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# EMDR and the Role of the Clinician in Psychotherapy Evaluation: Towards a More Comprehensive Integration of Science and Practice



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Eye Movement Desensitization and Reprocessing (EMDR) is an integrative psychotherapy approach that has been consistently evaluated as efficacious in the treatment of posttraumatic stress disorder (PTSD). The information processing model that guides its clinical application posits that EMDR should be effective in treating other psychological disorders that have experiential contributors. Research is needed to assess such applications. This special issue features three case series in which EMDR was applied to the treatment of complex PTSD, phobias, and chronic pain, respectively. The authors discuss deficits in the research literature, provide preliminary data on EMDR treatment of these conditions, and offer descriptive guidelines for evaluation that are achievable by the practicing clinician. Two additional articles offer preliminary data on physiological and cognitive/affective concomitants of therapeutic change. It is argued that clinicians should play a greater role in the rigorous and extensive examination of psychological treatments in the context of the exigencies of clinical practice. © 2002 Wiley Periodicals, Inc. *J Clin Psychol* 58: 1453–1463, 2002.

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Eye Movement Desensitization and Reprocessing (EMDR) is an integrative psychotherapy that synthesizes aspects of the major schools of psychology (Norcross & Shapiro, 2002; Shapiro, 1999, 2001a). Clinicians are coached to attend to the multidimensional indicators of change, as identified by the various approaches (e.g., Bohart & Greenberg, 2002; Lazarus & Lazarus, 2002; Shapiro, 2002b; van der Kolk, 2002; Wachtel, 2002). In addition, they are taught to apply EMDR according to certain principles expressed in an

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information processing model which addresses (a) the past experiences that have set the foundation for pathology and their manifestations (e.g., nightmares, physical sensation), (b) the present circumstances that trigger and/or exacerbate the condition, and (c) the creation and incorporation of templates for appropriate future action. This protocol is integrated within an eight-phase treatment approach (Shapiro, 2001a, 2002b; Shapiro & Maxfield, 2002).

Multiple controlled studies have indicated that EMDR is efficacious in the treatment of posttraumatic stress disorder (PTSD) (e.g., Carlson, Chemtob, Rusnak, Hedlund, & Muraoka, 1998; Ironson, Freund, Strauss, & Williams, 2002; Lee, Gavriel, Drummond, Richards, & Greenwald, 2002; Marcus, Marquis, & Sakai, 1997; Power, McGoldrick, & Brown, in press; Rothbaum, 1997; Scheck, Schaeffer, & Gillette, 1998; Wilson, Becker, & Tinker, 1995, 1997; for contemporary reviews, see Chemtob, Tolin, van der Kolk, & Pitman, 2000; Maxfield & Hyer, 2002; Perkins & Rouanzoin, 2002).<sup>1</sup> In addition to evaluation of PTSD symptoms, many of these studies, along with data-based case reports (e.g., Lazrove, Triffleman, Kite, McGlasshan, & Rounsaville, 1998; Levin, Lazrove, & van der Kolk, 1999) have provided evidence for robust clinical change on multiple measures of anxiety, depression, global distress, dimensions of personality, and most recently, indices of positive memory recall (Sprang, 2001). Internal analyses in some of the studies (e.g., Scheck et al., 1998; Wilson et al., 1995, 1997) have indicated that results are comparably robust with or without a PTSD diagnosis. These findings suggest that EMDR should be effective in the treatment of a variety of complaints.

The information processing model (Shapiro, 1991, 1995, 2001a, 2002b) used to guide EMDR practice was developed on the basis of clinical observation to explain clinical phenomena and therapeutic effects. It stipulates that unprocessed antecedent events can serve as the basis for a wide range of present pathology. As noted by Azrin (1996), while controlled research is lacking for EMDR treatment of disorders other than PTSD, Shapiro's model (1995) presents a reasonable theoretical basis for EMDR's more extended

