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Eye Movement Desensitization and Reprocessing in the Treatment of Panic Disorder With Agoraphobia

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This article describes a comprehensive treatment of a case of panic disorder with agoraphobia. A thorough history taking revealed that experiential contributors had a pivotal role in the development of the condition. Therefore, eye movement desensitization and reprocessing (EMDR) was used to address early traumatic events as well as the present stimuli that caused disturbance and had maintained symptomatology for the past 12 years. Although the client's symptoms were resolved after 15 sessions, EMDR was also effective in addressing future behaviors and resolving anticipatory anxiety. During EMDR processing, the client demonstrated emotional and cognitive changes consistent with trauma resolution, insight, and personal growth. The client gradually enacted functional new behaviors spontaneously as treatment unfolded. The therapeutic process and the targets are described in detail.

Keywords: *panic disorder; agoraphobia; eye movement desensitization and reprocessing; trauma*

1 Theoretical and Research Basis

Eye movement desensitization and reprocessing (EMDR) is an integrative psychotherapy that has been extensively evaluated in its approach to trauma and posttraumatic stress disorder (PTSD). In 1998, the American Psychological Association's Division 12 Task Force on Psychological Interventions designated EMDR, along with exposure therapy and stress inoculation therapy, to be probably efficacious in the treatment of trauma (Chambless et al., 1998). The International Society for Traumatic Stress Studies (Chemtob, Tolin, van der Kolk, & Pitman, 2000), the Israeli National Council for Mental Health (Bleich, Kotler, Kutz, & Shaley, 2002), and the Northern Ireland Department of Health (Clinical Resource Efficiency Support Team, 2003) soon followed by also designating EMDR as an effective form of treatment for PTSD and victims of terror. Most recently, the U.S. Departments of Defense and Veterans Affairs (2004) and the American Psychiatric Association (2004) have given EMDR the highest level of recommendation.

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Since its introduction in 1989, several controlled studies have compared EMDR with other types of treatment for PTSD. The findings indicate that EMDR and cognitive behavioral therapy (CBT), including exposure, appear to be equally effective, although EMDR may involve fewer treatment sessions and requires no daily homework (Ironson, Freund, Strauss, & Williams, 2002; Lee, Gavriel, Drummond, Richards, & Greenwald, 2002; Power et al., 2002; Rothbaum, 2001; Taylor, Thordarson, Maxfield, Fedoroff, Lovell, & Ogrodniczuk, 2003; Vaughan et al., 1994). Civilian studies of single-trauma victims (Lee et al., 2002; Marcus, Marquis, & Sakai, 1997; Rothbaum, 1997; Scheck, Schaeffer, & Gillette, 1998; Wilson, Becker, & Tinker, 1995, 1997) indicate a 77% to 100% remission of PTSD after three to six sessions of EMDR treatment.

Although clearly efficacious in its approach to trauma, published case histories also provide support for the use of EMDR in the treatment of a variety of disorders, including those related to anxiety, such as phobia and panic disorder (De Jongh & Ten Broeke, 1998; De Jongh, Ten Broeke, & Renssen, 1999; Goldstein & Feske, 1994; Nadler, 1996; Shapiro & Forrest, 1997). However, most of the controlled phobia research failed to use the EMDR protocol in its entirety (see De Jongh et al., 1999; De Jongh, Van den Oord, & Ten Broeke, 2002; Shapiro, 1999), a factor that may explain the minimal to modest success of EMDR reported in their findings. Studies using a greater length of treatment demonstrated positive effects in the treatment of panic disorder (Feske & Goldstein, 1997), although not with panic-disordered participants also experiencing agoraphobia (Goldstein, de Beurs, Chambless, & Wilson, 2000). As a possible explanation for these findings, Goldstein noted that "people with agoraphobia are more avoidant of intense affect, that they have highly diffused fear networks, and that they have difficulty making accurate cause-effect attribution for anxiety and fear responses" (Shapiro, 2001, p. 363). Thus, as the client is at risk of becoming overwhelmed, thoroughly preparing the client to tolerate the intense affect that often accompanies the processing phase of EMDR is an essential component of therapy.

Traditionally, treatments for panic disorder, with or without agoraphobia, have consisted of pharmacological and CBT approaches, both of which are considered effective treatments for this disorder (Sturpe & Weissman, 2002). However, there is some evidence to suggest that use of benzodiazepines to alleviate panic symptoms as needed (as opposed to more regular use), is related to poorer CBT outcomes (Westra, Stewart, & Conrad, 2002). Interoceptive exposure and cognitive therapy alone appear to be equally effective in treating panic disorder without agoraphobia (Arntz, 2002), and panic-control treatment alone and in vivo exposure both effectively reduce panic-related fears and agoraphobia (Craske et al., 2002). Furthermore, the positive treatment effects associated with panic-control treatment, with and without exposure, appear to positively affect other comorbid conditions (Tsao, Mystkowski, Zucker, & Craske, 2002). Some therapies requiring minimal therapist contact, such as various forms of bibliotherapy, computer-administered vicarious exposure, problem-solving, palmtop computer-administered therapy, and some forms of CBT have shown some promise in the treatment of panic symptoms, although clients with agoraphobia appear to require more therapist-initiated exposure (see Newman, Erickson, Przeworski, & Dzus, 2003, for a review).

Although CBT has been established as an efficacious form of treatment for panic disorders, less is known about its effectiveness over time. Analyses of long-term outcomes (van Balkom, de Beurs, Lange, & Van Dyck, 1999) indicated that the clinical effectiveness of

various evidence-based treatments is limited, even when their efficacy had been demonstrated in a controlled trial. The results further suggest that patients recover from a short course of treatment but that the vast majority of patients need prolonged additional treatment. As noted by Ost, Thulin, and Ramnerö (2004), "there is still much room for further development of CBT methods for PDA [panic disorder with agoraphobia] because only 60% of the patients treated in RCTs [randomized controlled trials] published since 1990 have achieved a clinically significant improvement" (p. 1106).

Given these findings and the difficulty that many clients experience in undergoing direct therapeutic exposure to their fear and body sensations, EMDR is emerging as a viable treatment alternative. However, to understand how EMDR may be beneficial in the treatment of panic disorders, with or without agoraphobia, an explanation of the theoretical framework for EMDR, the adaptive information processing (AIP; Shapiro, 1995, 2001, 2002) model, is necessary. In brief, the AIP model is based on the idea that the neurobiological system naturally attempts to process current perceptions in a manner that promotes associations to relevant stored information, to facilitate learning, and to relieve emotional distress. The resulting transfer of information from implicit to explicit memory systems (Shapiro, 2001; Stickgold, 2002) allows disturbing thoughts, emotions, and bodily sensations to be resolved by facilitating access to the stored material and linking it with more adaptive information. However, the intense affect and subsequent dissociation that accompany trauma may interfere with this process, causing the information (e.g., images, thoughts, emotions, and sensations) to be dysfunctionally stored within the memory network. Because the event is isolated within the network, preventing associations with adaptive information, the unresolved material is easily triggered during similar encounters, often leading to intrusive thoughts, emotions, and somatic responses. The consequent habitual response patterns can manifest in characterological difficulties, psychopathology, and the avoidance behaviors associated with phobias and panic disorders.

