EMDR Treatment of Childhood Sexual Abuse for a Child Molester: Self-Reported Changes in Sexual Arousal

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Expanding on previous findings that eye movement desensitization and reprocessing (EMDR) therapy may alter deviant sexual arousal in adult child molesters with a history of childhood sexual abuse (CSA), this article describes the changes reported following the application of EMDR therapy to the memories of CSA in an adult male who had sexually offended against prepubescent children. The client had previously completed a cognitive behavioral intervention to address his offending behavior. EMDR therapy took place over 11 months and consisted of 32 sessions, including preparation and review phases. The aim of the therapy was to alleviate current reported distress and symptoms of posttraumatic stress disorder (PTSD) related to his memories of CSA. The client reported positive changes in emotional, cognitive, and physiological functioning, consistent with reductions on a range of subscales of the Trauma Symptom Inventory 2 and the Inventory of Altered Self-Capacities. However, on completion of therapy, he also reported a reduction in the frequency and strength of sexual arousal to children, which was maintained at a 3-year follow-up, although this was not a target for treatment. The experiences described during the EMDR process by this client are discussed and related to the adaptive information processing (AIP) model and previous findings on reported changes in sexual arousal in this client group.

Keywords: eye movement desensitization and reprocessing (EMDR) therapy; sex offender; pedophilia; deviant sexual arousal; childhood sexual abuse (CSA); minor attracted person (MAP)

Efforts to reduce the incidence of childhood sexual abuse (CSA) include the assessment and treatment of individuals who have sexually offended against children, with the intention of preventing further offending and gaining more understanding of the factors that lead to CSA. The field of sex offender intervention is currently dominated by Cognitive Behavioral Therapy (CBT) approaches, focused on changing the cognitions and behaviors believed to be linked to sexual offending against adults and children and helping clients to develop skills that can be used to manage the thoughts and feelings that are associated with their offending behavior. Although cognitive and behavioral factors are thought to be relevant, the strongest predictor of sexual recidivism has been found to be deviant sexual arousal (Hanson & Bussiere, 1998; Hanson & Morton-Bourgon, 2005), which is often not directly addressed in treatment and therefore may not be affected by these standard cognitive behavioral theraphy (CBT) interventions. Where deviant sexual arousal *has* been addressed, this has also been done using cognitive and behavioral methods, such as olfactory aversion therapy, masturbatory reconditioning, and verbal or masturbatory satiation (Laws & Marshall, 2003; Marshall & Laws, 2003), but the evidence for behavioral strategies in reducing sexual arousal to deviant fantasies is weak and limited (Beech & Harkins, 2012).

Interventions for Pedophilia

In relation to treatment for men who have sexually offended against children, findings such as these are

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likely to have contributed to an opinion that a sexual preference for children may be durable and resistant to change in response to intervention (Walton & Duff, 2017) and a view that pedophilia can be considered a sexual orientation (Seto, 2012) that is biological in origin (Cantor et al., 2004; Dyshniku, Murray, Fazio, Lykins & Cantor, 2015). These conclusions, however, could lead to a lack of motivation in clinicians and researchers to explore possible methods for change and, for those who experience a sexual preference for children, a resignation to what is considered to be an unchangeable state, which may influence beliefs about management of sexual behavior (Tozdan et al. 2018).

The lack of evidence for the success of behavioral interventions in changing sexual preference for children does not necessarily mean that the preference is fixed. It may be that alternative methods would be more effective in producing some change. As pedophilia has been shown to be a primary motivator for some individuals who commit sexual offenses against children (Seto, 2019) and strongly linked to sexual re-offending, the identification and development of methods that may weaken sexual preference for children could potentially reduce the risk of sexual offending and re-offending against children.

Interventions aimed at changing sexual preference for children should explore and identify the origins of the deviant sexual arousal, which can provide both a deeper understanding of the client's sexual functioning and be used as a guide to therapeutic change, as is customary in clinical psychology practice (Eells, 2007; Johnstone & Dallos, 2006). A number of studies have found high rates of childhood sexual abuse (CSA) histories in men who have sexually offended against children (e.g., Jespersen, Lalumiere & Seto, 2009), and Nunes, Hermann, Malcolm & Lavoie (2013) found that sexual offenders who had been sexually abused as children had younger victims and demonstrated more indicators of pedophilic interest than sexual offenders who had not been sexually abused as children, indicating an association between early sexual abuse experience and sexual interest in children.

EMDR Therapy

Where clients identify the origin of their sexual arousal to children as developing from their experiences as a victim of CSA, memories of these experiences, and their impact on current functioning, may be amenable to change using eye movement desensitization and reprocessing (EMDR) therapy. EMDR therapy has been used for many years in mental health services to address the impact of distressing childhood events on current functioning (Shapiro, 1995, 2001, 2017). It is thought to alter not only perceptions, attributions, and beliefs but to produce change in emotional and physiological functioning, resulting in more adaptive behavior in a wide range of client groups (De Jongh, Ten Broeke & Renssen, 1999; Gauvreau & Bouchard, 2008; Grant & Threlfo, 2002; Jaberghaderi, Greenwald, Rubin, Zand & Dolatabadi, 2004; Proudlock & Hutchings, 2016; Ray & Zbik, 2002; Soberman, Greenwald & Rule, 2002). It has been used for a number of years in the treatment of sexual dysfunction (e.g., Pillai-Friedman, 2010; Wernik, 1993) and to alter physiological sensation (e.g., Gerhardt et al. 2016; Sinici, 2016) and has been used in forensic populations, including with sex offenders, to produce cognitive, emotional, and physiological change (Clark, Tyler, Gannon & Kingham, 2014; Fleurkens, Hendriks & Van Minnen, 2018; Ricci & Clayton, 2008; Ricci, Clayton & Shapiro, 2006; Ten Hoor, 2013).