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<sup>1</sup>Clinical variables are important considerations in evaluating differences in treatments. Although meta-analyses of the effects of EMDR and exposure therapy in the treatment of PTSD have revealed equal benefits for the two procedures in terms of overt symptoms (Davidson & Parker, 2001; Van Etten & Taylor, 1998), other criteria also must be weighed—an important one being the *efficiency* with which the treatment is applied. For example, both meta-analysis (Van Etten & Taylor, 1998) and direct comparison studies (e.g., Ironson et al., 2002; Lee et al., 2002; Power et al., in press) have demonstrated that the beneficial effects of EMDR can be obtained in much less treatment time and/or with less homework than is the case for exposure therapy. It also is important when evaluating the relative merits of EMDR and exposure to consider the rigor with which individual experiments have been carried out—something that was admittedly ignored in a recent meta-analysis by Davidson and Parker (2001). This is a serious omission when one considers the recent observation by Maxfield and Hyer (2002) and Sack, Lempa, and Lamprecht (2001) of a positive correlation between methodological rigor and magnitude of treatment effect. Fidelity of treatment application (i.e., assessed standardized application) also has been identified by these latter meta-analytic studies as a crucial variable.

The evaluation of appropriate clinical parameters also is important in dismantling studies. While the specific effects of the eye movement component remain unclear, research limitations include inappropriate control conditions and lack of attention to clinically significant variables, including efficiency and decrease in subjective distress (see Shapiro, 2001a, for a full review of parameters). There also are difficulties in the populations chosen for dismantling trials. In apparent response to the argument that analogue populations are inappropriate for clinical dismantling studies, Davidson & Parker (2001) undertook a further evaluation and reported marginal significance for the effects of eye movement with diagnosed clinical populations. However, even these trials should be further evaluated according to clinical parameters (e.g., sufficient treatment time; see Chemtob et al., 2000; Feske, 1998; Shapiro, 1999, 2001a, 2002b). Recent studies evaluating the eye movement component independently of the remainder of the EMDR clinical procedures (testing hypotheses related to working memory) compared eye movements to other types of dual attention tasks (Andrade, Kavanagh, & Baddeley, 1997; Kavanagh, Freese, Andrade, & May, 2001; Sharpley, Montgomery, & Scalzo, 1996; van den Hout, Muris, Salemink, & Kindt, 2001). These studies determined that eye movements resulted in significant decreases in the emotionality and vividness of autobiographical images, and that eye movements were superior to other tasks in achieving these results.

therapeutic use (also see Perkins & Rouanzoin, 2002; Ray & Zbik, 2001; Rogers & Silver, 2002; Siegel, 2002; Stickgold, 2002; van der Kolk, 2002). Clinical reports have indicated that the adaptive resolution of memories targeted for treatment can result in a comprehensive alteration of attendant cognition, affect, and behavior (e.g., Greenwald, 1999; Levin et al., 1999; Lipke, 2000; Lovett, 1999; Manfield, 1998; Shapiro, 2001a, 2002b; Silver & Rogers, 2002; Tinker & Wilson, 1999).

In short, EMDR is used to treat a variety of clinical conditions by processing memories of the experiences that contributed to their onset. However, a basic tenet of EMDR is that its application should dovetail with the accepted wisdom of each specialized area of clinical practice (Shapiro, 1995, 1998, 2001a). An example of this integration is the inauguration of a task force, led by two past presidents of the International Society for the Study of Dissociation, which wrote the guidelines for the use of EMDR with clients suffering from dissociative disorders (Fine et al., 1995). It is believed that the judicious integration of practice guidelines across psychological disciplines is best suited to meet the needs of both clients and clinicians (also see Shapiro, 2002a).

The emphasis on integration as a means of providing robust treatment across the clinical spectrum has had both positive and negative consequences. On the positive side, experts from diverse orientations and specialty areas have contributed to the knowledge base and led to extremely promising outcomes. For instance, Brown, McGoldrick, and Buchanan (1997) reported elimination of body dysmorphic disorder for five of seven consecutive patients after one to three EMDR sessions. This rapid improvement is consistent with the information processing model (Shapiro, 1991, 2001a, 2002b). It posits that comprehensive processing of memories of etiological events will result in the alteration of image, affect, cognition, sensation, and behavior. On the negative side, clinical application has far outdistanced research, and there is the concern that unevaluated integration can result in misapplication, as well as the dilution, rather than the enhancement, of clinical effects (Shapiro, 2001b).