Does the AIP model have a place among the models of fear acquisition? There is much debate in the literature about whether fear is acquired through associative conditioning or whether it is nonassociative (innate) by nature (Davey, 2002; Kleinknecht, 2002; Marks, 2002; McNally, 2002; Mineka & Ohman, 2002; Poulton & Menzies, 2002a, 2002b). Some theorists believe that fear acquisition requires an aversive event that serves as an associative learning experience, although memory of the event may not be accessible within the memory network (Kleinknecht, 2002; Mineka & Ohman, 2002). Other theorists support the nonassociative model, which proposes that certain fears have been naturally selected because of their ability to provide safety (e.g., fear of heights, water, strangers, etc.), and are therefore innate in all humans (Poulton & Menzies, 2002a, 2002b). Because exposure to the fear-provoking stimuli over time facilitates habituation, those with limited opportunities of exposure are at risk of phobias (Poulton & Menzies, 2002a, 2002b). The AIP model would emphasize that regardless of origin, the problem is essentially formed and sustained by the inability of adaptive information to link with the network containing information regarding the feared event.

Although proponents of the conditioning model might appreciate EMDR ability to access and target an etiological conditioning event, it is also possible to address past, present, and future symptoms in the absence of a known etiological event. Thus, EMDR has the ability to address panic and phobia regardless of the method by which the symptoms, or

fear, were acquired. Once the appropriate targets are chosen, the EMDR protocol addresses all experiential components (images, thoughts, emotions, bodily sensations) to stimulate the information processing system as explained by the AIP model.

2 Case Presentation

In the following case, EMDR was used to successfully address panic disorder with agoraphobia. Adriana presented for treatment at the age of 32, with a diagnosis of panic disorder with agoraphobia. Although her symptoms first appeared at the age of 20, by the time of treatment, her panic attacks were occurring once or twice per month (with some episodes occurring at night).

3 Presenting Complaints

Adriana was reporting a constant underlying tension, worry, and pervasive apprehension for the next panic attack, which contributed to her agoraphobic avoidance. A daily activity most affected by Adriana's panic attacks was driving. Eight years previously, she had experienced an intense panic attack (the worst one) and had not been able to drive alone without fear ever since. The panic attacks were unexpected and invariably occurred when she was driving alone. Her symptoms included a feeling of choking (because of a disturbance in her throat), tachycardia, sweating, feeling faint, tingling in her hands, leg tremors, visual disturbances, and a fear of dying. Eventually, Adriana's agoraphobia extended beyond her fear of being alone in the car to include any place where it might be difficult to escape or to receive help in case of a panic attack. These included being blocked in a traffic jam, shopping, and riding elevators.

Over time, Adriana became afraid of being alone, even when in her own home. Consequently, she actively avoided being alone (at home or outside) and performed all of her daily activities with an accompanying person. Naturally, this significantly affected her ability to function, in that it substantially limited her outings. Adriana was unable to go shopping or to the supermarket and even postponed her wedding several times. Using the subjective units of disturbance scale (SUD; Wolpe, 1958), where 0 reflects no disturbance and 10 the highest imaginable, Adriana rated her anxiety-provoking situations to range from being in a traffic jam with an accompanying person (SUD = 4) to driving to work alone (SUD = 10).

4 History

During the first phase of EMDR treatment, a complete history is taken to identify pertinent information for a focused treatment plan. Past events related to the distress are investigated, as well as present situations triggering the disorder and behaviors or skills the client requires. In Adriana's case, it was discovered during this phase of treatment that there were no other cases of panic disorders or mental problems in her family. However, her father had

a car accident when Adriana was 10 years old and subsequently avoided driving for 2 years, instead delegating this task to his wife. Adriana's mother was described as an apprehensive person, although without a diagnosable pathology.

When Adriana was a few months old, her parents took her to live with her grandparents for practical reasons (they had to wake up early to go to work). They used to visit her after work on their way home. The family was finally reunited after they purchased a home near the grandparents when Adriana's mother was pregnant with her brother. The birth of this brother also involved a traumatic experience. The day he was born, Adriana (then 8 years old) was trapped in the elevator, and her distress was intensified by the fact that her mother was not there to help and comfort her.

Shortly after her brother's birth, another traumatic event occurred. When Adriana was 9 years of age, some burglars entered the property, after presuming that nobody was home. The family heard noises in the garden and saw some men wearing balaclavas. The men immediately ran away. Adriana recalled her mother exclaiming, "Who knows what they would have done to us had they entered and found us here!" Consequently, Adriana experienced nightmares for years and was afraid to remain home alone.

Prior to the onset of Adriana's panic attacks, two particular events appeared significant, in terms of the development of her panic disorder. The first, a cannabis intoxication, appeared to precipitate the first anxiety attack. After smoking marijuana, Adriana experienced intense perspiration, visual disturbances, and a strong feeling of anguish while driving her car. A month after this episode, she underwent an appendectomy. Another month later, she suffered her first real panic attack while she was driving.

Adriana reported several unsuccessful psychotherapy cycles over the years. She had also received pharmacological treatment because the onset of the disorder and the specific medications had been changed several times. Pharmacological treatment did not appear to ameliorate her panic symptoms.

5 Assessment

Adriana recorded her panic symptoms in a weekly diary for the first 2 weeks to assess her behavioral, physiological, cognitive, and emotional responses. She was asked to write the date, the situation, the trigger, the intensity (from 0 to 10), the duration, who was with her at the time of the attack, and the symptoms. The diary was also kept for 2 weeks at the posttreatment and at the follow-up after 1 year. Recovery was tracked by monitoring the following baseline symptoms:

Panic Attacks at a 7 to 8 SUD Level

Pervasive tension, worry, and fear three to four times a week before leaving the home and before leaving the office with an intensity of SUD of about 5.

Physical symptoms were "need for air," dizziness, heart rate acceleration, weakness at the legs, and internal shaking. The trigger was the fear of fear.

Avoidance of situations that could provoke panic attacks (e.g., driving by herself, going to the supermarket, staying at home alone, and so on).

Adriana stated that because she always had an accompanying person in anxiety-provoking situations, her diary was only partial and did not reflect all the symptoms caused by the disorder.

In addition to the elimination of the panic attacks and the anticipatory anxiety, Adriana articulated the treatment goals in four domains:

Behavioral

To be able to drive the car by herself (e.g., to work, to the supermarket, to the hairdresser) without depending on someone else.

To be able to do pleasant things (e.g., window shopping, going out with a friend, and so on), enjoying them, and feeling free to do them.

Cognitive

To overcome and change the belief of not feeling well, to no longer perceive the car and her house as a potential danger or threat.

To change the tendency of seeing and anticipating catastrophes.

Physiological

To eliminate and resolve accelerated heart rate, shaking, feeling of not being able to breathe, dizziness, and weakness at the legs.

To learn to relax to face these situations with no body disturbance.

Emotional

To learn to master her fear and manage her emotions (fear, tension, worry, blocks).

To overcome the feeling of tension in places where an accessible exit is not visible (e.g., tunnels, movies, traffic jams, and so on).