EMDR therapy is based on the adaptive information processing (AIP) model, which is described as a naturally occurring, normal and intrinsic process of linking new experiences with relevant stored information to produce adaptive learning and resolution (Shapiro, 1995, 2001, 2017). This usual process can be disrupted when experiences are accompanied by strong and overwhelming emotions, which "block" normal processing. Shapiro (2001) explains that the perceptions of the event are "frozen" in their original state. This includes images, sounds, cognitions, emotions, and physical sensations. Memories of the experience (trauma) are stored in a fragmented way, with aspects of the memory isolated from one an other. These aspects are then subsequently triggered by similar situations, leading to affect, cognition, and physical sensation associated with the original event experienced as happening again or influencing present perceptions. EMDR therapy allows the individual to engage in AIP so that the traumatic memory can be reprocessed in connection with existing stored information to produce an adaptive resolution, which involves a cognitive restructuring and elimination of the associated maladaptive emotions and physical sensations (Shapiro, 1995, 2001, 2017). According to this model, adults who are sexually attracted to children may be influenced by perceptions of their own sexual abuse, "frozen" as they were experienced at the time of that abuse and triggered by various stimuli (e.g., the sight of a child). Therefore EMDR therapy could be used to access and reprocess these perceptions, producing change in current cognitive, emotional, and physiological functioning in this client group.

EMDR Therapy and Sexual Arousal

As in other client groups that have found EMDR therapy effective in altering the physiological sensations associated with the traumatic memory, it is possible that the sexual feelings associated with sexual abuse trauma could be altered by this therapeutic process. Cornine (2013) describes a case study in which sexual attraction to adult males weakened following EMDR therapy on the client's CSA (perpetrated by his older brother, during which he had been sexually aroused). Cornine reasoned that the current sexual response that had been associated with the abuse had been reduced by resolution of the trauma, while his sexual attraction to adult females was maintained. This was measured by rating strength of sexual attraction over the course of therapy.

Bartels, Harkins, Harrison, Beard, and Beech (2018) examined the effect of bilateral eye movements, a core component of EMDR therapy (Lee & Cuijpers, 2013; Van den Hout & Engelhard, 2012) on experience of sexual fantasy in a student population. They found that when the participants made bilateral eye movements while imagining a sexual fantasy, they reported experiencing the fantasy as less vivid, less emotionally pleasurable, and less arousing.

EMDR Therapy and Deviant Sexual Arousal

EMDR therapy has indeed been used to alter deviant sexual arousal in sex offenders with a reported history of CSA. Ricci et al. (2006) provided EMDR therapy in addition to standard CBT-based sex offender group intervention for this client group and reported a significant reduction in deviant sexual arousal, as measured by penile plethysmography (PPG), compared to a control group who received only the sex offender intervention. This was maintained at follow-up between 6 and 12 months later.

Ricci et al. (2006) explain that perceptions, emotions, and physical sensations experienced at the time of CSA can remain unchanged as they have not been processed in the adaptive, normal manner and are then re-triggered by particular stimuli; for example, the sight of a child that reminds the individual of their abuse. EMDR therapy can then alter these perceptions.

Ricci et al. (2006) also suggest other possible explanations for EMDR therapy producing this significant change in deviant sexual arousal. The increased emotional awareness and new perspectives of the participants' own abusive experience may make the process of sexual objectification more difficult and less satisfying and facilitate the undermining of the cognitive distortions used prior to EMDR therapy to make sense of offending behavior. EMDR therapy allowed participants to recognize that the distorted views they had held about their offending had originated in their experiences of sexual abuse (Ricci & Clayton, 2008). Ten Hoor (2013) reported on changes in the cognitions associated with her case study's CSA (that his own sexual abuse was not harmful) following EMDR therapy as he perceived his abuse in a more adaptive way, which allowed him to engage more fully in sex offender intervention. Ricci and Clayton (2016) later developed the "offense drivers" model to guide therapists in their use of EMDR aimed at changing the factors that appear to have motivated the individual's offending behavior, by resolving the past experiences that may be linked to these factors.

Ricci et al. (2006) also consider ideas of arrested emotional development arising from childhood sexual trauma, which can mean that current triggering stimuli activate the emotional responses first associated with the trauma but that following EMDR therapy, emotional responses are more adaptive. Therefore if pleasurable emotional and physical sensations (including physical sexual arousal) were experienced at the time of the sexual abuse these may then be triggered in the presence of particular stimuli that are associated with memories of the abuse and may also be amenable to change using EMDR therapy.

