Change in Adult Attachment Status Following Treatment With EMDR: Three Case Studies

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Three case studies illustrate pre– and post–eye movement desensitization and reprocessing (EMDR) adult attachment status as measured by the Adult Attachment Interview (AAI). Two adult males and one adult female presented for outpatient therapy; all of them were categorized with an insecure or disorganized attachment status at pretreatment. All presented with symptoms of depression and anxiety and complaints regarding problems in their current marital and family relationships. The three patients received 10 to 15 EMDR sessions over the course of approximately 1 year, interspersed with talk therapy sessions for the purpose of debriefing and psychoeducation. The EMDR approach utilized all eight phases of treatment within the three-pronged approach. Following EMDR therapy, all three patients made positive changes in attachment status as measured by the AAI, and all three reported positive changes in emotions and relationships. This article provides an overview of the literature related to adult attachment categories and summarizes the effect of adult attachment status on emotional and social functioning. The rationale and scoring procedures for the AAI are explained.

Keywords: EMDR; attachment; trauma; Adult Attachment Interview; outcome

The originator of attachment theory, English psychiatrist John Bowlby (1973), studied children separated from their parents because of lengthy hospitalization in the 1940s and 1950s and observed that the disruption to the attachment bond had a profoundly negative impact on the long-term well-being of children. Bowlby asserted that an infant's desire for proximity to attachment figures is central to survival, and, therefore, the infant who receives sensitive, responsive caregiving develops a sense of security in the world. The secure infant can move out into the world and develop healthy relationships.

Attachment Categories

Mary Ainsworth (1967), a student of Bowlby's, studied the quality of the infant's attachment to its mother and developed an assessment tool, called the Strange Situation, that categorized infant attachment by observing the differences in toddlers' ability to seek and receive comfort from their mothers after becoming stressed during exposure to a stranger. Ainsworth categorized the infants as either securely attached to their mothers or insecurely attached with two subtypes: avoidant and resistant/ambivalent. Eventually, a small percentage of children were identified as belonging to a fourth category: disorganized. Children categorized as disorganized were also given a best-fit classification of secure, avoidant, or resistant/ambivalent (Main & Solomon, 1986).

Research (Grossman, Fremmer-Bombik, Rudolph, & Grossman, 1988; Renken, Egeland, Marvinney, Mangelsdorf, & Sroufe, 1989) has found that infants and young children categorized as secure tend to be trusting toward their parents, receptive to comfort from their parents, and capable of easy dialogue with their parents as they grow older. Infants and toddlers categorized as avoidant appear to suppress emotion. They tend not to seek comfort from their parents, and later on they are described by teachers as

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aloof or hostile. Youngsters categorized as resistant/ambivalent appear demanding of comfort and attention, angry, and more difficult to soothe. They are frequently described as clingy or demanding of attention when they reach school age.

Infants and toddlers categorized with a disorganized attachment status may freeze or exhibit other fearful behaviors when they are approached by a parent (Main & Solomon, 1986). Disorganized children may exhibit either pleasing and caretaking behaviors or punishing and controlling behaviors toward parents by school age (Cassidy, 1988; Lyons-Ruth, Alpern, & Repacholi, 1993).

Adult Attachment Classifications

Researchers studying attachment patterns in children observed qualitative differences in the sensitivity and responsiveness of the mothers to their children's cues (Ainsworth, 1967). Through the development of the Adult Attachment Interview (AAI), Main and Hesse identified four categories of adult attachment, corresponding to each of the four patterns observed in children (Hesse, 1999). The secure, dismissive, and preoccupied attachment categories, corresponding to the secure, avoidant, and resistant/ambivalent attachment categories in children, refer to the subject's state of mind overall with regard to memories of their early attachment figures. The unresolved/disorganized adult attachment classification refers to the subject's state of mind regarding either childhood abuse by parents or significant losses. Adults categorized as unresolved/disorganized are given an additional overall classification as secure, dismissive, or preoccupied.

Transmission of Attachment Patterns

In studies examining the correspondence of infant attachment (according to the Strange Situation) to parent attachment classification (according to the AAI), researchers found 70% to 80% correspondence between the mother's attachment status and the attachment status in the child (Grossmann et al., 1988; van Ijzendoorn, 1992). Parents with a secure attachment style are most sensitively attuned to their children's cues, leading to the likelihood of a secure attachment in their offspring. Parents with a dismissive style of attachment tend to avoid closeness and intense emotions; therefore, a strong expression of feelings or needs from their offspring leads to withdrawal on the part of the parents. In response, their children tend to develop an avoidant attachment, inhibiting the desire to seek comfort, which is helpful in that it maintains the physical proximity. Parents with a preoccupied style tend to become easily overwhelmed and anxious, and they are inconsistent in their ability to respond sensitively to their children's cues. Their children tend to be resistant/ambivalent in attachment style, exhibiting demanding, angry behaviors as an adaptive method of getting their needs met more consistently in an environment where they cannot count on their parents to respond to more subtle cues (Ainsworth, 1982; van Ijzendoorn, 1995).

Parents with an unresolved/disorganized attachment classification are most likely to have children with a disorganized attachment. It is hypothesized that disorganized adults, because of unresolved memories of childhood abuse or unresolved loss, exhibit some type of behavior that is frightening to their children, such as minidissociative episodes or other signs of emotional dysregulation, triggered by their children's cues (Main & Hesse, 1990). Maltreatment by parents is a direct antecedent to attachment disorganization in children, as attachment disorganization is exhibited in the majority of maltreated children (Carlson, Cicchetti, Barnett, & Braunwald, 1989). Attachment disorganization in childhood is associated with problems related to dissociation and other types of pathology in adolescence and adulthood (Liotti, 1999).