6 Case Conceptualization

Many clinicians, regardless of their theoretical approach, believe that small and severe traumas experienced in early childhood have a significant impact on the insurgence of psychological distress. Raskin, Peeke, Dikman, and Pinker (1982) reviewed the antecedents of anxiety disorders and found that 53% of the participants suffering from panic disorders had experienced separation from their parents in childhood or adolescence, whether through death, divorce, or other means. These findings also indicated that the impact of traumatic life events depended on the age at which they occurred. Brown, Harris, and Eales (1993) confirmed the impact of abandonment and separation on the development of panic disorders, adding that exposure to unpredictable and uncontrollable stimuli in childhood may also contribute to such symptoms. These results are consistent with the AIP theory (Shapiro, 2001, 2002) described previously, in that these events may have created enough distress to impair the information processing of the event, resulting in stored affects and sensations that form the base of the pathology.

Although most would acknowledge that the intensity of a traumatic event contributes to the impact on the individual, the participants's mental processing skills must also be considered. For instance, a harmless event for an adult may be traumatic for a child. According to the AIP model, these events are considered *small t* trauma, although the events needed to diagnose PTSD such as accidents and natural disasters are considered *large T* traumas (see Shapiro, 2001, 2002). As mentioned previously, if the adult's neurological structure is still affected by traces of an insufficiently processed traumatic childhood experience, an apparently neutral current event can be experienced by the participant as anguishing and elicit an intense anxiety reaction.

In addition to the role of events per se (abuse, accidents, separations, etc.), parental attitudes must also be considered. Parental apprehension, strict parenting approaches, and rigidity tend to influence children's lives, thereby reducing their ability to explore independently and to achieve self-confidence (Parker, 1981). Converting these parental attitudes into targets through the identification of representative events will allow them to be processed through the EMDR protocol.

The correlation between symptoms and previous negative or stressful experiences is particularly clear in panic disorders. In fact, with reference to the role of unpleasant events in the etiology and maintenance of emotional disturbance, memory plays a mediating role (Williams, 1996) between event and psychopathology. Therefore, working on negative and damaging experiences is considered a key to accessing and changing dysfunctional knowledge and behavior. Given EMDR's proven effectiveness in this regard, one would expect it to effectively address the traumatic etiological events related to panic disorders. However, before using EMDR, therapists must take a thorough client history to identify and define the experiences that have created a vulnerability to these symptoms. The first panic attack is often the climax of a chain of stressful events, occurring once life circumstances are no longer conducive to escaping into avoidance (Fava & Mangelli, 1999). Often panic attacks occur during times of high stress, generated by problems at school or at work, loss of a loved one, as well as after a surgery, an accident, or the birth of a child.

Because the feeling of powerlessness and loss of control typical of panic disorders configure a cognitive and emotional schema often learned after experiencing disturbing events, the great challenge in psychotherapy is to identify and to reconstruct other situations associated with similar feelings of panic or distress (Fernandez, 2001). Moreover, the therapeutic goal is to identify the moment and the situation responsible for these dysfunctional learning experiences. Often, this involves incidents of abuse, parental arguments, accidents, and separations or losses.

Because these experiences have been dysfunctionally stored in the memory, information is fragmented, stored as sensory impressions, and later experienced as anxiety and distress. Evidence suggests that symptoms experienced during panic attacks (anxiety, extreme agitation, exaggerated startle response, irrational thinking, and blocking beliefs, harrowing emotions, eventual depersonalization and derealization experiences) become traumatic experiences in their own right (McNally & Lukach, 1992). Therefore, it is necessary to address the memories of particularly traumatic panic attacks, including the first, the worst, the last, and a projected future event. EMDR is an integrative psychotherapy that uses an 8-phase treatment approach and standardized phobia protocol to address these issues (Shapiro, 2001).

7 Course of Treatment and Assessment of Progress

Unlike CBT, which focuses primarily on exposure to situations and body sensations through therapist-assisted exposure, the primary focus of EMDR treatment is in-session processing of etiological events, triggers, and new behaviors. Targeting individual memories often leads to insights, and the revealing of other triggers and events for subsequent processing. In all, 12 sessions of EMDR focused on processing of etiological memories and triggers and 3 on development and enhancement of future behaviors. All in vivo exposure was self-initiated by the client and done without therapist assistance.

The history-taking phase was conducted in the first three sessions. During the second phase of EMDR treatment (*client preparation*), a therapeutic alliance is strengthened between the client and the clinician, a task that is consistent with any psychotherapeutic process. The findings of Goldstein et al. (2000; see also Shapiro, 2001) underscore the need to allocate adequate time to establish a therapeutic alliance and prepare the client. Consequently, alliance building and three sessions of psychoeducation on anxiety symptoms, including self-control techniques, were conducted before reprocessing began. The EMDR process and effects were explained to Adriana, and she was provided with a *safe place* exercise, which asked her to bring up an image of a place that elicited a positive feeling of well-being (e.g., walking on her bare feet on the green grass at her uncle's farm, feeling the softness and the freshness of the grass under her feet). While concentrating on this image, she felt lightness on her whole body and associated it to the word *nature*. The image, emotions, and physical sensations were then increased through simultaneous pairing with bilateral stimulation (see Shapiro, 2001). This exercise is a very nonthreatening way to introduce EMDR to the client. Adriana would then be able to use this exercise to regain her emotional calmness if disturbing material was re-experienced during therapy or between sessions.

During the first history-taking and preparation sessions, Adriana had gained awareness of the issues or situations that contributed to this disorder and was able to identify the relevant triggers. This information was key in formulating the treatment plan, which involved a very specific method of addressing these issues. Allowing six sessions for history-taking and preparation fostered a sense of coparticipation in Adriana and became central to the psychoeducation, which set the stage for subsequent reprocessing. Explanations to Adriana regarding the standard EMDR protocol (Shapiro, 2001) that targets etiological events that are experiential contributors to the disorder, recent triggers, and future templates became part of the psychoeducation process.

During the third phase of EMDR treatment (*assessment*), the client and the clinician identify the target to be processed in that session and choose the image that represents the worst part of the traumatic event, along with a statement that expresses a current negative belief about herself (e.g., "I am in danger"). Then the therapist encourages the client to find a related positive statement that she would like to believe instead (e.g., "I am safe now"). The validity of cognition scale (VOC; 1 = *feels completely false* to 7 = *feels completely true*; Shapiro, 1989, 2001) is used to obtain a rating of how true the positive statement feels. The client also identifies the negative emotions (e.g., fear, anger) linked to the memory and to the negative statement "I am in danger." The intensity of these emotions is measured using the SUD scale and the accompanying bodily sensations (e.g., tension, spasms) are identified.

To illustrate, it was decided to target Adriana's first panic attack for EMDR treatment because it was the most disturbing event in the history of her disorder. She viewed it as an event that was influencing her ability to function daily. As she described it,

> I was discharged from the hospital . . . . A few days later . . . I went out for some shopping . . . . While I was driving near my house, I was suddenly caught by an incredible agitation. I felt I couldn't breathe, as if I had a cramp, but I could do nothing . . . everything was blocked . . . my body tingled . . . my head was spinning. I was very scared of dying. Terror. I couldn't breathe . . . . I don't know how, but I succeeded to return home, I laid on the couch, but these feelings did not go away. On the contrary, they got worse.