The findings that sexual attraction and strength of sexual arousal can be altered in the general population and that EMDR therapy has been reported to have significantly changed deviant sexual arousal in men who have sexually offended against children warrant further exploration. Change during intervention in the above studies has been reported as possibly involving cognitive restructuring, elimination of maladaptive emotions, and weakening of sexual arousal to a particular subject (children, adult males, specific sexual fantasies). In order to shed more light on the possible various mechanisms involved, this case study aims to describe the change process reported by one client during EMDR therapy on memories of his CSA. He had sexually offended against children and reported a sexual arousal to children at the time of the offending. This arousal to children remained following cognitive behavioral sex offender intervention and was present prior to EMDR therapy. Following the completion of standard EMDR protocol on his CSA he reported that he no longer experienced sexual arousal to children, although this was not the focus of the intervention. The targets of therapy were the reduction of distress associated with the client's CSA and reduction in

the intensity and frequency of intrusive memories and nightmares. However, following intervention the participant reported that sexual arousal to memories of his CSA and to children that he had previously found sexually arousing was no longer present. Descriptions of change are based on participant report, clinical observation, and psychometric evaluation.

Method

Process

The client, J, had been referred by probation services to a specialist forensic clinical psychology service in the community, designed to address offending behaviors and related mental health issues, in order to reduce his risk of re-offending. This was not a mandatory service; J had requested help and had displayed motivation to engage in psychological intervention. He completed cognitive behavioral–based group intervention designed to help him to understand and alter the thoughts, feelings, and behaviors associated with his offending behavior. Following this he was offered psychological therapy to address symptoms of posttraumatic stress disorder (PTSD) that he reported as arising from his own CSA.

Measures

EMDR specific measures were administered during therapy sessions by the therapist. The Inventory of Altered Self-Capacities (IASC) and Trauma Symptom Inventory 2 (TSI 2) were administered pre- and post-intervention by an assistant psychologist, under the supervision of a doctoral-level clinical psychologist.

Measures Used During EMDR Therapy. The measures of change routinely used in EMDR therapy rate the strength of cognitions and emotions identified as targets of change. Positive or adaptive cognitions related to the target memory that the participant would like to have about themselves are identified and given a rating from 1 to 7 for how much the participant believes them to be true (Validity of Cognitions—VOC), and intensity of emotional distress is measured by the participant on a scale of 0 to 10 (Subjective Units of Disturbance—SUDs [from Wolpe, 1958, as cited in Brown & Shapiro, 2006]). Treatment is complete when the SUDs are measured as 0 or 1 and the VOC is measured at 6 or 7.

IASC. The IASC (Briere, 2004) is a 7-scale, 63 item self-report measure that looks at difficulties in the areas of relatedness, identity, and affect regulation. It has been normed and standardized on a general adult population; *t* scores are used to interpret the individual's level of symptomatology. These are linear transformations of the raw scale scores, derived to have a mean of 50 and a standard deviation of 10: *t* scores of 70 or above are considered to be "clinically significant," and scores of between 65 and 69 indicate some self-capacity disturbance.

TSI 2. The TSI-2 (Briere, 2011) measures the impact of past traumatic experiences on current functioning. It evaluates a broad spectrum of acute and chronic symptomatology associated with trauma having occurred at any point in the respondent's life span. It consists of 136 items and assesses a wide range of complex symptomatology. It has been normed and standardized on a representative sample of U.S. general population and consists of 2 validity scales, 12 clinical scales, 12 subscales, and 4 factors; *t* scores are used to interpret the level of symptomatology. These scores are linear transformations of the raw scale scores, derived to have a mean of 50 and standard deviation of 10. Higher *t* scores indicate greater degrees of symptomatology, with a *t* score of 60 and above considered "problematic" (above average symptom endorsement, likely to have clinical implications), and *t* scores of 65 and above considered "clinically elevated" (symptom endorsement that is sufficiently extreme as to represent significant clinical concern).

Treatment

EMDR Therapy

Standard EMDR protocol was followed throughout the intervention (Shapiro, 1995, 2001, 2017), which consisted of a number of phases. Following preparatory phases and the identification of a memory of the sexual abuse to work on, bilateral stimulation was used to desensitize and re-process the memory. During the desensitization and re-processing phase the client's attention to the various aspects of the memory network was directed using standardized procedures. Change was assessed using the measures previously described and the final phase involved the re-evaluation of the memory. The therapist was the first author, a doctoral level clinical psychologist who had completed EMDR training and had 6 years experience in providing EMDR therapy in forensic services. She was also trained and experienced in the psychological treatment of adults who have sexually offended.

The targets for change were identified by J and the therapist as: a reduction in anxiety, decrease in the frequency and intensity of intrusive memories and nightmares, and weakening of the overwhelming feelings of powerlessness, anger toward himself, and disgust. Sexual arousal to children was *not* identified or targeted directly as a goal for change. J engaged in 32 sessions over 11 months.

Participant

J was a 27-year-old male with a self-reported sexual arousal to boys aged between approximately 7 and 9 years old. At the age of 21, J received convictions and was incarcerated for the sexual assault of two male children aged 7 and 8 respectively. At the time of this intervention he was living in the community after being released from prison, was no longer subject to license conditions, and was attending the service voluntarily. He had no children and was not seeking contact with any children.