Attachment Patterns and Psychopathology

In nonclinical populations, only a small percentage of adults are classified as unresolved/disorganized. In studies of nonclinical populations, attachment security is identified in about 60% of the population. Avoidant attachment status (dismissive in adults) is found in approximately 25% of the population, resistant/ambivalent status (preoccupied in adults) is found in about 10% of the population, and disorganized status is found in approximately 5% of the normal population (van Ijzendoorn & Sagi, 1999). Researchers find attachment status to be fairly consistent throughout the life span (Waters, Merrick, Terboux, Crowell, & Albersheim, 2000).

It is clear in studies with clinical populations that the percentage of attachment insecurity and disorganization is much higher in populations seeking mental health treatment. In one adolescent study, teen suicidal ideation was found to be strongly associated with a disorganized attachment status (Adam, Sheldon-Keller, & West, 1996). Carlson (1998) observed that disorganized attachment in infancy is strongly associated with symptoms of dissociation in adolescence. In another teen study, anxious/resistant attachment in infancy was found to be associated with anxiety disorders in adolescence (Warren, Huston, Egeland,

& Sroufe, 1997). In an overview of studies of psychiatric disorders and attachment status, Dozier, Stovall, and Albus (1999) concluded that psychiatric disorders in general are almost always associated with insecure or disorganized attachment status, and unresolved/disorganized classification was found to be the most overrepresented classification found among clinical populations.

In one large study, Fonagy et al. (1996) found that only 9 of 82 psychiatric patients had a secure classification versus 50 out of 85 controls. The category most overrepresented was unresolved/disorganized, with 76% of inpatients scoring unresolved compared to 7% of controls. Fonagy et al. (1997) pointed out, however, that the majority of children with insecure attachment do not develop psychopathology. Fonagy and colleagues hypothesized that the attachment patterns of insecurely attached children are defenses to cope with the problematic interactions with their parents and that the method of coping can be quite adaptive. He posits that psychopathology develops from these defenses only when the strategies prove ineffective at protecting the child from anxiety related to a sense of safety and security in the world.

Liotti (1999) asserts that an unresolved/disorganized state of mind with respect to loss or childhood abuse is not associated with a defensive or adaptive pattern but is actually the result of an inability to defend oneself from anxiety related to experiences that are frightening or overwhelming. Signs of the unresolved/disorganized state of mind regarding childhood memories of abuse by parents or past experiences of loss sometimes but not always overlap with symptoms of posttraumatic stress disorder (PTSD). An individual who experienced an abusive upbringing or the death of a loved one may not meet the criteria for a diagnosis of PTSD but may be categorized as disorganized/unresolved according to the AAI with respect to the memory of abuse or loss. For example, even though an individual with a history of childhood abuse does not meet the criteria for PTSD, including signs of reexperiencing the trauma in some way, avoidance of memories and numbing, or increased arousal, the individual may show specific evidence of disorientation and disorganization in his speech during the AAI, meeting the criteria for unresolved/disorganized status.

It has been conceptualized that the individual categorized as unresolved/disorganized, like the individual diagnosed with PTSD, has memories of distressing experiences that have not been metabolized and integrated into the "autobiographical narrative" and that both individuals experience increased "stress reactivity" when exposed to unconscious or conscious reminders of the distressing event (Kobak, Cassidy, & Zir, 2004). Although signs of unresolved abuse or loss according to the AAI may or may not include symptoms that actually meet the criteria for PTSD, an individual who meets the criteria for PTSD related to abuse by caregivers will most likely be designated as unresolved/disorganized on the AAI.

On the other hand, if an individual has PTSD related to past trauma but the trauma is not related to abuse from parent (e.g., a car accident or sexual abuse by a neighbor), the effect of these memories is not reviewed during the AAI; his state of mind related to noncaregiver trauma is not rated for unresolved/disorganized attachment status. Only trauma related to abuse by attachment figures or the death of someone close qualifies for coding on the AAI (Hesse, 1999).

Although attachment status is found to be relatively stable over time, some researchers have looked at changes in attachment status following therapeutic intervention. Stovall-McClough and Cloitre (2003) administered the AAI pre- and posttreatment in a group of 18 women suffering from PTSD related to childhood abuse. The women were treated with either prolonged exposure (PE) therapy or skills training in affect and interpersonal regulation. Of the 13 women who were unresolved prior to treatment, eight lost their unresolved status following treatment. The women treated with PE lost their unresolved status at a significantly higher rate than those treated with skills training.

Levy et al. (2006) assessed changes in attachment organization according to the AAI in 90 patients assigned to one of three treatments: transference-focused psychotherapy, dialectical behavior therapy, or modified psychodynamic supportive psychotherapy. Only patients treated with transference-focused psychotherapy showed a significant increase in secure attachment. Attachment security in patients in the transference-focused psychotherapy treatment increased from 1 in 22 patients to 7 in 22 patients, a significant increase. Attachment security did not increase significantly in the other two treatment modality groups, and resolution of loss and trauma did not significantly increase in any of the treatment modality groups.

The Internal Working Model and the Adaptive Information-Processing Model

Bowlby (1989), originator of attachment theory, hypothesized that a child's earliest experiences with his parents leads to the development of beliefs regarding

self-worth, safety and security, and the trustworthiness of others, which he termed the "internal working model." The internal working model affects the child's ability to trust and connect with his primary attachment figures and later with the world of relationships outside his family. Thus, the young child who experiences rejection from his mother may enter the kindergarten classroom with an expectation of rejection (causing negative behaviors), and he may still expect rejection when he starts dating.