For Adriana, the most anguishing memory in this case was the image related to being in the car, still trying to breathe but unable to inhale air. She felt a pain in her chest, her heart accelerated, and she felt "a terrible feeling of death."

Adriana, guided by her therapist, linked the image of this scene, to a negative self-belief "I cannot control the situation." The positive statement, that is, what she would rather think about herself ("I can handle the situation") did not feel very true to Adriana (VOC = 2 of 7). The emotion linked to this memory (SUD = 10 of 10) was terror, and the distress was noticed in the arms, chest, and legs.

During the fourth phase of EMDR treatment (*desensitization*), eye movements or other forms of bilateral stimulation are used while the client focuses on the image, negative cognition, and bodily sensations. This enables the dual focus of attention, whereby the client concentrates on her inner experience associated with the traumatic memory while also attending to the external bilateral stimulation administered by the therapist. The therapist guides the client through several sets of eye movements until the SUD level has decreased to a value of 0 or 1 (e.g., when the reaction is appropriate to the present circumstances). After each set of eye movements, the therapist asks the client, "What do you notice now?" to facilitate the verbalization of any new associations that might emerge.

After 10 sets of eye movements, Adriana noted that her distress had substantially reduced. The scene of the first panic attack had faded and other memories, associations, and sensations began to emerge. The positive associations that emerged over time were increasingly adaptive and provided evidence that Adriana was starting to distance herself emotionally from the situation. This was evident by such statements as "looking at this scene does not bother me" or "I can handle these situations." After further sets of eye movements, Adriana gradually produced several meaningful memories and associations. For instance, she reported seeing herself handling that situation because she managed to reach home in spite of her feelings. In fact she noted, "All things considered, I never lost control . . ."

During the next phase of treatment (*installation*), the positive belief is strengthened after the client no longer feels the distress related to the targeted traumatic memory. This is obtained in practice by associating the positive cognition ("I can handle these situations") with the traumatic experience and adding eye movements. Installation is considered complete when the client considers her positive statements totally true (VOC = 7).

For Adriana, the positive statements included "I can trust my ability to manage emotions" or "I can handle these situations." The clinician instructed Adriana to mentally recall the distressing event (first panic attack) and to associate it with the positive statement during

the sets of eye movements. For Adriana, these statements were particularly meaningful because she could connect them to other similar events (other panic-related episodes and subsequent avoidance situations). Therefore, the associative link between the positive belief and the memory of the disturbing event is strengthened so that when the traumatic event is recalled, it is linked to the new positive belief (e.g., "I can handle these situations"). The positive belief may also generalize to other similar situations that have occurred in the client's life and may change the client's attitude toward present and future life events. This phase, focusing on the installation of the positive self-assessment, is a crucial step toward a positive therapeutic outcome.

After installation, the client is instructed to recall the original event while simultaneously focusing on the words associated with the positive cognition (e.g., "I can handle the situation") and mentally scanning her entire body from the top down. The purpose of this phase (*body scan*) is to identify any residual tension. After processing the first panic attack, Adriana still had some tension in her arms and legs, which was resolved with additional sets of eye movements. After each processing session, the *closure* phase prepared Adriana for the processing that may continue in the following hours or days. She was encouraged to keep a log of thoughts, dreams, and memories that emerged between sessions. The *re-evaluation* phase took place at the beginning of each subsequent session. Adriana was asked to recall the previously processed traumatic event and to evaluate her response. This determines whether reprocessing effects have been maintained. In this phase, new possible targets, memories, or situations to be reprocessed with the EMDR protocol may emerge.

The reprocessing of the first panic attack led Adriana to identify her mother's facial expression as another important target. In fact, when she spoke about her disorder, Adriana often related it to her mother's usual attitude. She linked her urge to return home immediately (when she went out) to the distress always conveyed by her mother, which was related to her need to know that all the family was together at home and safe, as if in a nest. Adriana reported identifying with her mother's states of mind and believed that this explained the lack of self-confidence and permanent state of alert she had been experiencing since the onset of her disorder.

The image representing this attitude of the mother, the negative and positive cognitions, the emotion, the SUD level, and body location were identified. In fact, each target was treated in the same way as the first panic attack according to the standard EMDR protocol (Shapiro, 2001). The image associated with Adriana's issue with her mother was her mother's (typical) expression of fear and concern. Her negative cognition was "I am powerless" and the preferred positive cognition was "I can handle the situation." This was not very believable to Adriana as she reported her VOC to be 1. The emotion associated with this target was anguish. Adriana felt significantly distressed as she recalled this target memory, as indicated by an SUD level of 8, and felt discomfort in her chest and throat.

After reprocessing this target, Adriana was able to recall that typical expression of her mother without distress. She noted that the image was very distant and differentiated from her. This was reflected in expressions such as "I am myself," "I can choose what I want," "I am different from my mother," "I must not take her literally," "I can hold only onto the things I need," and "I am not alone after all." Although Adriana felt that her mother's image was with her, she no longer believed that her mother needed help and viewed her as stable.

The following week, Adriana reported that the distress associated with her mother's typical expression was still resolved, and she felt appropriately detached from her. She very clearly associated her current difficulties with the traumatic event experienced at the age of 9 (when the burglars came into her garden). Thus, the image of these men wearing balaclavas, about to enter her house, became the next EMDR target. As she recalled this event and focused on this image, she reported the negative cognition as "I am in danger," which was associated with an intense fear (SUD = 8) that she felt in her heart. This memory was processed to resolution, that is, until Adriana could think about this episode without distress. The following week, Adriana remained at home alone for an hour, which was a vast improvement, as she had been unable to stay home alone, even for 1 minute. Adriana reported experiencing just a few moments of anxiety, lasting 2 or 3 minutes, but no panic attacks. She realized she no longer worried about feeling sick, especially in the gym, and was able to walk alone for short distances. Reevaluation of the distress associated with the previous week's target was zero (no distress) and the VOC was 7 for the positive cognition "I am safe."

After processing this episode, Adriana realized that despite the nightmares and the intense fear of remaining home alone (after the traumatic event of the burglars), the first key episode of great distress directly related to the panic disorder feelings occurred at the age of 19, when she smoked hashish with a friend and drove home feeling physically ill. Adriana pictured herself in the car, feeling sick and unable to see properly while attempting to get home. The negative cognition associated with this memory was "I am going to die" and the emotion presently felt while recalling the event, was fear (SUD = 7), located in her throat.

During reprocessing, it became evident that her fear of driving developed after that night. Also, because she still experienced physical discomfort after she reached home (eyes rotation, suffocation, anguish, etc.), she realized that this was the point at which she developed her fear of being alone. This fear was associated with the anxiety provoking thought "What if I feel sick?" During the EMDR session, she experienced the same feelings she had while under the influence of the hashish. Adriana eventually understood the influence that this experience had on her fear of letting herself go, of falling asleep, and on her constant state of alert. Being sick in the car created a feeling of distress associated with the situation and engendered the panic disorder as consequence of classic conditioning.