J had previously engaged in standard sex offender group-based intervention with probation before his referral to the community service and had completed some CBT-based offense focused group intervention aimed at understanding and managing risk of sexual re-offending at the community service. He had engaged well with this work. However, his sexual arousal to children remained. This was based on self-report—J described experiencing a sexual arousal to male children aged between 7 and 9 years approximately and engaging in sexual fantasy about children while masturbating approximately three to four times each week. It was also evident that J was experiencing some symptoms of PTSD, including intrusive memories, anxiety, anger, nightmares, and avoidance. He described very strong feelings of powerlessness and helplessness, anger at self, and self-disgust that accompanied intrusive memories of his CSA.

Background Information

J described a stable early family environment, in which he felt safe and cared for. However, at the age of 7 years he was groomed and sexually abused by an adult male neighbor. This continued for 2 years. At the time of the abuse he had experienced mixed feelings, perceiving some of the touching as physically pleasurable and arousing, and had enjoyed the treats and affectionate behavior that the abuser presented but experienced some aspects as emotionally uncomfortable. However, when the abuse unexpectedly became more intrusive and forceful he experienced shock, terror, an overwhelming sense of helplessness, powerlessness, disgust, and confusion.

J reported that as a young child he attempted to suppress the unpleasant, shocking memories of the experience by focusing his attention on other activities but deliberately recalled the more pleasurable and arousing aspects of his abuse. As he entered into puberty his understanding and perceptions of his abuse changed. He began to regard himself as "disgusting," "dirty," "weird," different from others, and as responsible for the abuse. He started to experience intrusive memories and flashbacks of the unpleasant acts of abuse several times each day and nightmares of the same every night, leading to disturbed sleep. The flashbacks were accompanied by a strong feeling of vulnerability, helplessness, and powerlessness. J described feeling "small" and needing to protect himself. Thoughts and memories of the abuse were accompanied by intense feelings of shame and self-disgust, and interfered with everyday functioning and interactions; for example, he could not concentrate on schoolwork or read a book and was often not able to follow conversations or engage fully with others. During his teenage years, when friends discussed their sexual interactions and behaviors with girls J felt anxiety, shame, and a feeling of being different from them. He avoided such conversations and interactions with girls, although he did feel a sexual attraction toward them, as he felt unable to manage his feelings of anxiety and shame while interacting with them. Into adulthood, he spent much of the day dealing with these flashbacks, memories, and feelings, attempting to distract, suppress, detach from others, and was unable to engage in employment or further education.

From puberty onward, memories of the abuse were also accompanied by more intense sexual arousal, and J would masturbate to memories of the pleasurable aspects of the abuse. This provided emotional comfort and soothing as well as sexual satisfaction that temporarily suppressed the shame, anxiety, and feelings of powerlessness. He also experienced a sexual arousal to male children who reminded him of himself at the time that he was abused and would also masturbate to fantasies of abusing them by engaging in the same acts with them as his abuser had done with him. He had engaged in masturbation to fantasies of perpetrating CSA and to memories of his abuse approximately three to four times each week since adolescence. J experienced a sexual attraction to adult females but described this as relatively weaker and occurring less frequently than his sexual arousal to children.

J's offending occurred when he came into contact with two boys in the community, aged 7 and 8 years respectively. Interacting with them triggered sexual arousal and thoughts of engaging in sexual activity with them. He described wanting to reenact the pleasurable aspects of his own abuse with himself in the role of his abuser.

EMDR Change Process

In accordance with standard EMDR protocol, J was asked to generate an image of his abuse and, while holding this in mind, to identify the thoughts and feelings he experienced. He did not report sexual arousal, and this was not a target for change. He was asked for the cognition that represented his beliefs about himself now and that was salient with the abuse memory. He identified two cognitions that he felt represented his beliefs: "I'm dirty" and "I'm small and powerless." The positive desired cognitions identified by J as being associated with the image were "I'm OK" and "I can protect myself now." He rated his belief in these desired statements as 1 out of 7 for both (VOC). He described feeling fear, anger toward himself, and shame and rated this as 8 out of 10 in intensity.

Each subsequent session started with J bringing the target image to mind, noticing emotions, physical sensations, and thoughts and then engaging in bilateral eye movements, led by the therapist. He was asked to notice what came into his awareness. Following each "set" of eye movements, J was asked what he had experienced and he provided reports of physical sensations, emotions, thoughts, images, fragments of memories. J required 32 EMDR sessions, including preparation, before his scores reached 0 out of 10 on the SUDS and 7 out of 7 on the VOC.

During the beginning stages of the desensitization phase of therapy J would appear absorbed in the memory, reporting experiencing the memory "like it's happening now" and his concurrent awareness of his surroundings was reduced. This dissociation was explored and was assessed as not being a barrier to engagement and being manageable during intervention. The therapist spoke to J, using grounding techniques (e.g., "you are here with me in the therapy room," "notice the feel of your hands on the chair," "this is a memory, it's in the past") when he began to dissociate. He was able to maintain concurrent awareness of the past and present when these methods were used and he reported changes in perceptions having occurred during these sessions. Over time and repeated exposure to the memory, dissociation gradually lessened in intensity and he was able to remain aware of his surroundings while simultaneously remembering the abuse without the grounding techniques. At the end of therapy J could recall the abuse as a "normal memory" and did not feel that it was happening again.