The adaptive information-processing (AIP) model (Shapiro, 2007) similarly describes the impact of early events on later functioning. The theory posits that memories of extremely distressing experiences may be "dysfunctionally stored" in the brain in an "unmetabolized state" in "memory networks" that contain the perceptions, negative beliefs, affect, and body sensations that arose during the experience. Unmetabolized memory networks are said to be easily triggered by any current stimulus that is somehow reminiscent of the distressing event, consciously or unconsciously causing the old negative beliefs, emotions, and physical sensations to emerge and negatively impacting the individual's behavior.

The AIP model, for example, hypothesizes that the young child who has endured numerous experiences of rejection in his relationship with his mother has a memory network of rejection experiences, stored along with the negative beliefs, emotions, and physical sensations. This memory network is easily triggered later on by anything that is reminiscent of the earlier experiences (e.g., a serious look on the face of a teacher or girlfriend), activating negative affect, physical sensations, and beliefs and impacting his behaviors quite negatively. The AIP model, then, expands on the internal working model, providing a more thorough understanding of the mechanisms driving an individual to defy logic and reason by behaving in a way that undermines his relationships with supportive others.

Eye Movement Desensitization and Reprocessing

Eye movement desensitization and reprocessing (EMDR) is a trauma resolution approach that involves a standard set of procedures and clinical protocols and includes specific types of bilateral sensory stimulation. Specific, focused strategies along with the bilateral stimulation help access the patient's dysfunctionally stored memory and related affect, desensitize the emotions and physical sensations, access more adaptive material stored in the brain, and forge new, more positive associations to the original event.

The EMDR approach involves eight phases, which include steps for history taking, preparation and stabilization, assessment, desensitization and reprocessing, closure, and reevaluation. During the preparation phase, the bilateral stimulation can be used to help clients develop and install positive resources, such as a sense of inner strength or a sense of connection to supportive others. Korn and Leeds (2002) presented two single case studies with patients who met criteria for complex PTSD and concluded that both patients achieved significant stabilization through the development and installation of resources with bilateral stimulation prior to reprocessing of traumas with EMDR.

EMDR treatment follows a three-pronged protocol. The first prong involves EMDR reprocessing of early memories. In the second prong, the clinician uses EMDR to target and reprocess recent or current situations in the client's life that trigger negative associations related to the past. In the third prong, the clinician and client create a visualization of the client behaving more effectively in the future and reinforce the image with bilateral stimulation (Shapiro, 2001).

EMDR was initially developed as an approach to trauma resolution, and its efficacy in treating symptoms related to traumatic stress is well documented (e.g., American Psychiatric Association, 2004; Department of Veterans Affairs & Department of Defense, 2004.). However, in addition to the resolution of overt symptoms of PTSD, process studies have identified qualitative changes in insight and awareness and more comprehensive treatment effects that result from EMDR (Brown & Shapiro, 2006; Edmond, Sloan, & McCarty, 2004; McCullough, 2002; Zabukovec, Lazrove, & Shapiro, 2000). The AIP model posits that accessing the dysfunctionally stored material associated with any distressing event (not limited to major trauma) with EMDR facilitates reprocessing of the associated negative material leading to new, more positive associations and improved functioning (Shapiro, 2007).

According to both Bowlby's internal working model and Shapiro's AIP model, memories regarding the loss of loved ones or unhappy experiences with parents may negatively impact emotional responses to later-life relationships. EMDR enables individuals to access and reprocess attachment-related distressing memories, potentially increasing the capacity of individuals to enjoy present-day close relationships. Logically, individuals may be able to move from an insecure attachment status related to distressing

childhood experiences to a qualitatively more secure status.

There is increasing clinical evidence that EMDR can help repair and strengthen affectional bonds in relationships. The EMDR approach has been used to resolve attachment-related trauma in children, allowing them to form more secure attachments to their parents (Wesselmann, 2007). Alternatively, the EMDR approach has been used to resolve negative bonding events in mothers, allowing the mothers to visualize a new, more positive birth experience and develop positive bonds with their children (Madrid, 2007). The EMDR approach has been used to effectively remove blocks to improving the relationships of couples seeking relationship therapy (Moses, 2007; Protinsky, Sparks, & Flemke, 2001).

AAI

The AAI categorizes the subject's state of mind with respect to primary attachment relationships as secure, dismissive, or preoccupied. The AAI also determines whether the subject is unresolved/disorganized with respect to any memories of childhood abuse by parents or major losses in childhood or adulthood. Childhood events themselves do not determine attachment category. The language the subject uses to describe the events determines the attachment classification (Hesse, 1999).

An important section of the AAI is the question that asks subjects to name five adjectives to describe their relationship with each parent and memories that support their choice of adjectives. Other sections include questions about what happened during childhood if they were hurt, injured, or ill or had feelings of rejection, memories of abuse by parents, and any major losses in childhood or adulthood. A transcript of the interview is evaluated by a trained and certified scorer. The individual scoring the transcript examines whether the adjectives are consistent with the described memories and with memories uncovered or eluded to in the latter part of the interview.