The next session focused on an event that preceded her first real panic attack, Adriana's appendectomy. When asked to recall the surgery, she reported a strong feeling in her throat. The image associated with this memory was Adriana waking up from surgery, crying, and looking for her mother. The negative cognition was "I am in danger" and the preferred positive cognition was "I am safe," although this was not very believable to her (VOC = 2). While recalling this event, Adriana felt anguish, which was very distressing (SUD = 7) and was noticed in her throat.

During reprocessing, Adriana associated the feeling in her throat to the fact that she was intubated. She recalled waking up during surgery, unable to inform the doctors that she was feeling everything. The doctors eventually realized she was awake and increased the anesthesia to appropriate levels. Apparently, the somatic memory related to being intubated at a time when she felt acute panic had remained stored in her memory network (Shapiro, 2001). The memory was never visually conscious but was expressed through the feeling in her throat that was generally associated with her anxiety. It was only during the EMDR session that she consciously realized the associative connection.

The following week the throat problem had disappeared, and the experience was considered part of her life like other events. She reported no panic attacks during the week and success in terms of her ability to remain at home alone. The ability to remain home alone continued to consolidate during the following weeks. Adriana had been able to travel to another town with her fiancé and did not felt anxious on the highway, nor in the gym. It appeared that her surgery experience was a key factor in her anxiety disorder. At this point, however, Adriana did not feel ready to attempt driving alone.

After reprocessing the memories regarding the burglars, the hashish evening, and the surgery with EMDR, Adriana no longer suffered from not seeing or failing to focus when she entered the car. However, the fear associated with the thought "I am far away from home" remained and triggered anxiety. This appeared to be related to the fear of being separated from her parents (as in her childhood story) and to her worst panic attack, which was so traumatic that it led her to avoid being alone and to need constantly her parents' presence to feel reassured.

Adriana's worst panic attack was then targeted to resolve her need to be accompanied by her father and to facilitate the transition from her family house to the one built with her fiancé. She ascribed her chronic disorder not only to her initial disturbing experiences but also to her panic attacks over the years. In fact, after her worst panic attack, Adriana started asking her parents to drive her to work, and since her father's retirement, that was his primary occupation. As Adriana began to address her fear of driving, she pictured her worst panic attack, which occurred in her idle car. Her negative cognition was "I am in danger (because I am alone)" and she wanted to believe "I am safe" (VOC = 2). She felt fear (SUD = 8) in her chest as she recalled this event. The event was successfully processed, because at the end of the EMDR session, she could recall the memory of the worst panic attack and feel no disturbance. The client was asked how true she felt "I'm safe" from 1 to 7 and she said "7". Then, she said she could think of the incident and of the words "I'm safe" feeling her body relaxed and light.

The following week, Adriana reported going to a large city (Milan) with her fiancé, driving the car in unknown areas, and feeling relaxed. Once in town, she went to a large bookstore on her own. While her fiancé looked for his books in other sections of the store, she felt totally independent and relaxed. She even ventured in the underground floors of the store alone. At this point in therapy, Adriana was able to recall her worst panic attack without negative thoughts and distress (SUD = 0, and VOC = 7). Hence, she spent entire days home alone and waited in a relaxed state. She was able to drive with her fiancé on the highway and to spontaneously visit the supermarket alone. Motivation and the desire to take initiatives increased as never before. Before entering this therapeutic path, she had no motivation or initiative to enact these behaviors. On the contrary, she was totally concentrated on avoiding and maintaining the status quo.

8 Complicating Factors

Despite these changes, Adriana was still reporting anxiety when she had to drive alone. A review of the remaining sessions indicated that this behavior was reinforced by secondary gain fed by parental loyalty and attachment. The foundation of the remaining dysfunctional

behavior became clear in subsequent processing. She recognized that because her father was the accompanying person, this put her in the role of managing him and his time (especially since he retired). This sense of control reinforced her pathology. Besides this, her perception of having her parents available to do her driving made her feel somewhat special because in those circumstances, they were dedicated to her. This aspect was addressed with her and at the end she realized that she was special to her parents unconditionally and that she did not need to have anxiety or panic attacks to feel it.

The next EMDR target was the last significant panic attack (October, 2003). The image related to this panic attack was Adriana once again sitting in her idle car, screaming for her fiancé. She felt agitated (SUD = 8/9), characterized by heaving breathing and tremors in her legs. Her negative cognition was "I am in danger" and she wanted to believe "I am safe" (VOC = 2). After processing this memory, the level of disturbance the client reported when recalling it was zero and the words "I am safe" were felt to be completely true (VOC = 7). The following week, Adriana reported driving alone to her fiancé's for the first time. She accomplished this twice (Tuesday and Thursday) and was able to manage feelings of anxiety. She reported that the anxiety she was still experiencing could be associated to the car accident her father had when she was a child and to the fact that he subsequently stopped driving for a long time and delegated that task to her mother. Adriana realized that she had learned and followed the same model. This target was then processed.

Reprocessing the memory of her father in the passenger seat while her mother drove also led to some important realizations. Adriana eventually understood that she and her father bonded to each other because of the panic attacks; it gave him a role and improved their relationship. Although her father had historically been rigid and irritable, he became a source of support to Adriana once she began suffering from this anxiety disorder. During the course of the session, it was revealed that during his bursts of anger, her father used to threaten to throw her out of the house, causing Adriana to feel terrified of being rejected and excluded. She became convinced that she had postponed her wedding (officially this was because of the panic disorder) to avoid leaving her parents' house where she was able to receive constant reassurance that she was accepted. By accompanying Adriana, her father was conveying the message that "he is there" and that "he cares for her."

The panic disorder and the anxiety had allowed her to remain at home and to establish a privileged relationship with her father (this alliance and closeness did not exist before because he was physically distant). It is clear that this was a secondary gain of her anxiety disorder. The session ended with Adriana acknowledging the positive cognition "now I am free." Given the positive role modeling of her father (in that he was able to overcome the accident and his fear of driving), she concluded that she could be close to her father in other ways and that she did not need to be ill to have a good relationship with him. Her realization and analysis of the secondary gains and the impact on the father-daughter relationship occurred spontaneously during the EMDR session.

The following week, Adriana reported driving her fiancé's car (bigger than hers and unfamiliar) to take him home from his office without anxiety. EMDR was then used to reinforce the memory of the drive and some neutral and positive feelings associated with the event. As she reviewed the drive, Adriana noted that she was comfortable and that she had not suffered from anticipatory anxiety during the few weeks preceding the event. After using eye movements to process this journey, Adriana reported feeling relaxed and convinced that

"I am free." She recalled a small hint of anxiety on her way home when she thought "I am driving away from Andrew," but this was easily assuaged by reminding herself, "Andrew is there anyway." A future template (imaginal work plus bilateral stimulation; see Shapiro, 2001) was used to strengthen Adriana's ability to restructure her thoughts and to manage her now low-grade relationship anxiety by saying to herself, "It is just the usual anxiety, you are not going to have me again."