Over the course of therapy the feeling of being powerless, scared, and small weakened. The abuse was experienced more easily as a past event and he reported being aware that he was no longer in danger and that he was an adult and able to protect himself. He began to spontaneously compare his abused child self to his current adult self and notice the differences. He described feeling more safe and competent. He came to the conclusion that the fear and powerlessness experienced during some abuse episodes had been so intolerable that he had attempted to reduce this by telling himself he had been in control, focusing on his perceived consent and enjoyment of the abuse, which reinforced his sexual arousal. He reported that this perception had been part of the fantasy and masturbation to the abuse during adolescence. However, this had maintained the feelings of self-disgust and shame.

As the intervention continued, J reported his feelings of self-disgust and shame weakening and feelings of intense anger that prior to EMDR were directed at himself for "going along" with the abuse began to get directed toward the abuser. J began to change his view of his own role in the abuse. Initially he had believed that he had been consenting, active, and responsible for the continuation of the abuse, and this changed to J believing that he had been groomed and manipulated, had responded to this as any other child would have done, and that the abuser was fully responsible for the abuse. This included perceptions of his own arousal during the abuse; he perceived his physiological response to the abuse as understandable rather than deviant and shameful. Information about the grooming process learned from the previous CBT-based interventions appeared to be used to come to new conclusions about the abuse process; for example, that behavior can be modeled and normalized to the child by the abuser. This removed the feelings of disgust and anger toward himself, and he then experienced anger at the abuser for abusing him and disgust at the act of abuse rather than at himself. These were considered to be adaptive and healthy responses to memories of CSA.

At times near the beginning of therapy, J would describe an intense emotion or physical sensation without identifying the cognitive or temporal aspects of the memory; for example, feeling of nausea, fear, and a sensation of heaviness in his hand. Gradually these different parts of the memory began to "link

up," and he reported particular emotions and physical sensations becoming associated with images and more awareness of the context and thoughts he had experienced at that time. Sometimes J was unaware of the different aspects of the memory until he was asked directly for feedback on the various modalities of experience, which then appeared to produce this "linking up." For example, during one set of eye movements he displayed behaviors of intense swallowing and shaking. When asked for feedback he did not mention this. The therapist asked him to notice his body and physical sensations during the next set of eye movements. He then reported experiencing the same physical sensations in his throat that he had felt at the time of the abuse. This in the session was accompanied by feelings of fear, shock, helplessness, perceptions of being frozen, and a specific image of the abuser. Continuing with the eye movements, J reported more detail of the memory and its context in the wider timeline. He became more able to reflect on his experience following each set of eye movements. He reported that he had not been aware that he was swallowing and shaking until the therapist had asked him directly to notice his body, but facilitating his awareness of these physical sensations during the following set of eye movements had led to an integration of these into the emotional and cognitive aspects of the memory, which had felt fragmented prior to the session. This one moment of concurrent awareness was followed by a significant shift in perspective and immediately reduced the distress associated with that particular part of the memory.

J reported details of the abuse emerging that he had not been consciously aware of before intervention began. Changes in perspective included the following: J reported that at the beginning of therapy, when thinking about where he had lived as a child he would "see" only his own house and the abuser's house. At the end of therapy his memory of the street now included images of the other houses between his and the abuser's. He recalled the variety of clothes that he and the abuser had worn on different occasions and the various weather conditions or seasons involved, and stated that before EMDR therapy he could "see" only one outfit each and had not noticed the environmental differences. He could visualize a wider view of the scene of the abuse than he had prior to EMDR therapy. The timeline and behavioral processes were more complete: J could recall the order of events, the feelings and thoughts accompanying them, and go through a discrete episode of abuse from start to finish without barriers, gaps, and jumps in his memory. Prior to EMDR he experienced feelings, images, and "pieces" of memories. Some of these pieces were associated with sexual arousal, others with intense fear and helplessness, and others with shame. His memories at the end of EMDR were more detailed, connected, and integrated, and all the feelings that had been associated with them had reduced in intensity. J rated his anxiety, anger toward self, and shame when thinking about his abuse as 0 out of 10 on the SUDS and his belief in the cognition "I'm OK" and "I can protect myself" as 7 out of 7.

J reported that he no longer experienced anxiety, feelings of powerlessness, anger at himself, and disgust when recalling his CSA outside the therapy room. His nightmares had stopped and he did not experience intrusive memories of the abuse. J could not identify any current triggers to work on. Any anxiety reported in review sessions appeared to be normal reactions to various situations, and he stated that the feelings targeted had not been experienced since completing EMDR therapy. He experienced no distress when recalling his abuse but did feel some mild anger at the abuser and mild disgust at what the abuser had done. These were considered to be normal reactions and were not addressed any further.

J could not identify any desired situation that he wanted to use for future template work at the time of the therapy being completed. He felt that all his goals had been achieved and reported no areas of distress or difficulties in functioning currently active. He was advised that he could return to the service for future template intervention if any difficulties arose.