The scorer also examines the coherence of the responses, for example, whether sentences are completed or trail off, whether responses are relevant to the questions or are long and meandering, whether the responses fully answer the questions or are clipped and avoidant of the questions, and whether the language makes sense or shows evidence that the subject is becoming disoriented. The language of the interview is also examined for the presence of emotions, evidence of preoccupation with upsetting memories, excessive blaming of parents or of self, derogatory language, and evidence of balance, honesty, forgiveness, and valuing of relationships. Before subjects are assigned to a category, they are given a numerical rating from 1 through 9 on five types of experiences from both the mother and father: rejecting, involving/reversing, pressure to achieve, neglecting, and loving. Each subject is also given a numerical rating from 1 through 9 for three states of mind related to both the mother and father: idealizing, involving anger, and derogation. The subject is also given a numerical rating for both unresolved loss and unresolved trauma. (The unresolved trauma rating is related to the subject's state of mind regarding any abuse by an attachment figure. In order to be categorized as abuse, it must meet certain criteria, including an experience of either intense fear or pain.) The scorer must cross-check the final category designation by double-checking general category indicators. But, in general, if the subject has a score of 6 or higher on either the idealization scale or the derogation scale, he will be designated dismissive; if the subject has a score of 6 or higher on the involving anger scale, he will be designated preoccupied; and if the subject has a score of 6 or higher on unresolved loss or trauma, he will be designated unresolved/disorganized. In general, low scores indicate a secure attachment classification.

In general, subjects categorized as secure are able to provide answers to the interview questions that are relevant and make sense. Secure subjects recall memories that appropriately support the adjectives they use to describe their relationships. Whether their parents were loving or mistreating, the language used by secure subjects reflects an appropriate level of emotion without loss of organization, balance, and valuing of relationships overall.

The designation for the secure category is F. There are five subgroups within the secure category:

(F_1): This subgroup shows coherence and balance overall but tends to come from a background that is somewhat harsh and exhibits an attitude of practicality without much sentiment.

(F_2): This subgroup tends to be slightly unemotional or slightly dismissing of attachment, especially in the first part of the interview, but is coherent and balanced overall, showing a valuing of relationships and a sense of compassion.

(F_3): This subgroup is coherent, honest, and at ease with the interview, exhibiting forgiveness, balance, and humor.

(F_4): This subgroup is coherent and balanced overall but exhibits slight preoccupation with some negative experiences or with pleasing their parents.

(F_5): This subgroup is coherent and balanced overall but exhibits some evidence of mild anger.

In general, subjects in the dismissing category make attempts to avoid attachment-related memories and feelings. They may answer questions inconsistently and incoherently, and they tend to be overly short in their responses.

The designation for the dismissing category is Ds. There are four subgroups within the dismissing category:

(Ds_1): This subgroup shows evidence of idealization of one or both parents and denial of negative experiences and feelings.
(Ds_2): This subgroup makes derogatory comments regarding parents, thereby avoiding vulnerable feelings by denigrating the importance of the parental relationship.
(Ds_3): This subgroup acknowledges negative feelings or experiences but then minimizes or rationalizes to avoid distress.
(Ds_4): This subgroup is extremely fearful about losing a child, without any apparent cause for the distress. This subgroup is rare.

Preoccupied subjects tend to get lost in lengthy discourse due to overwhelming feelings of either anger or fear. They frequently appear to forget the original interview question because of their total immersion into their memories.

The designation for the preoccupied category is E. There are three subgroups within the preoccupied category:

(E_1): This subgroup lapses into vague, inarticulate, or childlike speech. This subgroup is rare.
(E_2): This subgroup gets lost in angry discourse.
(E_3): This subgroup exhibits evidence of preoccupation with fearful childhood events.

The unresolved/disorganized category refers to individuals who lose their ability to reason, lose their sense of time or reality, or lose organization to their thoughts while describing either the death of someone close or childhood abuse by attachment figures. The designation for the unresolved/disorganized classification is U/D, whether the disorganization pertains to abuse or loss or both. This category refers to the state of mind with respect specifically to the abuse or loss; therefore, the subject is also given an F, Ds, or E classification pertaining to overall attachment status.

Rarely, subjects will achieve scores that lead to both preoccupied and dismissing designations. A subject who is deemed both E and Ds is designated "cannot classify."

Method

Participants

Participants included three adult patients, two male and one female, all between 38 and 45 years old, who initiated outpatient mental health therapy for themselves because of problems in their mood, behavior, and relationships. All participants voluntarily agreed to participate in the study and complete the AAI before and after two sessions of resource development and 10–15 sessions of EMDR.

Assessment

The AAI was administered pre- and posttreatment and scored by the author. The author was trained in the use of the AAI by Nancy Kaplan in July 2003 and was certified as a highly reliable coder by Mary Main and Erik Hesse. During individual sessions of EMDR therapy, subjective units of disturbance (SUD) and validity of cognition (VOC) were assessed prior to reprocessing and before closure of the session.

Treatment

Each subject was treated with two sessions of resource development prior to EMDR reprocessing. Within the first resource development session, subjects visualized a "relaxing and comfortable place" that was reinforced with bilateral stimulation. The subject was also asked to remember one or two events associated with feeling like a competent adult. The memory of the competent adult state and the associated feelings and sensations were reinforced with bilateral stimulation. During the second resource development session, the subject was asked to identify a place that would feel safe and comfortable to a child. The subject was also asked to identify a person, a spiritual figure, or perhaps an animal who might be protective and nurturing to a child. The subject was then asked to visualize the "child self within" inside the safe and comfortable place, nurtured by the protective figure. This image was reinforced with bilateral stimulation.

Resource development was followed by 10 to 15 sessions of EMDR over the span of 1 year's time. Talk therapy was interspersed between EMDR reprocessing sessions. The number of EMDR sessions and the number of talk therapy sessions depended on the frequency of visits (determined by the patient), the patient's desire for debriefing between EMDR sessions, and the need for psychoeducation between EMDR sessions. In all three cases, no medication changes were made between pre- and posttreatment AAI.