The session ended with Adriana's expressing her desire to try some short drives. Because Adriana still reported some disturbance associated with driving, this was targeted further through future templates as anticipatory anxiety. In addition, her memory of being trapped in the elevator and her years of anxiety and failures was targeted because these constituted the history of her disorder. By the end of the processing session, she was able to recall a particular moment of healthy functioning prior to the age of 20 and stated "This is me, the real Adriana, who could do as she pleased and was healthy and free. These years of anxiety have affected my life but are not part of my identity." These words and this belief were installed. In the overall therapeutic process, the reconstruction of a person's identity, as well as the reinforcement of the person's health is very meaningful; the processing strengthened the belief that "I can go back to these moments, I can feel good as I did in the past." Adriana concluded with another spontaneous image, "I see myself as I am now, a grown-up adult waiting for her fiancé. I see these years as a parenthesis, even though I continued to grow and live even with the burden of anxiety."

Adriana came to the 18th session saying she went driving alone because she really wanted to, she just felt like doing it. She went to her fiancé's and to her grandmother's. She toured the village several times and even took a new road. She felt a little insecure and noticed her hands were sweating and that her heart was thumping, but then everything immediately normalized. She did not think or feel that she had to go home immediately (as she used to). On the contrary, the whole drive was experienced with relaxation and enjoyment because she could look around and see the houses or an old acquaintance walking by. She stressed, in particular, the feeling of enjoyment associated with this trip, in seeing things differently, without pressure or anxiety. She reported that the car in front of her stopped at a crossing and she recalled her feeling of pleasure as she said to herself, "Now I am free." Previously, this type of situation would have caused considerable anxiety and would have been perceived as an obstacle or something blocking her way.

In the final sessions, EMDR therapeutic work focused on the consolidation of these changes to promote generalization. Future situations were targeted and it was decided to focus on the past behavior to be changed, driving to work alone, without her father. This was the last agoraphobic symptom and the most anxiety-provoking situation in her hierarchy because it involved giving up the secondary gain of her father's role. After desensitizing this target (SUD = 0) with the EMDR standard protocol, Adriana stated, "It is true, I am capable and my father can do something else instead of driving me. Actually, sometimes he grumbles because he has to wake up early to drive me. . . . Therefore, he can stay home and do his things and I can be free." She confirmed the cognition "I am capable," which felt completely true in terms of her ability to drive to work alone. The session ended after installing this positive belief with some sets of eye movements. Six days later, Adriana tried to drive to work alone and did it with a manageable level of anxiety. In the following weeks, she continued enacting this behavior. Therapy ended after approximately 30 sessions with

a remission of panic disorder and agoraphobic behaviors symptoms. The 30 sessions included 3 sessions of history taking and treatment planning; 3 sessions of preparation for EMDR sessions; 15 EMDR processing sessions of etiological events, triggers, and future behaviors; and 9 sessions reviewing results.

9 Follow-Up

Follow-up at 3 months, 6 months, and 1 year confirmed maintenance of the above effects. Her posttreatment and follow-up diary not only reported no symptomatology but all of her treatment goals were met as indicated by the following results:

Elimination of anxiety and panic attacks,
Elimination of avoidance behaviors,
Establishment of independent functioning through the ability to be alone and drive,
Resolution of agoraphobic symptoms,
Insight and understanding about symptoms and secondary gains, and
Establishment of a new self-perception, which included an adjustment of interpersonal relationships, and return to normal daily life functioning.

10 Treatment Implications of the Case

In this case, several anguishing situations were effectively addressed by EMDR. It is worth noting that the EMDR processing of a particular selected target—for instance, the first panic attack—can spontaneously and directly associate with other related episodes. Although sometimes the reasons for these connections are not immediately clear to the therapist when they arise spontaneously during a set of eye movements, continued processing generally reveals the logic and meaning in terms of the foundation of the disorder. EMDR works on a multisensory level providing a simultaneous emotional desensitization, change of physical sensations, and elicitation of client insights regarding event. The simultaneous shift in emotional and cognitive content allows the client to reestablish a more appropriate contact with reality, thereby promoting new behaviors. Once this process is set in motion, clients can take an appropriate emotional distance enabling them to gradually accept the risk of facing their emotions and new situations.

In this particular case, Adriana began to recall and to connect all of the events that were related to the panic attacks. Although this type of association is typical of therapeutic work in general, it appears to occur more quickly during EMDR therapy. It seems that EMDR provides direct access to the memory network and allows previous memories to be metabolized, thus contributing to therapeutic changes that go beyond the disappearance of the originally presented complaint. In this instance, the EMDR treatment affected not only the symptoms of panic and agoraphobia but reconstellated the family of origin power dynamic and placed her upcoming marriage in a new perspective.

The sequence of treatment procedures demonstrated in the present case is very significant. Unlike standard CBT treatments, therapist-assisted in vivo exposure was not needed as part of the therapy. Standard CBT treatment of PDA would include in vivo exposure as

a primary means of decreasing the emotional arousal and fear-related beliefs. The model that underlies such treatments (Arntz, 2002; Faretta & Fernandez, 2003) posits the use of therapist modeling and corrective information during extended confrontation of, or participation in, the real-life feared situation as an important aspect of treatment. In contrast, the AIP model guiding EMDR treatment posits that that dysfunction is primarily generated by the dysfunctionally stored memories, which can best be treated by direct targeting. It is hypothesized that the anxiety and fear felt by the client are actually the emotions and physical sensations inherent within the implicit memory network (Shapiro, 2001; Stickgold, 2002). Therefore, the processing of the etiological events that have caused and maintained the dysfunction is the pivotal aspect of EMDR treatment. In vivo exposure is suggested only after the etiological events have been processed and the fear largely resolved. The in vivo exposure is then used to reveal any specific triggers or ancillary targets that need to be processed. As noted in this case, clients often begin spontaneously to drop avoidance and emit new positive behaviors subsequent to EMDR processing. As demonstrated in this case, Adriana began to drive and stay alone without the therapist's prompting. This is typical of the 20 cases of PDA treated by the authors. The dissimilarity of EMDR and CBT procedures has important theoretical and treatment implications and warrants further investigation.

11 Recommendations to Clinicians

It should be noted that in contrast to the Goldstein et al. (2000) study that used only one session for history and preparation, six sessions of history taking, alliance building, and psychoeducation prepared Adriana for EMDR processing. The result is that unlike the participants of the Goldstein et al. study, successful in-session processing was observed and the panic disorder ceased after four processing sessions. Twelve processing sessions resulted in a full remediation of symptoms. With Adriana, after resolving the dysfunctional learning experiences and reprocessing past events, future templates were targeted by processing projected feared events. EMDR was used to further consolidate the adaptive and positive behaviors as they were enacted. This case is typical of 20 clients already treated by the authors (Faretta & Fernandez, 2003).

As mentioned previously, EMDR facilitates both the reconstruction of the etiological elements and the processing of the events, which, although apparently forgotten, remain dysfunctionally stored within the memory network. In this sense, EMDR may be included within a therapeutic program tailored for each individual client. Processing with EMDR allows clients to re-experience the traumatic memories within the safety of a typical therapeutic setting.

