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JOURNAL OF EMDR PRACTICE AND RESEARCH

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EMDR in Psychosis: Guidelines for Conceptualization and Treatment

David P. G. Van den Berg
Parnassia Psychiatric Institute, Den Haag, The Netherlands

Berber M. Van der Vleugel
Community Mental Health Service GGZ Noord-Holland Noord, Alkmaar, The Netherlands

Anton B. P. Staring
Altrecht Psychiatric Institute, Utrecht, The Netherlands

Paul A. J. De Bont
Mental Health Organization GGZ Oost Brabant Land van Cuijk en Noord Limburg, Boxmeer, The Netherlands.

Ad De Jongh
Academic Centre for Dentistry Amsterdam (ACTA)
University of Amsterdam and VU University Amsterdam
School of Health Sciences, Salford University, Manchester, United Kingdom

A significant proportion of clients with psychosis have experienced childhood trauma and suffer from comorbid posttraumatic stress disorder. Research indicates that exposure to distressing early life events plays an important role in the emergence and persistence of psychotic symptoms—either directly or indirectly. The Two Method Approach of EMDR conceptualization and recent findings on reprocessing of psychosis-related imagery fit with the existing cognitive models of psychosis. This article presents a series of preliminary guidelines for conceptualizing EMDR treatment in psychosis, which are based on both theory and clinical experience and are illustrated with case examples. Several obstacles and related treatment strategies for using EMDR in psychosis are described. EMDR in psychosis can very well be combined with other standard interventions such as psychotropic medication and cognitive behavioral therapy.

Keywords: trauma; psychosis; EMDR; delusions; auditory verbal hallucinations; PTSD

Recent studies unequivocally show that most people with psychosis have suffered childhood trauma and that these adverse experiences may causally influence the development and persistence of psychotic symptoms (Matheson, Shepherd, Pinchbeck, Laurens, & Carr, 2013; Read, Van Os, Morrison, & Ross, 2005; Varese et al., 2012). Moreover, relationships between trauma and psychosis have become clearer (Morrison, Frame, & Larkin, 2003). This suggests that trauma-focused treatments may be an important addition to the treatment of psychosis (Callcott, Standart, & Turkington, 2004).

A significant portion of clients with psychosis suffer from comorbid posttraumatic stress disorder (PTSD). Estimated prevalence rates for current PTSD in psychosis vary between 10% and 30% (Achim et al., 2011; Buckley, Miller, Lehrer, & Castle, 2009). Other studies into PTSD in psychosis find higher prevalence rates, but most of these studies have major limitations because of the use of self-reports or small samples. Also, some studies did not indicate whether lifetime or current PTSD was studied.

Many clinicians are reluctant to use EMDR therapy or other trauma-focused therapies such as

 http://dx.doi.org/10.1891/1933-3196.7.4.208

prolonged exposure (PE) in clients with psychosis and comorbid PTSD. Accordingly, psychosis has been an exclusion criterion in almost all PTSD studies (Spinazzola, Blaustein, & Van der Kolk, 2005). Although the empirical evidence for the effectiveness of trauma treatment in psychosis is scarce, clinical experience and exploratory studies are promising (De Bont, Van Minnen, & De Jongh, 2013 Frueh et al., 2009; Van den Berg & Van der Gaag, 2012). These studies challenge longstanding beliefs that psychosis should be a contraindication for the treatment of comorbid PTSD in people with psychosis.

Two of these studies successfully and safely applied EMDR therapy. Dropout rates were low and treating PTSD was found to be associated with significant improvements in depression, anxiety, self-esteem, and even appeared to have decreased the amount of hallucinations in one of these studies (Van den Berg & Van der Gaag, 2012). Clearly, more research is needed. At the moment of writing, a multicenter randomized clinical trial is being conducted, investigating safety and efficacy of EMDR therapy and prolonged exposure for treating clients with psychosis and comorbid PTSD (De Bont, Van den Berg, et al., 2013). It should be underlined that in these studies, no procedures for stabilization were used prior to the application of the EMDR procedure.