Case 1

Pretreatment. Mr. B, a 38-year-old White, entered therapy at the insistence of his wife. He and his wife had one 7-year old daughter. He admitted to frequent verbal anger outbursts toward his wife and daughter. He reported that his wife had expressed great unhappiness in the marriage and described his daughter as clingy with his wife and distant from him. Mr. B was certain that his wife had plans to leave him once their daughter was grown. He also stated that he believed he might be happier divorced, and he justified this statement with sharp criticism toward his wife regarding her habits of housekeeping and parenting. He described subjective feelings of hopelessness and worthlessness.

Mr. B explained that his present relationship with his parents was conflicted. He described both parents as harsh disciplinarians when he was a child, and he still viewed them as "selfish." His parents had divorced when he was 10, and he and his sisters had stayed with their father. During the history-taking session, Mr. B admitted to abuse by his mother and his paternal grandfather. Mr. B had been diagnosed with depression by his family physician and prescribed an antidepressant.

On the AAI, pre-EMDR, Mr. B scored "cannot classify" because of high scores in both the dismissive and the preoccupied categories. Mr. B was classified as D_2 (dismissive–derogatory type) because of very high scores for derogation related to his mother and also category E_2 (angry/preoccupied) because of very high scores for anger related to his father.

Treatment. Following history taking and the AAI, Mr. B completed two sessions of resource development and 15 sessions of EMDR, within a total of 25 therapy sessions over 1 year's time. The validity of the positive cognition (VOC) began at 3 on average and reached a 7 prior to closure. SUD started at 4 on average, increased to 8 or 9 immediately after beginning desensitization, and then decreased to 0 or 1 prior to closure.

Difficult memories that surfaced during the AAI as well as challenging recent situations were used as initial targets for reprocessing. One touchstone event was identified when Mr. B was recounting an upsetting incident with his son and he was asked to notice the feelings, sensations, and negative beliefs associated with the recent event and then to allow his mind to float back to childhood. He accessed a memory of an incident of verbal abuse from his mother regarding some masturbatory behavior when he was a child. Mr. B admitted that he had remembered but purposely avoided mentioning the verbal abuse incident during the AAI because he carried such intense shame related to the memory. During the assessment phase, Mr. B reported a SUD of 10 for this memory. It was reprocessed over four sessions until SUD reached a 1, which he deemed ecologically appropriate. Other memories were reprocessed within one or two sessions. Some recent events were reprocessed very quickly, allowing time for future template work within the same session.

Following is a summary of Mr. B's targets and cognitions:

Target = Beating by his grandfather and lack of protection from his father. NC = "I'm not good enough." PC = "It's not about me."

Target = Beating by mom. NC = "I must be stupid to trust." PC = "I am learning that in my life today most people have good intentions."

Target = Needing help with project at work. NC = "I have to be in control to survive."

PC = "Now it's safe to let go of things I can't control."

Target = Being locked in the closet by an older brother. NC "I am powerless." PC "I am now skillful and can protect myself."

Target = Verbal abuse by mother, related to masturbatory behavior. NC "I'm ugly. I'm odd. I'm abnormal." PC "I am normal."

Target = Blow-up with daughter. NC "I will cease to exist if I'm not in control." PC "I can go with the flow."

Target—Being at work. NC "Those sons-of-bitches!" PC "I can handle it."

Target—Recent dispute with wife. NC "She's being stupid." PC "Nobody's perfect, no marriage is perfect."

Target—Recent dispute with wife. NC "I have to win." PC "I am an adult. I can handle this like an adult."

During reprocessing of recent events, childhood material was often accessed, and Mr. B soon gained insight into how his present responses were rooted in his past. For example, while reprocessing the dispute with his wife, Mr. B remembered what it felt like to be small and helpless with his father when he was a child. He stated, "This is probably what she feels like when I act this way. The kid part of me acts like a bully to be in control." Future templates included imagining an appropriate response to challenging situations at work, at home with his wife and daughter, and with both his parents in the present. After reprocessing upsetting memories related to his parents, Mr. B was surprised to have a positive memory of his mother bundling the children up around the fireplace on a stormy night. The positive memory was reinforced

with bilateral stimulation, along with a PC "It's safe to be close."

Results. Post-EMDR, Mr. B scored F_5/E_2 (earned secure with an alternate angry/preoccupied classification due to moderate anger scores). He no longer met criteria for the Ds2 (dismissive–derogatory type) classification. He was able to discuss his upbringing by his parents with much more emotional calm. Table 1 shows changes in the major AAI 9-point scales pre- and post-EMDR treatment as well as the change in Mr. B's overall attachment category designation.

Mr. B reported that incidents of anger outbursts at home had become significantly less frequent and less intense. Mr. B and his wife participated in one session of couples' therapy, and both agreed to make a long-term commitment to their marriage. Both Mr. B and his wife reported that Mr. B had become more patient and less critical with his daughter, thus improving the quality of their relationship. Mrs. B reported that her husband showed an absence of previously reported feelings of hopelessness and worthlessness.

Case 2

Pretreatment. Mr. M, a 45-year-old White, entered individual therapy after marital therapy with another counselor had failed to improve his marriage, and he and his wife had separated. In the initial interview, he insisted that he was completely to blame for the problems in the marriage. He stated that he was seeking professional help so that his wife would take him back. He and his wife had been married for 25 years and had three sons, ages 15, 19, and 21. He described his relationship with his children as awkward and distant. He also described feelings of despair and high levels of anxiety.

