators' personal orientations, intensive engagement with material and grounding of interpretations. Procedures suggested were adhered to during the course of this study. Validity was assured by using triangulation as recommended by Goering and Streiner (1996:491) and Stiles (1993:593) in method of data collection. Validation of interpretations was sought by asking a second investigator, an independent, suitably qualified person, to audit the research process. Finally a coherent report was written.

RESULTS AND DISCUSSION

In this paper only selected results are reported, as "thick" descriptions of each case are unfeasible due to space constraints. Since the primary focus was on whether/ how EMDR® enabled patients traumatised by diagnosis to cope, patients' subjective experiences of diagnosis, and levels of depression, anxiety, satisfaction with life, positive-negative affect balance and sense of coherence, as well as experience of psychotherapy were analysed. Attention was focused on differences/similarities between cases treated with EMDR®, and differences/similarities between cases treated with EMDR® and Supportive Therapy respectively.

Participants' experience of their diagnosis and situation

All participants, except Mrs G, were diagnosed more than six months prior to research commencement. From their subjective reports and criteria for PTSD/ASD (APA, 1994), it was clear that they all still experienced diagnosis as traumatic, though their severity ratings of disturbance varied between 5 and 10 on the SUD-scale (see Table 1). Nevertheless, it came as a shock to everyone, accompanied by feelings of depression, despondency, insurgency, bitterness and grief. In Mrs V's words: "I don't show it to others, but I wonder whether I will live or die." This resonated with the "existential plight" (Weisman & Worden, 1976:1), a phase characterised by an exacerbation of thoughts about life and death, causing a myriad of disturbing emotions.

Common themes emerged prior to therapy. Cancer diagnosis caused fears and anxieties related to potential metastasis and the efficacy of radiotherapy, common to cancer patients (Massie & Holland, 1989:273). Negligence related guilt, a common human reaction to trauma and loss (Haber, Ayers, Goodheart, Lubin, Siegel, Accuff, Freeman, Kieffer, Mikesell & Wainrib, 1995), also featured strongly. As five of the six patients had cancer of the breast, vagina/cervix or prostate, gender issues arose, as their bodily selves and interpersonal selves were compromised. Mr E said: "Will it (sexuality) improve to normal again?" According to Maguire (1985:77) the alteration in body image most often impacts negatively on sexuality as well.

Despite experiencing social support, patients were not entirely satisfied. Some felt pitied, others misunderstood, and others experienced over-involvement. Although all patients confirmed that they were using religious coping, existential questions characterised their search for meaning. This correlated with what Barraclough (1994) described when she noted that anger towards God is often experienced.

Although acknowledging the reality of their diagnoses as a group, some denied their emotional upheaval and anger. Unwillingness to acknowledge certain emotions was associated with individuals' readiness for therapy. Although it could not be stated with certainty in which phase of adjustment each patient was according to the Kübler-Ross model (1969), it was assumed that they were all oscillating between denial and anger.

At therapy completion, the EMDR® group were less concerned about their diagnosis and prognosis - indicative of having found meaning in their situation. They gained acceptance of their disease, which was reflected in "living each day to the fullest" (Mrs. V) and "feeling content and calm" (Mrs. T). None of the three could still be diagnosed according to the criteria for PTSD or ASD after psychotherapy, while SUD-ratings for disturbance concerning their diagnosis lowered to 0, 1 and 2 respectively (cf. Table 1). Subjective reports and responses to the questionnaires also correlated meaningfully.

After Supportive Therapy one patient still acutely feared metastasis, another remained preoccupied with the severity of cancer ("You have cancer and its not just such an illness...") and the third kept avoiding cancer-related thoughts. Two contradicted themselves during interviews, on the one hand stating their "positivity" and on the other presenting with fears. Though 2 did not meet criteria for PTSD/ASD any more, the third patient still had full-blown PTSD. SUD-ratings were 1, 1 and 4 respectively.