To date, only one published study used EMDR to specifically target psychotic symptoms instead of comorbid PTSD. In this randomized clinical trial, psychotic symptoms were targeted by EMDR in a hospital setting ($N = 45$; Kim et al., 2010). Effects of three sessions of EMDR were compared to relaxation training. No effects or significant differences were found. This lack of effect is probably caused by the fact that all clients were admitted for an acute psychotic episode and, accordingly, received extensive treatment (including medication). This may have concealed all other treatment effects. Perhaps most important to note is that EMDR did not cause any adversities.

This article describes the conceptualization and application of EMDR in the treatment of psychotic symptoms and psychosis-related imagery, using the Two Method Approach. The focus is predominantly on delusions and auditory verbal hallucinations (i.e., voices). This approach is illustrated with several case examples. Moreover, attention is paid to obstacles and complications one may encounter in the application of EMDR therapy in clients with psychosis. Treatment strategies to cope with these obstacles are presented. Because of the complex nature of most psychoses, it is suggested that EMDR is combined with other therapeutic strategies, including the use of cognitive behavioral interventions. It should be noted that there is no scientific basis for using EMDR in psychosis as yet. Accordingly, this article is based on the clinical experience of the authors.

Talking About Trauma in Psychosis

Clients with severe mental illness (SMI) usually feel an urge to talk about their traumatic experiences (Lothian & Read, 2002). In contrast, clinicians seem to fear that this will inevitably result in adverse events (Read, Hammersley, & Rudegeair, 2007). This "harm hypothesis" is nevertheless contradicted by intervention studies (De Bont, Van Minnen, et al., 2013 Frueh et al., 2009; Mueser et al., 2008; Van den Berg & Van der Gaag, 2012). In addition, this assumption is not supported by a study that found that SMI clients cope well with trauma interviews (Grubaugh, Tuerk, Egede, & Frueh, 2012).

Disclosure of traumas and dysfunctional interactional experiences with parents, peers, and others may be unsettling for clients but this is not observed exclusively in those suffering from psychosis. The therapist should therefore be empathic but goal oriented. A useful analogy is that of a first aid doctor who cleans and stitches a nasty wound not only in an empathic but also in a task-orientated way rather than projecting a fear of blood and pain. The emotional suffering that comes along with addressing traumas is usually temporary. The burden of going through life with untreated PTSD is often much more distressing because it results in negatively reinforcing cycles between symptoms of PTSD and psychosis (Mueser, Rosenberg, Goodman, & Trumbetta, 2002). Consider the following rationale:

> Unfortunately you experienced some really terrible things. Fortunately these things are now in the past. However, you are still experiencing intrusive memories of them. As you know, memories can be very unsettling, but they cannot really harm you [give an example, for instance: your father really physically hurt you; but your memory of father does not]. In the treatment, we will work through your worst memories. This will help you experience that you have the strength and resilience to cope. I am confident that you too will succeed.

Many SMI clients carry coping plans or emergency plans. To facilitate stability and safety, these plans might be updated and adapted before EMDR treatment starts. Moreover, the current authors emphasize the importance of experience with clients with psychosis before using EMDR in this group. Although the use of standard EMDR procedures is advocated, it is deemed important to be familiar with the complexity of most psychoses, the presence of comorbid disorders, and the context of working within a multidisciplinary mental health team.

Indications for EMDR in Psychosis

First, EMDR is indicated in psychosis for comorbid PTSD. PTSD is a highly prevalent comorbid disorder in psychosis (Achim et al., 2011; Buckley et al., 2009). Untreated PTSD negatively influences symptoms of psychosis and clients' prognosis (Mueser et al., 2002).

Second, EMDR can be used in symptoms of psychosis that are directly related to earlier (traumatic) life events. For instance, paranoia that started directly after a traumatic experience (e.g., being assaulted) or voices that are clearly trauma related (Hardy et al., 2005; Morrison et al., 2003).

Third, the use of EMDR is indicated when life events indirectly influence psychosis via core beliefs and intermediate assumptions about self, others, and the world. For example, being bullied in childhood may result in negative expectations of others, which eventually results in paranoid delusions (Fisher et al., 2012). Similarly, low self-esteem has shown to strongly influence reactions to insulting voices (Paulik, 2012). Research indicates that these assumptions form an important cognitive link between trauma and psychosis (Fowler et al., 2006; Gracie et al., 2007).