Mr. M stated that his father was deceased, and he was currently living with his mother. He admitted that both his parents were very strict and lacking in affection when he was a child, but he denied any kind of abuse by his parents during the initial interview. He did admit to an incident of sexual abuse during childhood by an adult in his church. He described some memories of what sounded like very small dissociative episodes as a young child, but he denied any present-day dissociative symptoms. Mr. M had been diagnosed with depressive disorder and anxiety by his treating psychiatrist and was prescribed an antidepressant.

On the AAI, at pre-EMDR, Mr. M scored $F_1/U/d$ (secure with a secondary classification of unresolved/disorganized due to a moderate score in this category).

Treatment. Following history taking and the AAI, Mr. M completed two sessions of resource development and then completed 10 sessions of EMDR, within a total of 20 therapy sessions over approximately 1 year's time. Mr. M reported SUD of 6 on

TABLE 1. Mr. B: Changes in AAI 9-Point Scales and Overall AAI Category Designation Pre-and Post-EMDR Treatment

AAI 9-Point Scales Pre-and Post-EMDR Treatment				
State of Mind (9-point scales)	Pre-EMDR (mother scales)	Pre-EMDR (father scales)	Post-EMDR (mother scales)	Post-EMDR (father scales)
Idealization	1	1	1	1
Anger	4.5	7	4	5
Derogation	8	2	2	1
Unresolved	1	1	1	1

Overall AAI Attachment Category Categorization	
Pre-EMDR Treatment	Post-EMDR Treatment
"Cannot classify" (combination E_2 and Ds_2—angry preoccupied and dismissive, derogatory type)	F_5/E_2—Primary designation "earned" secure. Alternate designation angry preoccupied due to a moderate anger score (score of 5 is a borderline score).

average per target, reducing to a 0 or 1 prior to closure. The VOCs were, on average, 3 prior to reprocessing. Mr. M was able to achieve a final VOC of either 6 or 7 and reach closure within one session.

Following is a summary of Mr. M's targets and cognitions:

Target = Incident of rejection from his childhood peers.
NC = "There must be something wrong with me." PC = "I'm different, but not less than."
Target = Witnessing a severe fight between his parents in childhood. NC = "I'm not safe." PC = "I'm okay."
Target = Beating by his brother in childhood. NC = "It's not safe to relax." PC = "It's safe to relax today."
Target = Childhood sexual molestation by an adult. NC = "Something is wrong with me." PC = "I am normal."
Target = Sexual acting out as a child. NC = "I am shameful." PC = "It was a misguided attempt to comfort myself."
Target = Verbal abuse from his mother in childhood. NC = "It's not safe to disagree." PC = "I can disagree and it's okay."
Target = Verbal abuse from his father. NC = "I can't be vulnerable." "I'm incompetent." PC = "I don't have to be perfect. I'm still okay."
Target = Verbal attack from his wife. NC = "I'm always wrong." PC = "If I don't have her approval, I can be okay."
Target = Acting out by his son. NC = "I'm a bad parent." PC = "I do the best I can."
Target = Beating by his father in childhood. NC = "I am not safe." PC = "I am safe now."

Mr. M appeared to avoid reprocessing the beating by his father until other targets had been reprocessed. Mr. M had minimized the beating as "no big deal" early in treatment, but during the assessment phase, he admitted to fear and memory of physical pain. His SUD related to the memory of the beating started at 8 and decreased to 1, which he deemed ecologically appropriate. Following reprocessing of recent events, Mr. B visualized healthy responses to challenging situations with his wife and son, and the visualization was reinforced with bilateral stimulation, usually during the same session.

Results. Post-EMDR, Mr. M scored secure (F_1) with no evidence of the unresolved/disorganized category found prior to treatment. Mr. M was now able to freely talk about difficult experiences with his parents during childhood, and he identified physical abuse appropriately as abuse. Table 2 shows changes in the major AAI 9-point scales pre- and post-EMDR treatment as well as the change in Mr. M's overall attachment category designation.

Post-EMDR, Mr. M was able to share equally in the responsibility for the problems in the marriage and expressed both sadness and acceptance regarding the permanency of the separation. He reported spending more time with his sons, offering more emotional

TABLE 2. Mr. M: Changes in AAI 9-Point Scales and Overall AAI Category Designation Pre-and Post-EMDR Treatment

AAI 9-Point Scales Pre-and Post-EMDR Treatment				
State of Mind (9-point scales)	Pre-EMDR (mother scales)	Pre-EMDR (father scales)	Post-EMDR (mother scales)	Post-EMDR (father scales)
Idealization	3	2	1	1
Anger	1	1	1	1
Derogation	1	1	1	1
Unresolved	N/A	5	N/A	1

Overall AAI Attachment Category Categorization	
Pre-EMDR Treatment	Post-EMDR Treatment
F_1/U/d—Primary designation secure. Alternate designation unresolved/disorganized due to moderate score on the unresolved scale.	F_1—Secure

Note. N/A = not applicable.

support, and feeling more comfortable in conversation with them. Mr. M reported an absence of feelings of despair and significant decrease in overall anxiety.

Case 3

Mrs. K, a 42-year-old White, entered therapy after moving to the vicinity. Mrs. K described acute depression and frequent suicidal thoughts, and she self-harmed by cutting her arms, legs, or stomach with a razor nearly every day and sometimes more than one time per day. She expressed unhappiness in her marriage and stated that she had no voice in her relationship with either her husband or her grown daughters. Mrs. K had had several years of therapy prior to the move, including one inpatient hospitalization in a treatment program for patients with cutting behavior. Mrs. K also had completed nearly one year of dialectical behavioral therapy (DBT; Linehan, 1993) prior to the move to her present location. (DBT teaches skills for emotion regulation, distress tolerance, mindfulness, and interpersonal effectiveness through a structured program involved classes and individual therapy.) She agreed to attend a DBT class at this therapist's location in conjunction with the EMDR therapy.