Although sexual feelings were not a focus of the treatment, J reported that during the reprocessing phase of therapy his sexual arousal to the memory of his abuse had weakened as the perception of the memory had altered. He explained that before EMDR therapy began he would become aroused to the more positive aspects of the memory, but since perceiving the abuse in a more integrated and objective way he no longer experienced sexual arousal in response to his memories of abuse. Furthermore, J reported a significant reduction in his sexual arousal to children. Prior to EMDR therapy, seeing male children that reminded him of himself at the age at which he was abused would produce sexual arousal. This would involve J feeling an attraction to the child and "storing away" an image of them to use for masturbation. This had begun at the age of 14 and continued until the time of engaging in EMDR therapy. He had masturbated to fantasies of children or memories of his abuse approximately three to four times each week.

Following completion of EMDR therapy he reported no longer feeling any sexual arousal or attraction toward such children. He no longer masturbated to images or fantasies of children or to memories of his sexual abuse. He also reported a stronger sexual arousal to adult females and more frequent sexual thoughts about adult females accompanied by sexual arousal, compared to the time before he began EMDR therapy. J reported that, at times, while masturbating to fantasies of adult females, some sexual thoughts of children had intruded but these were infrequent and did not increase sexual arousal, and he responded by either stopping his masturbation or removing the thoughts of children.

Results

EMDR Protocol Measures

Subjective Units of Distress (SUDs). At the beginning of EMDR bringing to mind the target memory produced feelings of fear, anger at self, and shame at 8/10. This had reduced to 0/10 on completion of therapy.

VOC. Measurement of belief of the positive cognitions ("I'm OK" and "I can protect myself now") began at 1/7 before processing and increased to 7/7 on completion of therapy.

IASC. Table 1 shows changes in scores pre- and post-EMDR therapy. Scores on all subscales had reduced on most subscales from the clinically significant range to the normal range, although "self-awareness" remained within the problematic range and "affect instability" remained as clinically significant.

TSI 2. Table 2 shows scores pre- and post-EMDR therapy. All the scores that were in the above average symptom endorsement range, and extremely high symptom endorsement range had reduced to the normal range following treatment.

Three Year Follow-up

Three years after EMDR therapy, J attended the service for a routine follow-up appointment. He was seen by the treating clinician. Repeat measures were not administered but J reported no flashbacks in the last 3 years and his thoughts of the abuse were not experienced as intrusive. He was sleeping well, had not experienced any nightmares, and described having "normal dreams" for the first time since adolescence. He did not feel any sense of powerlessness, anger at himself, or disgust. He felt more confident and had "space" in his head to think—he was now able to concentrate and mentally attend to cognitive tasks that he had found very difficult before, such as reading, interacting attentively with others, and generating future goals.

TABLE 1. Scores on IASC

Self-Capacity Scale/Subscale	Pre-EMDR Score	Post-EMDR Score
Relatedness		
Interpersonal conflicts	77[b]	56
Idealization /disillusionment	91[b]	44
Abandonment concerns	94[b]	51
Identity		
Identity impairment	99[b]	63
Self-awareness	95[b]	66[a]
Identity diffusion	≥100[b]	57
Susceptibility to influence	87[b]	53
Affect control		
Affect dysregulation	≥100[b]	61
Affect skill deficits	≥100[b]	50
Affect instability	≥100[b]	71
Tension reduction activities	87[b]	49

Note. IASC = Inventory of Altered Self-Capacities.

[a]Scores from 65 to 69 are considered to indicate some self-capacity disturbance.

[b]Scores of 70 and above are considered to be clinically significant.

TABLE 2. Trauma Symptoms Inventory 2

Factor	Pre-EMDR—*T* Score	Post-EMDR—*T* Score
Self-disturbance	62[a]	54
Posttraumatic stress	63[a]	52
Externalization	45	47
Somatization	42	42
Scale/subscale		
Anxious arousal	57	50
Anxiety	58	48
Hyperarousal	55	52
Depression	62[a]	53
Anger	45	45
Intrusive experiences	69[b]	54
Defensive avoidance	63[a]	52
Dissociation	60[a]	54
Somatic preoccupations	42	42
Pain	38	42
General	46	43
Sexual disturbance	44	46
Sexual concerns	47	51
Dysfunctional sexual behavior	42	42
Suicidality	51	48
Ideation	52	48
Behavior	47	47
Insecure attachment	62[a]	55
Relational avoidance	63[a]	53
Rejection sensitivity	58	55
Impaired self-reference	58	53
Reduced self-awareness	66[b]	57
Other directedness	48	48
Tension reduction behavior	47	54

[a]Scores of 60 to 63 indicate above average symptom endorsement.

[b]Scores of 64 and above are considered extremely high symptom endorsement.

J stated that he did not experience any sexual arousal to boys he previously would have felt arousal toward, did not experience any sexual arousal when he recalled memories of his sexual abuse, and experienced sexual arousal in response to seeing sexualized images of adult females.

Discussion

This case description provides information on the change process reported by one individual with a sexual attraction to children when using standard EMDR therapy to process his CSA memories. In this case, EMDR therapy was followed by self-reported changes in emotional, cognitive, and behavioral functioning, as one would expect and as in keeping with the previous EMDR literature. Also evident were large changes in IASC and TSI 2 scores, indicating a reduction in symptoms related to PTSD. The goals identified by J at the beginning of treatment—a reduction in anxiety, decrease in the frequency and intensity of intrusive memories and nightmares, and weakening of the overwhelming feelings of powerlessness, anger, and disgust—had all been achieved.