Lastly, EMDR can be used to reprocess negative unrealistic and fearful imagined expectations or negative psychosis-related imagery. Most clients with psychosis report these types of intrusive imagery (Lockett et al., 2012; Morrison et al., 2002; Schulze, Freeman, Green, & Kuipers, 2013). Preliminary results show that working on imagery might reduce psychotic symptoms (Morrison, 2004).

Table 1 shows the possible indications and conceptualizations for the application of EMDR in psychosis using the Two Method Approach (De Jongh, Ten Broeke, & Meijer, 2010). The therapist can follow the standard EMDR protocol, yet must be aware of some possible specific obstacles that may appear in clients with psychosis. These will be addressed later in this article along with various treatment strategies to deal with them.

EMDR, the Two Method Approach and Imagery

Experience gained from the application of EMDR over the past years has shown that it is possible to extend this treatment to a broad variety of psychological symptoms. Consequently, when a therapist in the context of his or her treatment decides to use EMDR therapy, the treatment will focus on reshaping the memories that underpin the symptoms from which the client suffers. Therefore, before commencing treatment, the therapist will need to draw up a coherent hypothesis regarding the relationship between complaints, other than PTSD per se, and a series of significant target memories to be treated with EMDR.

TABLE 1. Indications and Conceptualization for EMDR in Psychoses

Goal	Target	Method
Reduction of comorbid PTSD symptoms	Memories of traumatic life events that are frequently relived	Standard EMDR Protocol
Reduction of psychotic symptoms	Memories of life events that are directly connected with psychosis	EMDR First Method Approach
	Memories of life events that are indirectly connected with psychosis	EMDR Second Method Approach
	Relevant psychosis-related imagery	EMDR on "flash-forwards" or (fantasy) imagery

Note. PTSD = posttraumatic stress disorder; EMDR = eye movement desensitization and reprocessing.