Mrs. K stated that no one had protected her from sexual abuse by her brother during childhood. She indicated that she had been "unwanted"; therefore, she believed that the sexual abuse was her fault because she had not been worth protecting. She described her mother as "low functioning" and "uncaring" and her father as "gentle and kind" but unable to stand up to her brother. She denied abuse of any kind by either parent. However, she currently became emotionally overwhelmed and self-harmed following contacts with her parents. There had been no contact between Mrs. K and her brother for more than a decade. Mrs. K was diagnosed with major depression, and she had been prescribed an antidepressant, an antianxiety medication as needed, and sleep medication by her psychiatrist. Pre-EMDR, Mrs. K scored Ds_3/U/d (dismissive, with an alternate unresolved/disorganized classification due to a moderate score in this category). (Note: The U/d classification according to the AAI is based on scores related to the state of mind with respect to abuse from parents and not with respect to abuse from siblings.)

Treatment. Following history taking and the AAI, Mrs. K completed 13 sessions of EMDR, within a total of 40 individual therapy sessions over 1 year. In addition, Mrs. K attended DBT class weekly. Closure was achieved in one to three sessions per target. Between sessions, Mrs. K was encouraged to practice DBT emotion regulation and distress tolerance skills and to keep a DBT diary card. On average, Mrs. K reported SUD of 9 prior to the reprocessing of events, and the SUD decreased to a 0, 1, or 2 prior to closure. SUD of 1 or 2 were deemed ecologically appropriate. The validity of cognitions were, on average, a 3 prior to reprocessing. Mrs. K was able to achieve a final VOC of 7 prior to closure. The positive cognitions chosen were specific to the events in order to increase Mrs. K's initial acceptance of the statement (for example, "I did not cause her to act that way" as opposed to "I am worthwhile"). Targets were reprocessed over one to two sessions.

Following is a summary of Mrs. K's targets and cognitions:

Target = Memory of her brother threatening her by harming a pet. NC "I am not safe." PC "It's all over now." "I'm safe now."

Target = Memory of abuse by her brother and her parents' failure to protect. NC "I am not safe." PC "It's all over now." "I'm safe now."

Target = Memory of abuse by brother and parents' failure to protect. NC "I am worthless." PC "I did nothing to deserve to be treated like that."

Target = Memory of verbal abuse by her grandmother. NC "I deserved it." PC "No child deserves to be abused."

Target = Memory of her mother's refusal to respect privacy. NC "I am worthless." PC "I did not cause her to act that way."

Target = Memory of beating by her father. NC "I am worthless." PC "I did not deserve it."

Target = Recent incident involving her mother lying to others. NC "I am worthless." PC "I have the right to speak up."

Target = Husband criticizing her. NC "I am worthless." PC "I have the right to hold my ground."

Following the reprocessing of recent events, a visualization of appropriate, assertive responses to challenging situations with mother and husband were reinforced with bilateral stimulation.

Results. Post-EMDR, Mrs. K shifted from Ds_1 (dismissive) with an alternate U/d (unresolved/disorganized) designation to F_1 (earned secure). She was able to identify treatment by her father as physical abuse and could discuss the memories. She acknowledged her parents' failure to protect her from her brother and also the effects of her parents' unhappy childhood experiences on their behaviors. She acknowledged some positive parts of the current relationships with both of her parents as well as elements that were unsatisfying. Table 3 shows changes in the major AAI 9-point scales

TABLE 3. Mrs. K: Changes in AAI 9-Point Scales and Overall AAI Category Designation Pre-and Post-EMDR Treatment

AAI 9-Point Scales Pre-and Post-EMDR Treatment				
State of Mind (9-point scales)	Pre-EMDR (mother scales)	Pre-EMDR (father scales)	Post-EMDR (mother scales)	Post-EMDR (father scales)
Idealization	2	7	1	1
Anger	1	1	1	1
Derogation	1	1	1	1
Unresolved	N/A	5	N/A	1

Overall AAI Attachment Category Categorization	
Pre-EMDR Treatment	Post-EMDR Treatment
Ds_3/U/d—Primary designation dismissive. Alternate designation unresolved/disorganized due to moderate score on the unresolved scale.	F_1—"Earned secure"

Note. N/A = not applicable.

pre-and post-EMDR treatment as well as the change in Mrs. K's overall attachment category designation.

Mrs. K reported significant improvement in levels of depression and only rare thoughts related to suicide. She was able to apply assertiveness skills with both her parents and also with her husband and grown daughters for the first time. Use of cutting to manage stress had gradually decreased in frequency to one time in 2 months, and at the end of one year, no cutting had happened in 2 months.

Discussion

Three adult patients who initiated outpatient mental health counseling for symptoms of depression and interpersonal problems were treated with 10 to 15 EMDR sessions over the course of 1 year in addition to talk therapy sessions and, in one case, additional DBT group sessions. The AAI was administered pre-and post-EMDR.