Observations of patients during EMDR® supported that the technique

- maintained patient focus on current issues
- fostered insight
- facilitated adaptive resolution and
- pre-empted revisitation of previously handled issues.

Supportive Therapy patients were observed to verbalise

problems in detached, intellectual ways, rather than dealing with emotions, until being refocused.

However, both approaches successfully enabled patients to cope with diagnoses. The efficacy of each method will be explicated with reference to the questionnaire responses.

Alleviation of symptomatology

Results obtained with questionnaires are reflected in Table 1

Stress

Whereas all patients manifested symptoms of PTSD/ ASD at pre-assessment, symptom alleviation occurred on the entire EMDR® group and in 2 patients of the Supportive Therapy group. The positive impact of EMDR® was especially noted in reduced SUD-scores.

Depression

While the EMDR® group manifested moderate (9, 13) and severe (27) depression on the BDI, post-treatment scores indicated an absence of (0), and mild depression (6). The Supportive Therapy group initially reflected

Table 1: Comparison of scores of participants before (B) and after (A) psychotherapy on the various measuring instruments

SCALES	B/A	EMDR®			Supportive Therapy		
		Mrs V	Mr E	Mrs T	Mr K	Mr C	Mrs G
1PTS / ASD	B	yes	yes	yes	yes	yes	yes
	A	no	no	no	no	no	yes
SUD	B	10	5	10	5	5	10
	A	0	1	2	1	1	4
BDI	B	27	9	13	18	12	24
	A	0	6	0	6	4	19
STAI-S	B	46	26	48	32	39	66
	A	20	24	20	25	34	48
STAI-T	B	47	44	43	37	34	44
	A	22	31	25	30	22	44
SWLS	B	30	21	21	16	21	25
	A	35	22	32	22	18	28
AFM	B	14	15	16	11	19	5
	A	34	23	35	23	23	9
SOC	B	147	132	143	115	149	123
	A	178	160	173	138	166	140

1PTS/ASD= Post Traumatic Stress / Acute Stress Disorder
SUD = Subjective Units of Distress Scale
BDI = Beck Depression Inventory
STAI-S = Spielberger State-Trait Anxiety Inventory : State;
STAI-T = Spielberger State-Trait Anxiety Inventory : Trait;
SWLS = Satisfaction with Life Scale
AFM = Affectometer: Positive-Negative Affect Balance
SOC = Sense of Coherence Scale

moderate (12) and severe (18, 24) depression, and after psychotherapy mild (4, 6) and severe (19) depression. Hence both interventions engendered lowered depression, but EMDR® especially so.

Anxiety

In the EMDR® group prominent pre-/post-treatment differences were found on the STAI (State) and STAI (Trait) (cf. Table 1). STAI-S scores were reduced with 2,03, 1,02 and 0,15 standard deviations respectively. Reductions on the STAI-T were 1,42, 1,92 and 1,02 respectively. EMDR® thus not only alleviated anxiety associated with specific situations (state), but also influenced enduring personality structures (trait) positively. Thus, diagnoses of cancer caused "personality changes" due to traumatisation. Once it was targeted and brought to adaptive resolution, personalities "returned" to pre-morbid levels of functioning, possibly explaining significant differences in supposedly stable scores.

In the Supportive Therapy group differences in STAI-S scores represented a lowering of 0,5, 0,36 and 1,3 standard deviations respectively, and on STAI-T 0,55, 0,94 and 0 respectively. Although Supportive Therapy was successful in alleviating anxiety too, its impact was more limited. Notably on the STAI-T scale differences between EMDR® and Supportive Therapy by far favoured EMDR®.

Increase in well-being

In addition to symptom reduction, general psychological well-being was enhanced too.

Satisfaction with life

Improvement of scores by 0,76, 0,14 and 1,65 standard deviations confirmed enhanced quality of life among the EMDR® group. Among the Supportive Therapy group scores improved with 1,1 and 0,49 standard deviations, and decreased with 0,45 standard deviation.