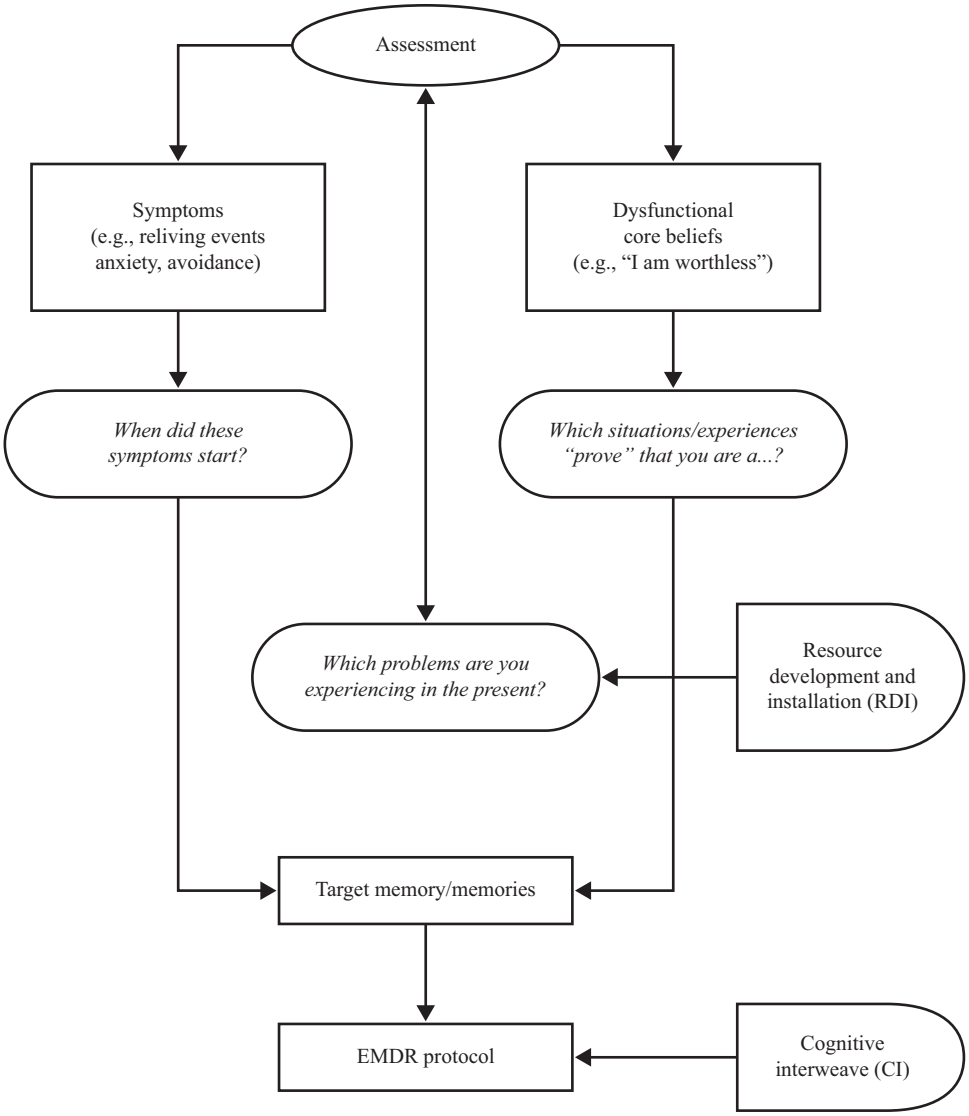

FIGURE 1. Two Method Model of EMDR. Adapted from De Jongh, A., Ten Broeke, E., & Meijer, S. (2010). Two method approach: A case conceptualization model in the context of EMDR. *Journal of EMDR Practice and Research*, *4*(1), 12–21.

The *Two Method Approach* is a comprehensive approach aimed at helping therapists conceptualize their cases thereby making it possible to formulate hypotheses regarding which targets are essential for alleviating symptoms. In other words, it is a structured procedure that is executed prior to the actual EMDR to select what target memories to reprocess. After the targets have been identified using this method, the standard EMDR protocol is used to reprocess the memories (De Jongh et al., 2010). The Two Method Approach is considered to be an expansion of the traditional way of conceptualizing EMDR through questioning (Shapiro, 1995, 2001). This model of case conceptualization has two components (see De Jongh et al., 2010 for a detailed description).

The First Method (see Figure 1) is used in symptoms whereby the memories of etiological and aggravating events can be meaningfully identified and formulated on a timeline. It is primarily aimed at conceptualizing EMDR in the treatment of *Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition, Text Revision (*DSM-IV-TR*) Axis I disorders. Starting point is the target symptom (cluster). Etiological and subsequent aggravating events are identified. Questions to clarify this are the following: "From your point of view, which event or events is/are responsible for the current complaints or might have worsened them?" or "Which events led to your symptoms?" The course of the complaints is then plotted on a timeline. The most important target memories are identified and

rated in a hierarchy. Subsequently, the standard protocol is applied.

The Second Method is used to identify memories that underlie the dysfunctional core beliefs or intermediate assumptions of the client. This method is primarily used in complex psychopathology in which dysfunctional underlying assumptions have an important influence. Starting point in the Second Method are the negative dysfunctional core beliefs that are connected with the client's problems. Target images of experiences that have led to the formation of these negative beliefs about self, others, and the world (the so called "evidence") are identified. Questions that can be asked here are the following: "What caused you to (start) believing/believe that you are (a) . . . [core belief]?"; "What 'taught' you that you are (a) . . . [core belief]?"; "Which early experiences currently 'prove' so to speak, that you are (a) . . . [core belief]?"; or "Think of a more recent situation that makes it clear to you that you are (a) . . . [core belief]?" These pieces of evidence are then rated in a hierarchy (from strong to weak "proof") and reprocessed via standard EMDR protocol to obtain a deactivation of the negative schemas or a decrease of their credibility to the client.

In addition, there is a third way of case conceptualization within EMDR. This is directed at unrealistic and fearful expectations or negative imagery that is associated with the psychopathology. It dovetails with mounting evidence showing that imagery is an important factor in the emergence and persistence of emotional disorders (Beck, 1970; Hackmann, Surawy, & Clark, 1998). EMDR originally targets negative imagery of past events (i.e., memories or flashbacks). Engelhard, Van den Hout, Janssen, and Van Der Beek (2010) showed that taxing working memory, such as EMDR, is capable of reducing vividness and emotionality of negative imagery of feared future events (so called flash-forwards). This development has opened up an entire new area of application for EMDR (Engelhard et al., 2011; Logie & De Jongh, in press).