The tension between science and practice has been well articulated by numerous authors and has recently surfaced in the debate regarding the advisability of attempting to devise a list of empirically supported treatments for various psychological disorders (e.g., Chambless & Ollendick, 2001; Elliott, 1998; Glass & Arnkoff, 1996; Kazdin, 1996; Kendall, 1998). Regardless of which side is taken in this discourse, there can be little doubt that few treatments for few clinical complaints have risen to the level of "well supported" by controlled research (Chambless et al., 1998). In fact, approximately a dozen treatments for a like number of complaints (e.g., headaches, bulimia, agoraphobia, and depression) were listed in the 1998 report, and the selection criteria for the treatments indicated only the *statistical* superiority of the procedure in question, but nothing about the absolute strength, robustness of the clinical effects, or rate of attrition. Consequently, clinicians often have been placed in the position of using anecdotal report and personal experience as the primary evidence in their treatment selection. The primary purpose of this special issue on EMDR is to allow practicing clinicians to articulate their decision-making process and to present preliminary data regarding outcome and/or the process of change.

A strength of this series of articles is that its authors were seasoned clinicians and experts in their specialized area of clinical application before their introduction to EMDR. Consequently, their therapeutic outcomes are evaluated within the context of their own clinical practice. The goals of the articles are to (a) provide preliminary data of various applications, (b) provide descriptive guidelines and set some obtainable standards for practicing therapists who desire to assess other clinical applications, (c) offer suggestions to therapists on additional ways to evaluate their work in a clinical setting, and (d) high-

light clinical parameters that should be taken into account by academic clinical researchers. Although presenting only preliminary data, these articles suggest avenues for more rigorous study and address, from the clinician's perspective, serious deficits in the clinical outcome literature.

The first three articles in this issue discuss the effectiveness of EMDR protocols for specific clinical conditions. Each author was asked to (a) give a brief review of the extant treatments for their chosen clinical population, (b) discuss the reasons they used EMDR in their treatment of these clients, (c) delineate the specific EMDR protocol they used, (d) present outcome data from their clinical practice, and (e) make suggestions for future research. Interestingly, each of the authors raises a different area of concern relevant to both research and clinical practice.

Korn and Leeds (2002) introduce the use of EMDR Resource Development and Installation (RDI) in the stabilization of clients with chronic severe trauma. Individuals who have experienced chronic interpersonal neglect and abuse often present with a wide range of symptoms (e.g., identity confusion, affect dysregulation, self-destructive behavior, and somatization) that are currently delineated as the associated features of PTSD (American Psychiatric Association, 2000). The disorder of Complex PTSD was proposed to incorporate this complex constellation of symptoms as diagnostic criteria (Pelcovitz et al., 1997; also see Herman, 1992). Korn and Leeds point out that while there is widespread consensus in the clinical community regarding the need for stabilization and phase-oriented treatment with this population (see Briere, 1996; Chu, 1998; Courtois, 1999; Herman, 1992), research has been limited to group-based interventions (Linehan, Armstrong, Suarez, Allmon, & Heard, 1991; Linehan, Tutek, Heard, & Armstrong, 1994; Najavits, Weiss, Shaw, & Muenz, 1998; Zlotnick et al., 1997). This small case series utilizing EMDR appears to be the first systematic report of standardized outcome data evaluating an individual stabilization technique with this population. In addition, the authors report that although patients with severe interpersonal trauma are ubiquitous in the clinical population, there are practically no controlled treatment outcome studies to guide the therapist. For instance, they note that while numerous EMDR studies of simple PTSD exist, the lack of affect regulation in a Complex PTSD population precludes trauma processing with EMDR until sufficient stabilization has been achieved (also see Ford & Kidd, 1998; Leeds, 1998; Leeds & Shapiro, 2000; Shapiro, 1995, 2001a). The proposed RDI protocol was developed to achieve the requisite client stabilization before addressing relevant trauma memories. The standardized and behavioral measures offer initial data regarding potential treatment effects with this population.