In addition, sexual arousal was also reportedly affected, with J describing a substantial reduction in the frequency and strength of sexual arousal to

children and to his own abuse memories that was sustained over 3 years. Following on from the Ricci et al. (2006) article that reports on EMDR therapy producing significant reduction in deviant sexual arousal in child molesters with reported histories of CSA, and other reports of changes in sexual arousal following intervention (Bartels et al., 2018; Cornine, 2013), this article provides some detail on the emotional, physiological, and cognitive changes reported by one individual during EMDR therapy that may help us develop an understanding of the possible mechanisms involved.

Possible Mechanisms of Change

In a discussion of changes in deviant sexual arousal measured in their study, Ricci et al. (2006) state that

> according to Shapiro (1995, 2001), emotions, physical sensation, and beliefs are inherent in the unprocessed memories. Consequently, the child's perspective would be essentially unchanged from the time of victimization, and similar events in the present (e.g., the sight of a similar-appearing child) can trigger the dysfunctional response. . . . Sexual arousal is one aspect of the memory of victimization that remains somatically stored until processing has occurred (Shapiro, 2005, p. 554).

This appeared to be consistent with J's case; in the initial stages of EMDR he "reexperienced" the abuse, with the perceptions and feelings seemingly almost unaltered from the time of the actual events. However over the course of the therapy, these emotions, physical sensations, and cognitions changed as he used more recent information networks to process these memories adaptively, incorporating more adaptive perspectives into his understanding. It follows then that the sexual arousal experienced during the abuse and subsequently associated with the memory would be re-triggered, essentially unaltered, until adaptive processing during EMDR therapy changes these sexual responses, alongside other feelings and sensations.

Ricci et al (2006) describe new realizations emerging from the EMDR process that allow the individual to perceive his own abuse in a more adaptive way. They suggest that

> increased emotional awareness makes the practice of sexual objectification both more difficult and less satisfying. The increased clarity with which the offender perceives his victimization allows him the opportunity to challenge the cognitive distortions . . . he previously used to support and/or mitigate his offensive actions. (p. 554)

Previously the "positive" and "negative" aspects of the abuse had been separated from each other and J had attempted to avoid the distress of the negative by focusing on the positive, becoming sexually aroused and masturbating to the pleasurable aspect. Following EMDR therapy, J's view of his abuse became a more integrated, whole, and detailed memory, in which he could recognize the pleasurable aspects alongside the distressing, intrusive, and unwanted aspects. He saw himself as a victim rather than as consenting. He reported recognizing that he had felt pleasure and arousal during the abuse as an understandable physiological reaction and that he had not instigated this, but been groomed. His view of his own victims and their perspective also altered. Prior to EMDR therapy, memories of his own experience of his sexual abuse (the positive aspect) appear to have influenced his perceptions of his victims. He had assumed they felt the way that he had. Following EMDR therapy he was able to perceive them as individuals separate from his own experiences and empathize with how they may have perceived their abuse. This more realistic view then allowed him to change the cognitions that he had used to rationalize his sexual fantasies and offending behavior.

Changes in self-perception, emotional functioning, and relating to others were reflected in the psychometric measures used. J's scores on the IASC reduced from the "clinically significant" range to the normal range on nearly all subscales and on the TSI 2, reductions from the "problematic" or "clinically elevated" range to the normal range on subscales of reduced self-awareness and relational avoidance and sensitivity. Other shifts to the normal range were identified for intrusive experiences, defensive avoidance, dissociation, depression, self-disturbance, and overall posttraumatic stress.

Ricci et al. (2006) also consider the idea of arrested emotional development occurring as a consequence of the abuse. J had found it difficult to form adult sexual relationships and had avoided doing so as this triggered intense anxiety, which he felt was due to fear of physical closeness and the possible expectation of sexual contact that led to distressing memories of his abuse. He described a reduction in these feelings, linked to a reduction in the emotional intensity of

the memories and a weakening in feelings of incompetence and dependence once the trauma had been processed. The physical sensations, emotions, and cognitions associated with the abuse shifted from a child's to an adult's experience and perspective, with J feeling that he was no longer small and helpless.

Although sexual arousal was not the focus of the intervention, EMDR therapy altered J's perceptions of his abuse and also weakened his sexual arousal to those memories and to children that reminded him of that abuse. This is consistent with the AIP model that when experiences are not fully processed they remain frozen in time and re-triggered until they are able to be processed using adaptive networks. J's sexual arousal, experienced at the time of the abuse, remained and was triggered when he recalled the original experience. Reprocessing this memory led to an adaptive perspective of the whole experience. It could be expected that even without focusing the therapy on sexual feelings, they would naturally alter during reprocessing, as sexual arousal to the abuse would not be part of a healthy adaptive perspective.

Utilizing Previous Interventions

J appeared to utilize learning from previous intervention during his EMDR therapy in order to re-conceptualize his own abuse. He incorporated knowledge about the grooming and abuse process gathered from group discussions of this subject into his new understanding of how his abuser had groomed him. This new perception was followed by a lessening of the sense of responsibility he felt for his abuse and the shame and anger he felt for his behavior. Clark et al. (2014) refer to a similar process in their case study description of an adult who had made limited gains in CBT-based sex offender intervention but who then appeared to have utilized learning from this CBT intervention during his EMDR process. Shapiro (2001) explains that the individual's current adaptive information network is used to make new sense of the traumatic experience during EMDR. Therefore information gained since the trauma can become incorporated in the new perspective. Ten Hoor (2013) refers to the individual being more able to engage in sex offender intervention following the changes made during EMDR, suggesting that both types of interventions may influence each other.