First Method Approach in Psychosis: EMDR Aimed at Experiences That Are Directly Connected to Symptoms

When there are apparent, direct connections between certain life events and the development and persistence of psychotic symptoms, the First Method can be used. In essence, there is no difference in the way EMDR is applied in the treatment of anxiety disorders (De Jongh & Ten Broeke, 2007). Via the First Method, experiences are targeted that are directly related to the start or worsening of psychotic symptoms or to the content of these symptoms. Most clients are capable of identifying stressful events that they subjectively relate to their paranoia or hallucinations. Also, the actual moment that a client's confusion got replaced by delusional conviction is often clearly remembered. Memories of the etiological and aggravating events can be meaningfully formulated on a timeline and then processed using the standard EMDR protocol (De Jongh et al., 2010; Shapiro, 2001). Actually, drawing this timeline with a client can be very insightful, putting the events on the X-axis and the psychotic symptom on the Y-axis (Figure 2).

Case Example: First Method With Comorbid PTSD

Judy was a 46-year-old woman diagnosed with schizoaffective disorder more than 20 years ago. She received intensive case management and her psychotic symptoms were mostly managed with medication. She worked at a restaurant for 12 hours a week, where she still experienced ideas of reference. When stressed, she sometimes reacted with a burst of aggressive emotion.

A TV program about a rapist triggered some of Judy's memories. When she was 19 years old, she was molested on a beach. By running away, she was able to prevent being raped. However, the TV program worsened the flashbacks of this event as well as insomnia, hyperarousal, and other PTSD symptoms that were dormant. She strongly started to feel that she had barely escaped certain death on that particular day. When assessed with the Clinician Administered PTSD Scale (CAPS; Blake et al., 1990), she met diagnostic criteria for PTSD.

The event and target selection for EMDR was not difficult in this case: a clear-cut single event with current flashbacks of the face of the aggressor. The negative cognition (NC) associated with the target was "I am defenseless," the score on the subjective units of disturbance (SUD) scale was 9 (0 = *no disturbance*, 10 = *worst possible*). The desensitization process went quickly and without significant obstacles. The SUD decreased to 5, then 3, then 1, and then 0. The validity of the positive cognition (PC; "I can handle this") increased to maximum, all in a single session. The session ended with the procedure of a future template: Judy imagined seeing a newsflash on TV about a rapist and a murderer. She quickly judged that she would be able to handle this.