Positive-negative affect balance

The EMDR® group improved with 20, 8, and 19 on the AFM at post-assessment, and the Supportive Therapy group with 12, 4 and 4.

Sense of Coherence

At pre-assessment EMDR® patients scored higher than Czech cancer patients' mean score of 117 (Antonovsky, 1993:729). At post-assessment their scores improved with 1,39, 1,63 and 1,35 standard deviations. Together with their subjective reports, the results confirmed their degree of restoration, since in addition to experiencing life as meaningful and manageable prior to therapy, they also experienced it as comprehensible post-therapy.

In contrast, for the Supportive Therapy group, life was still not understandable after therapy, a finding possibly resonating with their respective smaller improvements of 1,03, 0,76 and 0,79 standard deviations.

Notably pre-treatment scores for all Supportive Therapy patients were lower than those of EMDR® patients. The first patient's score was less than the mean of 117 for Czech cancer patients (Antonovsky, 1993:729), while the third's was average. The second patient's score, high above average, corresponded with EMDR® group scores. This difference between initial scores of patients could be ascribed to chance.

Although both therapeutic techniques enhanced patients' experience of life as meaningful and manageable, only EMDR® improved their experience of life as understandable, as reported. It is hypothesised that EMDR® facilitated comprehension of the traumatised cancer patient's existential plight, thereby reducing the confusion causing emotional disturbance.

How was therapy experienced by participants?

The EMDR® group unanimously acknowledged opportunities to "talk" about their disturbances and difficulties, perhaps reflecting prevailing notions of psychotherapy, even thought results confirmed their extensive gains compared to the "talk therapy" afforded the Supportive Therapy group. Positive impressions of therapy abounded. Mrs V, the most enthusiastic recipient of therapy, experienced it as "wonderful", felt that she had regained her "old self" and that therapy helped her to grow into a stronger person. Mr E, least improved of the EMDR® group, experienced therapy positively as it touched issues not considered before, but insisted he was still processing his experiences. According to his questionnaire scores, he nonetheless showed

improvement. Mrs T was positive, as she had gained direction and courage to continue with life, answers to her questions and enhanced self-worth.

Supportive Therapy elicited the following comments: Mr K enjoyed the opportunity to talk about "sensitive issues" not verbalised before, but felt therapy had made no difference in his life. As with Mr E, this statement was contradicted by improvement on all questionnaires. Mr C saw psychotherapy as a waste of time as it had made no difference to his situation, since his faith strengthened his coping ("Some people need it, others don't"). His perception was confirmed by minimal psychometric change. Mrs G experienced psychotherapy positively, as she raised issues never considered before. However, like Mr E, she felt that she was still busy adapting. Her sense of ongoing adjustment was confirmed as she still evidenced full-blown PTSD at termination.

The main shortcomings of this study were the small sample size, necessitating a qualitative rather than quantitative approach, and the fact that both interventions were conducted by the same person. As EMDR® was still relatively new in SA at the time the research project took place, it was difficult finding a suitably trained person to assist with therapy, therefore also necessitating the small sample size. The fact that both interventions were conducted by the same person could, however, also be seen as a benefit for the project, as this minimised the impact of other nuisance variables. Another limitation of the study was that no long-term follow-up was available for all participants.

In conclusion: the effect of therapy was evaluated by examining participants' subjective experience of their diagnosis and situation, as well as their levels of depression, anxiety, satisfaction with life, positive-negative affect balance and sense of coherence. In almost all these aspects EMDR® tended to have been more successful in helping participants cope with their diagnosis than Supportive Therapy, as indicated by patients' subjective feedback and test results. Participants attending EMDR® experienced therapy more favourably than participants attending Supportive Therapy, indicating that pure attentional effects cannot explain the current findings. The hypothesis - that EMDR® can help patients who experience their cancer diagnoses and/or treatment as a trauma, to cope with it, as indicated by their subjective experience of the situation and their levels of depression, anxiety, satisfaction with life, positive-negative affect balance and sense of coherence - was thus supported by the research findings in the case of these particular participants.

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