As indicated by De Jongh and colleagues (De Jongh, Ten Broeke, & Renssen, 1999) in an earlier article on the treatment of phobias with EMDR, exposure therapy has been identified as empirically well supported for the treatment of adult specific phobias. However, they argue that the use of in vivo exposure for a variety of phobias (e.g., fear of flight and of certain animals) is difficult to operationalize, and outcomes with imaginal exposure alone involve extensive treatment with only limited success. Surprisingly, although it is assumed by many that much controlled research already exists on therapeutic treatment outcomes with respect to the entire gamut of phobias, this is not the case. Rather, to date, controlled studies with standardized clinical treatments have been limited primarily to specific phobias such as spider, snake, and injection phobias while controlled research on other types of phobias (DSM-IV-TR; American Psychiatric Association, 2000) such as thunderstorms, driving, choking, and vomiting is generally lacking. The absence of such research has led reviewers to call for a more extensive evaluation of the various phobic conditions as well as the development of other treatment methods (Öst, 1997). The small case series on traumatically induced dental phobias described in this article (De Jongh,

van den Oord, & Ten Broeke, 2002) constitutes one of the few reports on this reportedly resistant population. Further, the authors suggest that differential effects found in studies on EMDR and other phobia treatments may be due to the etiological nature of the phobia, and discuss what they believe to be important criteria for treatment selection.

Grant and Threlfo (2002) note that while chronic pain has been reported to affect 70 to 80% of the adult population at one time or another, traditional theories underlying its treatment have not held up well with respect to recent neurobiological findings. In addition, current treatments have generally concentrated on coping with the pain rather than reducing it. While previous clinical observations have suggested the potential effectiveness of EMDR for the treatment of chronic pain (e.g., McCann, 1992), the case series presented by Grant and Threlfo offers the first data-based description of a specific treatment rationale. Grant and Threlfo provide a description of the treatment protocol, with its focus on both the emotional and sensory concomitants of pain. Given the reported deficiencies of the controlled outcome research with all treatments for this population (Morley, Eccleston, & Williams, 1999), together with their variable success, dropout, and relapse rates (Turk & Rudy, 1991), it is hoped that more rigorous study will be implemented to evaluate this integrative approach to pain reduction as well as the implications of its underlying theoretical model (Ray & Zbik, 2001; Shapiro, 2001a).

In addition to elucidating innovative treatment protocols and providing preliminary data, the initial three articles underscore an inherent difficulty facing the practicing clinician. While therapists often have been castigated for failing to rely on empirically supported treatments, this complaint can be countered by the equally valid argument that clinical outcome research has failed to keep pace with the demands and exigencies of daily clinical practice. The problems noted in these articles illustrate the difficulties therapists face when treating clients across the full range of diagnoses. First, some disorders (e.g., dissociative disorders, complex PTSD) have little or no controlled outcome research to guide treatment selection. Second, some empirically validated treatments are impractical. For example, it is difficult to treat choking and vomiting phobias or phobias of infrequent or dangerous stimuli (e.g., thunderstorms, wasps) with *in vivo* exposure prescriptions. Third, some empirically evaluated treatments have indicated variable patient adherence and success. Clinicians seeking to aid patients with chronic pain are left on their own to evaluate client characteristics and customize a form of treatment unmarred by potentially high dropout and relapse rates. For the clinician, client feedback is the primary guide to treatment choice and therapeutic practice (also see Seligman, 1995).

Despite the fact that the methodologies and data described in the three articles are only preliminary, they should prove useful to the practicing clinician. While traditional placebo controls and ABBA single-subject designs are untenable in clinical practice, the methods by which these data were obtained (e.g., behavioral reports, standardized measures, evaluation of results by a person other than the therapist or author of the protocol) are within the scope of practicing clinicians wishing to evaluate new applications. They represent a significant advance over the purely subjective anecdotal reports that often pervade innovative practice, or attempts to integrate diverse methodologies (see Shapiro, 2001b). In their delineation of protocols and clinical considerations, the authors have opened the door to more extensive research. It may be hoped that their work here will contribute to an understanding of the needs of practicing clinicians and encourage researchers to engage in more extensive fieldwork to evaluate various treatments in actual clinical settings.