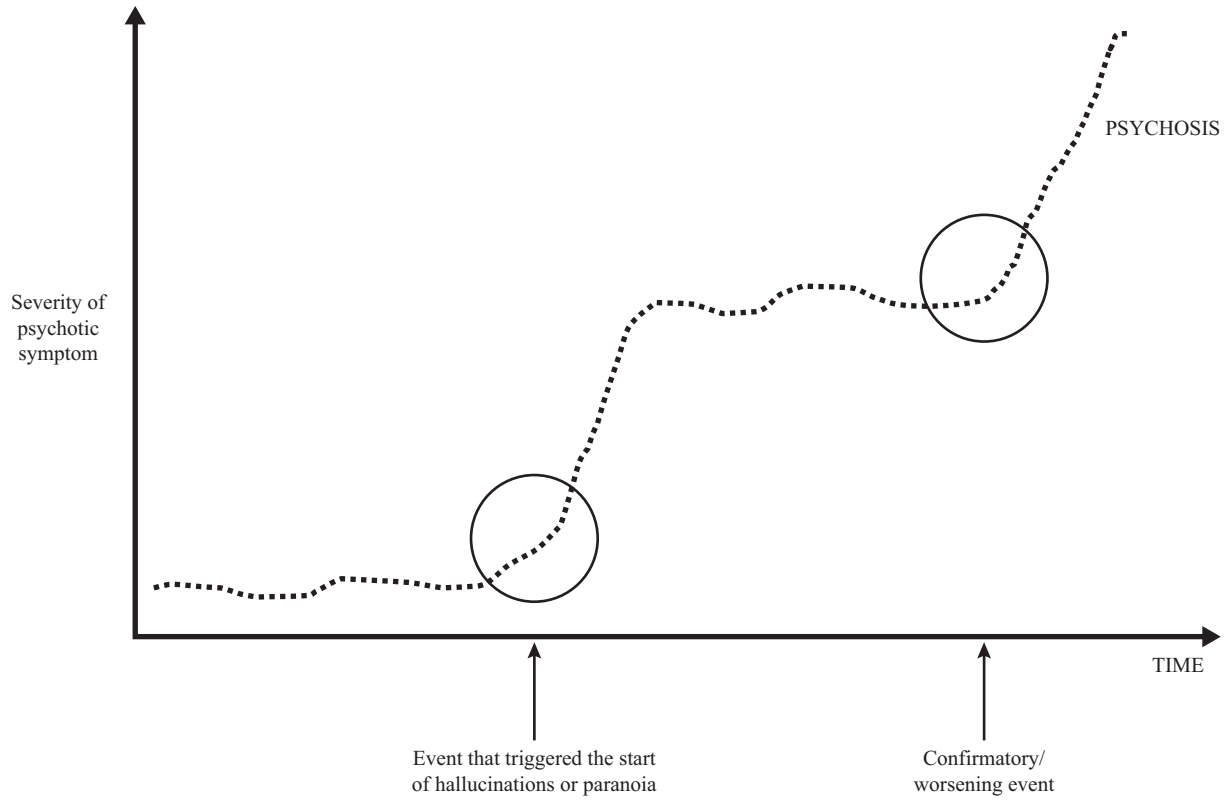

FIGURE 2. EMDR First Method Approach in psychosis.

In the following session, a few days later, Judy stated that she was surprised by the result. Talking about the memory no longer triggered intense emotional reactions. However, she had been avoiding watching TV during the previous week, fearing that the flashbacks might return. Another future template session was conducted as well as an actual exposure assignment: Judy and the therapist searched and looked at rape-case news items on the Internet.

At follow-up, 6 months after the end-of-treatment, Judy had recovered further and had stopped her avoidance behaviors. She no longer slept with the light on, did not avoid the TV or newspapers, and was using public transport without a problem. She no longer met PTSD criteria on the CAPS.

Case Example: First Method With Voices

Francis was an asylum seeker from Sierra-Leone. He was diagnosed with paranoid schizophrenia 8 years ago. During assessment, he reported hearing voices, threatening him with statements such as "we are going to chop your hands off" and "we will kill you." He believed these voices belonged to people who were actually out to get him and this made him very suspicious and anxious. He was jumpy, suffered from nightmares, and had difficulty concentrating. The voices started after he witnessed rebels torching people and cutting off their hands. The psychotic symptoms (auditory hallucinations and paranoid interpretation) were directly associated with these traumatic experiences, both in onset and content. Using the First Method Approach, it was hypothesized that reprocessing these memories would have a positive effect on his psychotic symptoms.

The therapist provided Francis with information on consequences of experiencing trauma. He shared his hypothesis that the voices were directly related to the traumatic experiences in Sierra Leone and that he expected that trauma treatment might result in a reduction of distress. Francis identified two very distressing target memories: (a) Witnessing someone being burned alive and (b) seeing someone losing both hands. The NC accompanying both pictures was "I am in danger." The EMDR standard protocol for desensitization was used and SUD scores started to decline.

The hallucinations complicated the treatment. The voices were continuously threatening Francis during the eye movements, blocking a decrease of the experienced distress. Francis did not regard the

voices as symptoms of a disorder. He was convinced these voices were the actual killers and that they were present in the Netherlands, so he felt his life was in great danger. The therapist applied a cognitive intervention that can be regarded an extended cognitive interweave. He challenged Francis's beliefs on the possibility that the murderers he saw in Sierra-Leone 10 years ago were now here to get him. Making a cumulative probability calculation, Francis realized there were quite a few conditions that would have to be met and that the odds that this was actually the case were low. Although he still thought it was possible, he felt safer and EMDR was continued. SUD scores of both targets dropped to 0 in a few sessions.

Integrating psychoeducation, cognitive interventions, and EMDR helped Francis to change his appraisals of the voices. The idea that the voices were actually very vivid flashbacks slowly gained credibility, which motivated him to start ignoring them. This reduced preoccupation with the voices. As a result, Francis felt much better and was less burdened by the voices in his functioning.