In terms of EMDR's applicability to panic disorders, specifically, clinical experience has shown that the integration of EMDR into already existing models enables a cognitive understanding of the schemas favoring and maintaining panic and a desensitization or deconditioning in terms of the feared events or situations. This helps to reveal important emotional conditions that constitute psychological nexes, leading to a better cognitive understanding of the disorder and its relevant behavioral adaptation. EMDR also facilitates the sequential organization of forgotten, meaningful traumatic memories, which, after reprocessing, enable the activation of a better adaptation and a more realistic attitude

against the feared (and therefore avoided) events. Generally, we notice that clients change their behavior or act it out spontaneously, without having it assigned as homework (Faretta, 2001). For instance, they may start taking short walks on their own or spontaneously face the feared situation. The intervention also focuses on the bodily component of panic, to address the anticipatory fear. This helps the client to restore a more appropriate contact with reality, by starting to recognize the different opportunities and potential (inner resources) to achieve new adaptive conditions and to enact appropriate behaviors.

An important consideration in the treatment of panic disorders, and the one illustrated nicely in this case example, is secondary gain. For instance, clients may somehow believe that without their panic disorder and the consequent avoidance, they shall have to face the world and could fail. They then tend to maintain the symptoms to postpone or avoid this responsibility. Other blocking beliefs, such as "I don't deserve to overcome this and feel good" or the dependence on an individual because of an unbalanced attachment relationship, may also be considered indirect gains of the disorder. Therefore, these issues must be identified and targeted within the EMDR standard protocol. All steps of the phobia protocol should be initiated that include a sufficient preparation phase and then the processing of targets related to each symptoms: (a) events that set the foundation for the pathology; (b) first experience of fear, anxiety, or panic; (c) worst experience; (d) most recent experience; (e) current triggers; and (f) future templates.

In addition to processing the events directly related to the obvious symptoms (e.g., fear of driving), effective therapeutic work focuses also on the dynamics created by the disorder, the attachment bonds, the factors contributing to distress maintenance, and the possible skills and behaviors useful for suitable future actions. Only the sole and unique individual history of each person can explain the existence of this disorder. EMDR support in psychotherapy may ascribe a sense and a meaning to the symptoms through an analysis of the dynamic relationships between the participant, the others, and the environment.

References

American Psychiatric Association. (2004). *Practice guideline for the treatment of patients with acute stress disorder and posttraumatic stress disorder*. Arlington, VA: American Psychiatric Association Practice Guidelines.

Arntz, A. (2002). Cognitive therapy versus interoceptive exposure as treatment of panic disorder without agoraphobia. *Behaviour Research and Therapy*, *40*, 325-341.

Bleich, A., Kotler, M., Kutz, E., & Shaley, A. (2002). *A position paper of the (Israeli) National Council for Mental Health: Guidelines for the assessment and professional intervention with terror victims in the hospital and the community*. Jerusalem, Israel.

Brown, G. W., Harris, T. O., & Eales, M. J. (1993). Aetiology of anxiety and depressive disorders in an inner-city population. 2. Comorbidity and adversity. *Psychological Medicine*, *23*, 155-165.

Chambless, D. L., Baker, M. J., Baucom, D. H., Beutler, L. E., Calhoun, K. S., Crits-Christoph, P., et al. (1998). Update on empirically validated therapies, II. *Clinical Psychologist*, *51*, 3-16.

Chemtob, C. M., Tolin, D. F., van der Kolk, B. A., & Pitman, R. K. (2000). Eye movement desensitization and reprocessing. In E. B. Foa, T. M. Keane, & M. J. Friedman (Eds.), *Effective treatments for PTSD: Practice guidelines from the international society for traumatic stress studies* (pp. 139-155, 333-335). New York: Guilford.

Clinical Resource Efficiency Support Team. (2003). *The management of post traumatic stress disorder in adults*. Belfast, Northern Ireland: Department of Health.

Craske, M. G., Roy-Byrne, P., Stein, M. B., Donald-Sherbourne, C., Bystritsky, A., Katon, W., et al. (2002). Treating panic disorder in primary care: A collaborative care intervention. *General Hospital Psychiatry*, *24*, 148-155.

Davey, G. C. L. (2002). "Nonspecific" rather than "nonassociative" pathways to phobias: A commentary on Poulton and Menzies. *Behaviour Research and Therapy*, *40*, 151-158.

de Beurs, E., Balkom, A. J. L. M., Van Dijck, R., & Lange, A. (1999). Long-term outcome of pharmacological and psychological treatment for panic disorder with agoraphobia: A two year naturalistic follow-up. *Acta Psychiatrica Scandinavica*, *99*, 59-67.

De Jongh, A. E., & Ten Broeke, E. (1998). Treatment of choking phobia by targeting traumatic memories with EMDR: A case study. *Clinical Psychology and Psychotherapy*, *5*, 1-6.

De Jongh, A. E., Ten Broeke, E., & Renssen, M. R. (1999). Treatment of specific phobias with eye movement desensitization and reprocessing (EMDR): Protocol, empirical status, and conceptual issues. *Journal of Anxiety Disorders*, *13*, 69-85.

De Jongh, A., Van den Oord, H. J. M., & Ten Broeke, E. (2002). Efficacy of eye movement desensitization and reprocessing (EMDR) in the treatment of specific phobias: Four single-case studies on dental phobia. *Journal of Clinical Psychology*, *58*, 1489-1503.

Faretta, E. (2001). *Panico memoria traumatica ed intervento integrato con l'EMDR*A [Panic, traumatic memory and integrated intervention with EMDR]. Proceedings of the Cognitive Behaviour Therapy Association XI National Congress. Palermo, Italy: Aiatic.

Faretta, E., & Fernandez, I. (2003). L'integrazione dell'EMDR nel trattamento del disturbo da attacchi di panico [Integration of EMDR in the treatment of panic attack disorder]. In F. Rovetto (Ed), *Panico origini, dinamiche, terapie* pp. 469-487). Milan, Italy: McGraw-Hill.

Fava, G. A., & Mangelli, L. (1999). Subclinical symptoms of panic disorder: New insights into pathophysiology and treatment. *Psychotherapy and Psychosomatics*, *68*, 281-289.

Fernandez, I. (2001). Il contributo dell'EMDR nella psicoterapia [The contribution of EMDR to psychotherapy]. In P. Spannocchi & M. Cenerini (Eds.), *Stress, trauma e psicoterapia* (79-85). Florence, Italy: Medicee.

Feske, U., & Goldstein, A. J. (1997). Eye movement desensitization and reprocessing treatment for panic disorder: A controlled outcome and partial dismantling study. *Journal of Consulting and Clinical Psychology*, *65*, 1026-1035.

Goldstein, A. J., de Beurs, E., Chambless, D. L., & Wilson, K. A. (2000). EMDR for panic disorder with agoraphobia: Comparison with waiting list and credible attention-placebo control conditions. *Journal of Consulting and Clinical Psychology*, *68*, 947-956.

Goldstein, A. J., & Feske, U. (1994). Eye movement desensitization and reprocessing for panic disorder: A case series. *Journal of Anxiety Disorders*, *8*, 351-362.

Ironson, G. I., Freund, B., Strauss, J. L., & Williams, J. (2002). Comparison of two treatments for traumatic stress: A community based study of EMDR and prolonged exposure. *Journal of Clinical Psychology*, *58*, 113-128.

Kleinknecht, R. A. (2002). Comments on: Non-associative fear acquisition: A review of the evidence from retrospective and longitudinal research. *Behaviour Research and Therapy*, *40*, 159-163.