The last two articles in this issue investigate the physiological and cognitive/affective concomitants of clinical change. Each study offers preliminary data regarding evaluations that can supplement clinical outcome studies. In both articles, relative client

improvement on standard clinical dimensions is examined in relation to additional concomitants of the change process. Both articles point to a potentially fruitful collaboration between the practicing clinician and expert analysis with the goal of elucidating the nature of therapeutic alteration.

The article by Heber, Kellner, and Yehuda (2002) reports on the evaluation of cortisol levels in the EMDR treatment of a client suffering from complex PTSD. This is the third published study to use EMDR to evaluate the physiological concomitants of successful trauma treatment (Levin et al., 1999; van der Kolk, Burbridge, & Suzuki, 1997; Wilson, Silver, Covi, & Foster, 1996). However, it constitutes the first report of the potential use of cortisol as a physiological measure for a psychological treatment. As the authors note, no other study has evaluated whether or to what extent observed alterations of cortisol levels in PTSD change as symptoms decline. The question of whether biological indicators can be altered through clinical treatment is a vital one in the field of traumatology. However, as this article indicates, the scientific evaluation must be informed by the clinical dimensions of the client being evaluated. Baseline measures and recovery patterns for single- versus multiple-trauma victims and adult-onset versus childhood-onset traumatization will need to be established. It is possible that single-subject designs will be better able to evaluate these parameters than multisubject controlled studies which mask individual differences. The current collaboration between a practicing clinician and biological researchers may prove extraordinarily beneficial. As the authors point out, the use of a noninvasive neuroendocrine measure has great potential because it reduces the possibility of habituation, as found with more conventional testing procedures.

The article by McCullough (2002) offers a preliminary analysis of the change processes in the EMDR treatment of trauma as well as a wide range of potential avenues of investigation. As an expert in both traumatology and the principles of STDP (McCullough, 1993, 1997), the author provides an excellent example of how client responses within actual treatment sessions can be used to investigate questions of interest to both theoreticians and clinicians. Her initial categorization of trauma and resolution responses offers not only an investigation of cognitive and affective interaction but suggests subcategories that may prove fruitful in designing future interventions to accelerate the treatment process by guiding clinicians to elicit responses that more closely mimic spontaneous processing (see Shapiro, 2001a). The research questions posed in McCullough's (2002) seminal work can potentially shed light on the theoretical models and mechanisms of change that have been proposed to underlie various trauma treatments. McCullough's (2002) method of utilizing the client response data provides an excellent basis to test the different predictions of desensitization, information reprocessing, and cognitive restructuring models. The proposed integration of STDP and EMDR also underscores the primary emphasis on robust treatment that many believe can better meet the needs of clients and practicing clinicians than adherence to a particular orientation (Beutler, 2000; Norcross & Goldfried, 1992; Norcross & Shapiro, 2002; Stricker & Gold, 1993).

In the aggregate, this array of articles highlights the need for a collaboration of science and practice in the evaluation of any form of psychotherapy. The discussions of treatment options and protocols proposed by practicing clinicians underscore the need for comprehensive selection criteria, delineated procedures, and multidimensional evaluations of clinically significant change. The process evaluations indicate that both physiological and cognitive/affective data can potentially be combined in future studies to chart the concomitants of change. Of special significance is that all five papers emphasize the need for appropriate attention to client characteristics in treatment selection and duration.

As previously noted, all papers in this issue offer preliminary data only. The need for more rigorous study is unquestionable. However, for many client populations, the lack of



solid clinical outcome data places the practicing clinician at the center of decision-making processes. Further, even when treatments are empirically validated, the exigencies of therapy (e.g., practicality, compliance, efficiency, maintenance of effects, robust change) may influence treatment selection. It is hoped that future investigations will recognize such variables while maintaining rigorous adherence to scientific and clinical parameters. When possible, standardized outcome measures should be supplemented with investigations of multidimensional behavioral, affective, cognitive, and physiological concomitants of change. The possibility of such robust integration promises to open new frontiers of understanding for both clinician and scientist alike.

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