Offense Related Cognitions

Although the "offense drivers" model (Ricci & Clayton, 2016) was not used in the protocol (as it had not been published at the time of this intervention beginning), any links to offense supportive perceptions or feelings were closely monitored by the therapist during treatment. It was hypothesized that, as previously reported (Ricci & Clayton, 2008), a more accurate and adaptive view of his abuse would allow J to understand the links to his offending behavior, and it was anticipated that any offense supportive cognitions or feelings identified following EMDR could be addressed in further offense focused intervention.

During the therapy, the removal of the distress experienced by J allowed him to explore the impact of his own abuse. He realized that the tendency to see himself as consenting, which could be viewed as offense supportive, had arisen from a distorted perception of his abuse and also the need to reduce the feelings of powerlessness and fear that were related to the more shocking and overwhelming memories of the abuse. As the powerlessness and fear had diminished he no longer needed to tell himself that he had consented. Therefore the positive cognition "I'm OK. I can protect myself now," although it could possibly be viewed as offense supportive (he could perceive his victim as OK following his offending), this related more to J feeling that the abuse was now in the past; he was an adult now but he was a child when he was abused and not able to protect himself at that time.

Although "I'm OK. I can protect myself now" was the only positive cognition measured explicitly and related mainly to the time context of the trauma, J described a cognitive change relating to the responsibility of the abuse—that he had not consented and had told himself he had enjoyed it in order to cope with the negative aspects—that was not offense supportive. He also realized that although he had been sexually aroused during the abuse and when recalling the abuse, this did not mean that he had wanted it to happen.

Implications

The finding that EMDR therapy may produce changes in sexual arousal to children in this client group has obvious implications for the discussion on the origins and treatability of pedophilia. A growing number of authors have concluded that for some individuals a sexual preference for prepubescent children cannot be changed and should even be considered a sexual orientation to be accepted and managed (Seto, 2012; Walton & Duff, 2017). However, these opinions are likely to be based on evidence from clients who have undergone CBT- or behavioral-based methods of change, the most common or standard forms

of treatment, rather than EMDR therapy. It therefore would be more sensible to conclude the following: There is little evidence to suggest that CBT- or behavioral-based interventions can alter sexual arousal to children, but there is some evidence that it may be changed by using EMDR therapy to address the impact of the clients' own sexual abuse experiences where this is relevant. We therefore should regard sexual arousal to children as being potentially changeable for some client groups, particularly as perceptions of changeability can influence beliefs on management of sexual arousal to children.

These findings may contribute to the effort to develop interventions that could be used to alter sexual arousal to children in individuals who have also been victims of sexual abuse as children. The evidence base at this point in time is very small, and the present study describes the change process in one individual only. However, these preliminary findings provide an opportunity for further research and offer a possible means of change to those individuals who are motivated to weaken their sexual arousal to children when this arousal is associated with their own CSA. This could apply to adults who have already sexually offended as well as those individuals who are reporting sexual arousal to their own abuse memories and may be at risk of first-time offending. As deviant sexual arousal is considered to be the strongest indicator of sexual offending, and other standard interventions have not been found to alter this, EMDR therapy should be considered suitable for exploration in the sexual abuse prevention field. As in this and previous studies, EMDR could be used as part of an wider, more comprehensive intervention aimed at identifying, understanding, and reducing the risks of sexual reoffending.

Limitations

One obvious limitation of this study is the lack of objective measurement of sexual arousal. Changes were measured by participant report only and therefore may have been misreported. As sexual arousal was not the target for this therapy, it was not measured at pre- and post-intervention, but information was gathered from J retrospectively following his report that sexual feelings had changed. J was under no obligation to complete treatment, was living in the community and no longer subject to license conditions, and there was nothing explicitly identified as being dependent on the outcome of his treatment. The possibility that he may have adapted his reports to please the therapist was considered. However, as this was an intervention aimed at reducing PTSD symptomology, sexual arousal was not being monitored during the EMDR therapy. Furthermore, J did not display a tendency to please the therapist in other ways, and this possibility was inconsistent with his overall psychological formulation. Future studies may benefit from employing more objective measures, such as the PPG or Implicit Association Tests (Babchishin, Nunes & Hermann, 2013) as well as the gathering of qualitative and descriptive information on the change process.

Future research should aim to gather data from both representative samples of men who have sexually offended against children who identify their deviant sexual interest as originating from their own sexual abuse and from non-offending populations who disclose a sexual preference for children and also disclose their own history of CSA. It may be useful to explore those client groups displaying fewer signs of PTSD in contrast to this case, in which the main objective was to reduce aspects of PTSD rather than change sexual arousal. It may be that those individuals who did not experience any pleasurable physical feelings or sexual arousal at the time of their own abuse would respond differently to this intervention. The links from their abuse to their offending behavior may be different. It may also be fruitful to attempt to identify the specific aspects of the therapy that are useful in changing sexual arousal as opposed to changing other aspects of past trauma, such as cognitions and other perceptions.

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