Lee, C., Gavriel, H., Drummond, P., Richards, J., & Greenwald, R. (2002). Treatment of post-traumatic stress disorder: A comparison of stress inoculation training with prolonged exposure and eye movement desensitization and reprocessing. *Journal of Clinical Psychology*, *58*, 1071-1089.

Marcus, S. V., Marquis, P., & Sakai, C. (1997). Controlled study of treatment of PTSD using EMDR in an HMO setting. *Psychotherapy*, *34*, 307-315.

Marks, I. (2002). Innate and learned fears are at opposite ends of a continuum of associability. *Behaviour Research and Therapy*, *40*, 165-167.

McNally, R. J. (2002). On nonassociative fear emergence. *Behaviour Research and Therapy*, *40*, 169-172.

McNally, R. J., & Lukach, B. M. (1992). Are panic attacks traumatic stressors? *American Journal of Psychiatry*, *149*, 824-826.

Mineka, S., & Ohman, A. (2002). Born to fear: Non-associative vs. associative factors in the etiology of phobias. *Behaviour Research and Therapy*, *40*, 173-184.

Nadler, W. (1996). EMDR: Rapid treatment of panic disorder. *International Journal of Psychiatry*, *2*, 1-8.

Newman, M. G., Erickson, T., Przeworski, A., & Dzus, E. (2003). Self-help and minimal-contact therapies for anxiety disorders: Is human contact necessary for therapeutic efficacy? *Journal of Clinical Psychology*, *59*, 251-274.

Ost, L. G., Thulin, U., & Ramnerö, J. (2004). Cognitive behaviour therapy vs. exposure in vivo in the treatment of panic disorder with agoraphobia. *Behaviour Research and Therapy*, *42*, 1105-1127.

Parker, G. (1981). Reported parental characteristic of agoraphobics and social phobics. *British Journal of Psychiatry*, *135*, 555-560.

Poulton, R., & Menzies, R. G. (2002a). Non-associative fear acquisition: A review of the evidence from retrospective and longitudinal research. *Behaviour Research and Therapy*, *40*, 127-149.

Poulton, R., & Menzies, R. G. (2002b). Fears born and bred: Toward a more inclusive theory of fear acquisition. *Behaviour Research and Therapy*, *40*, 197-208.

Power, K. G., McGoldrick, T., Brown, K., Buchanan, R., Sharp, D., Swanson, V., et al. (2002). A controlled comparison of eye movement desensitization and reprocessing versus exposure plus cognitive restructuring, versus waiting list in the treatment of post-traumatic stress disorder. *Journal of Clinical Psychology and Psychotherapy*, *9*, 299-318.

Raskin, M., Peeke, H. V. S., Dikman, W., & Pinker, H. (1982). Panic and generalized anxiety disorders. Developmental antecedents and precipitants. *Archives of General Psychiatry*, *39*, 687-689.

Rothbaum, B. O. (1997). A controlled study of eye movement desensitization and reprocessing for posttraumatic stress disordered sexual assault victims. *Bulletin of the Menninger Clinic*, *61*, 317-334.

Rothbaum, B. O. (2001, November). Prolonged exposure versus EMDR for PTSD rape victims. In P. A. Resick (Ed.), *Three clinical trials for the treatment of PTSD: Outcome and dissemination*. Paper presented at the annual meeting of the Association for the Advancement of Behavior Therapy, Philadelphia, PA.

Scheck, M. M., Schaeffer, J. A., & Gillette, C. S. (1998). Brief psychological intervention with traumatized young women: The efficacy of eye movement desensitization and reprocessing. *Journal of Traumatic Stress*, *11*, 25-44.

Shapiro, F. (1989). Efficacy of the eye movement desensitization procedure in the treatment of traumatic memories. *Journal of Traumatic Stress Studies*, *2*, 196-223.

Shapiro, F. (1995). *Eye movement desensitization and reprocessing: Basic principals, protocols, and procedures*. New York: Guilford.

Shapiro, F. (1999). Eye movement desensitization and reprocessing (EMDR) and the anxiety disorders: Clinical and research implications of an integrated psychotherapy treatment. *Journal of Anxiety Disorders*, *13*, 35-67.

Shapiro, F. (2001). *Eye movement desensitization and reprocessing: Basic principles, protocols, and procedures* (2nd ed.). New York: Guilford.

Shapiro, F. (2002). Paradigms, processing, and personality development. In F. Shapiro (Ed.), *EMDR as an integrative psychotherapy approach: Experts of diverse orientations explore the paradigm prism*. Washington, DC: American Psychological Association Press.

Shapiro, F., & Forrest, M. (1997). *EMDR*. New York: Basic Books.

Stickgold, R. (2002). Neurobiological concomitants of EMDR: Speculations and proposed research. *Journal of Clinical Psychology*, *58*, 61-75.

Sturpe, D. A., & Weissman, A. M. (2002). What are effective treatments for panic disorder. *Journal of Family Practice*, *51*, 743.

Taylor, S., Thordarson, D. S., Maxfield, L., Fedoroff, I. C., Lovell, K., & Ogrodniczuk, J. (2003). Comparative efficacy, speed, and adverse effects of three PTSD treatments: Exposure therapy, EMDR, and relaxation training. *Journal of Consulting and Clinical Psychology*, *71*, 330-338.

Tsao, J. C. I., Mystkowski, J. L., Zucker, B. G., & Craske, M. G. (2002). Effects of cognitive-behavioral therapy for panic disorder on comorbid conditions: Replication and extension. *Behavior Therapy*, *33*, 493-509.

U.S. Department of Defense and Veterans Affairs. (2004). *VA/DoD clinical practice guideline for the management of post-traumatic stress*. Washington, DC: Author.

van Balkom, A., de Beurs, E., Koele, P., Lange, A., van Dyck, R. (1996). Long-term Benzodiazepine use is associated with smaller treatment gain in panic disorder with agoraphobia. *Journal of Nervous & Mental Disease*, *184*(2),133-135.

Vaughan, K., Armstrong, M. F., Gold, R., O'Connor, N., Jenneke, W., & Tarrier, N. (1994). A trial of eye movement desensitization compared to image habituation training and applied muscle relaxation in post-traumatic stress disorder. *Journal of Behavior Therapy and Experimental Psychiatry*, *25*, 283-291.

Westra, H. A., Stewart, S. H., & Conrad, B. E. (2002). Naturalistic manner of benzodiazepine use and cognitive behavioral therapy outcome in panic disorder with agoraphobia. *Anxiety Disorders*, *16*, 233-246.

Williams, J. M. G. (1996). Memory processes in psychotherapy. In P. M. Salkovskis (Ed), *Frontiers of cognitive therapy*. New York: Guilford.

Wilson, S. A., Becker, L. A., & Tinker, R. H. (1995). Eye movement desensitization and reprocessing (EMDR) treatment for psychologically traumatized individuals. *Journal of Consulting and Clinical Psychology*, *63*, 928-937.

Wilson, S. A., Becker, L. A., & Tinker, R. H. (1997). Fifteen-month follow-up of eye movement desensitization and reprocessing (EMDR) treatment for PTSD and psychological trauma. *Journal of Consulting and Clinical Psychology*, *65*, 1047-1056.

Wolpe, J. (1958). *Psychotherapy by reciprocal inhibition*. Stanford, CA: Stanford University Press.

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