In case 1, the attachment status of Mr. B was designated "cannot classify" (a combination of dismissive and angry/preoccupied categories) pre-EMDR. The designation "cannot classify" is rarely seen in nonclinical populations but has been found to be associated with adults with histories of psychiatric disorders, sexual abuse, and criminal and marital violence (Hesse, 1999). Post-EMDR, Mr. B was designated "earned" secure with an alternate designation of angry/preoccupied status due to a moderate anger score. (A secure status is designated as "earned" when parents are rated less than 2.5 on a 9-point "loving" scale.) In case 2, the attachment status of Mr. M changed from secure status with a secondary unresolved/disorganized designation pre-EMDR to secure status with no evidence of unresolved/disorganized post-EMDR. In case 3, the attachment status of Mrs. K changed from dismissive with a secondary unresolved/disorganized designation to an "earned" secure status.

Based on the results of these three case studies, the reprocessing of attachment-related memories with EMDR may have a positive effect on attachment status as assessed by the AAI, moving patients toward a more secure attachment status. Desensitization and reprocessing of early memories with EMDR has been shown to increase patients' access to adaptive information stored in the brain related to distressing memories and decrease associated feelings of anger, shame, and fear. The EMDR desensitization and reprocessing may reduce patients' need to either idealize parents or derogate them as a defense when speaking about their early memories, and EMDR may improve their overall capacity to speak coherently about the past without becoming emotionally overwhelmed.

In the three case studies, the ability of the three patients to speak more coherently on the AAI post-EMDR appeared to translate to improved functioning

in their relationships. As early relationship memories and recent relationship events were desensitized and linked to more adaptive information through EMDR, negative beliefs related to self-worth, vulnerability, and powerlessness shifted to more positive beliefs. The positive impact on the patients' internal working model (Bowlby, 1999) subsequently improved their capacity to think and respond rationally in their relationships.

Fonagy (1997) asserts that children who are designated as either avoidant (dismissive in adulthood) or ambivalent/resistant (preoccupied in adulthood) have developed unconscious defenses to underlying anxiety related to problematic interactions with their parents and that psychopathology develops when the defenses fail and the anxiety breaks through. Specifically, it appears that adults with a dismissive attachment status (and children with avoidant status) may be attempting to avoid vulnerability and anxiety by denying painful truths and avoiding upsetting memories and thoughts or by derogating relationships in order to convince themselves that experiences of rejection do not matter. Adults with preoccupied attachment status (and children with ambivalent/resistant status) may be attempting to avoid vulnerability and anxiety with demanding, controlling, or lashing-out behaviors. In either case, individuals tend to remain "stuck" because the defensive behaviors that prevent them from vulnerable and anxious feelings also prevent them from "working through" memories of events associated with the vulnerable feelings and from experiencing healthy relationships in the present.

Through the caring therapeutic relationship and utilization of the EMDR approach, the patient with an insecure attachment status is able to mindfully focus on the anxiety-provoking material and reprocess early events associated with the vulnerable feelings until the anxiety lessens and the beliefs and perceptions shift. Clearly, it is unlikely that an individual with an insecure or disorganized attachment status would be able to recall or reprocess every early event associated with negative beliefs, perceptions, and behavioral patterns, but by EMDR reprocessing of major representative events, the positive effects may generalize, affecting feelings, thoughts, and perceptions regarding a broad number of life experiences.

In contrast to individuals with dismissive and preoccupied status, individuals who have an unresolved/disorganized designation related to memories of abuse or loss may be without adaptive defenses to cope with the painful event, leading to mental disorganization associated with this attachment designation (Liotti, 1999). Similarly, Shapiro's (2001) AIP model hypothesizes that events that are extremely distressing may overwhelm the natural information processing system, preventing the material from processing normally. Within the context of a supportive and secure therapeutic relationship, the therapist can utilize EMDR to assist the patient in accessing and reprocessing the memories until the anxiety and the mental disorganization is lessened and the negative beliefs and perceptions link to more adaptive stored material.

Bowlby's (1989) internal working model theorizes that beliefs and relationship patterns developed in the earliest attachment relationships tend to become consistent patterns into adulthood. Changing negative beliefs, perceptions, and automatic responses associated with early memories is the first step, and the next step is changing present-day relationship patterns, but present-day patterns of perceptions, thoughts, and responses should also be directly targeted as longtime interpersonal patterns and reactions may have become habitual. In the case of Mr. B, Mr. M, and Mrs. K, negative beliefs, perceptions, and behavioral patterns set in childhood had created negative perceptions and behavioral patterns in their current relationships. Recent events that had triggered negative responses were targeted and reprocessed, and new healthy behavioral patterns and thoughts were mentally rehearsed and reinforced with bilateral stimulation.

Research indicates that secure attachment status is associated with sensitive caregiving toward children, increased stability in adult relationships, and reduced risk for mental illness (Dozier et al., 1999; Pietromonaco, Greenwood, & Barrett, 2004; Simpson & Rholes, 2004). If the use of EMDR with adults to reprocess attachment-related childhood memories does indeed improve the quality of attachment status, these improvements could positively affect present-day relationships with children and partners and reduce symptoms related to mental illness.

Limitations of the Study

There were several weaknesses in the study. The author conducted and scored the AAIs pre- and post-treatment. The individual treatment with all three patients was facilitated by the same therapist. In case 3, Mrs. K received significantly more sessions and was involved in DBT group at the same time. The study lacked long-term follow-up data, and no other standard measures of symptom severity were included.

Recommendations for Future Research

More research is needed involving larger groups of experimental and control subjects in order to determine

validity and consistency of positive effects on attachment status following EMDR treatment. Future studies should consider combining the use of the AAI with other standardized measures. More research is also recommended to determine the length of treatment necessary to create positive changes, the effects of such changes in attachment status on symptoms related to emotional illness, and factors that may confound positive treatment effects on attachment status or length of treatment required.

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