Case Example: First Method With Delusions

Leonard was a 48-year-old man with paranoid schizophrenia; he was diagnosed subsequent to symptoms appearing after a life-threatening robbery a few years ago; prior to this, he had never been in contact with mental health services. The perpetrator threatened him with a knife and Leonard thought at the time that he had narrowly escaped death. A few weeks later, Leonard encountered the perpetrator in the company of some friends. The perpetrator looked at Leonard and made a threatening gesture with his hand (cutting his throat) and the assailant's friends all laughed. Leonard concluded "he is a gang member and they are going to kill me." From that day on, Leonard was extremely alert when outside. This hypervigilance evolved into a paranoid delusion unto the point all Black people were part of a conspiracy to murder him. Leonard isolated himself, his company went bankrupt, and his wife left him. When he sought treatment at the mental health service, he was totally convinced that all people with dark skin in his hometown were after him. Leonard experienced no reliving symptoms such as flashbacks or nightmares. But he continued to worry about his safety and was preoccupied with being threatened. Because of these symptoms, he was diagnosed with paranoid schizophrenia and his psychiatrist prescribed antipsychotic medication. Leonard became somewhat less preoccupied with his Black neighbors, but his convictions did not change and he did not leave his house. Leonard was referred for cognitive behavioral therapy (CBT).

Leonard and his therapist started working on the case formulation. It was clear to Leonard that there were two important experiences related to his current fear of Black people: (a) The actual robbery and (b) being threatened on the street. The therapist compared Leonard's complaints to those of someone developing a phobia for dogs after being bitten and Leonard felt well understood. Psychological treatment started with EMDR for these experiences with the plan of continuing with CBT.

The first target was the image of the perpetrator putting his knife on Leonard's throat. The NC looking at this image was "I am helpless." The SUD score started at 10 and drops to 0 in one session. The validity of cognition (VOC; I can handle this) rose from 3 to 7. The therapist installed a future template to reduce the fear of walking his dog and encountering Black neighbors. Leonard concluded that he was a strong person and he was motivated to start walking his dog himself.

At the next session, Leonard reported less anxiety and preoccupation. He had walked the dog on his own several times and succeeded in ignoring Black men. The second target was his memory of the assailant making the threatening gesture while with his friends. The NC was I am in danger and the desired PC was "I am safe now." The future template focused on shopping at the local grocery store, which is visited by many immigrants. Again, Leonard concluded he was strong.

EMDR was successful in desensitizing the target memories and Leonard stated he had doubts about the veracity of his suspicion. Therefore the therapist applied cognitive techniques. Leonard and his therapist gathered all the evidence supporting his belief that the gang still wanted to murder him. They also took a close look at matters that argued against this belief, for example, the fact that years had gone by without a single attack. After some behavioral experiments, Leonard continued the exposure in vivo.

The group of imagined potential assailants shrank rapidly. Eventually, Leonard feared only the perpetrator of the robbery and the three comrades. He was able to move freely in his neighborhood and to return to work on a part-time basis. Leonard still makes sure that he does not encounter the perpetrator. The therapist tried to motivate Leonard for a final behavioral experiment: making inquiries to test whether the perpetrator was still interested in him.

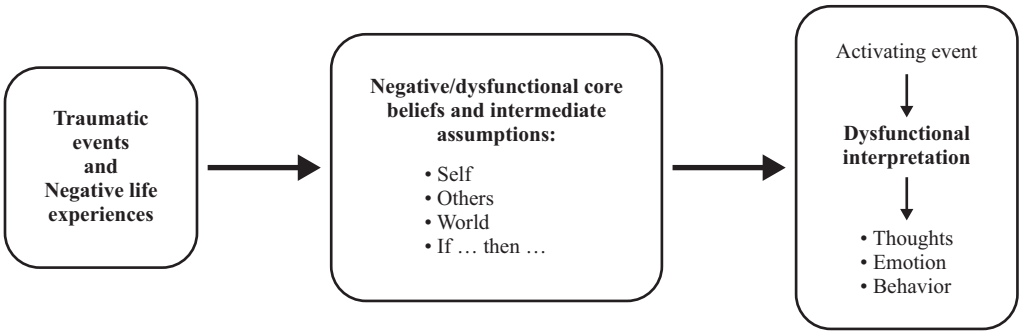

FIGURE 3. EMDR Second Method Approach in psychosis.

Leonarddeclined this option and therapy ended in mutual agreement.

Second Method Approach in Psychosis: EMDR Aimed at Experiences That Exert an Indirect Influence on Psychotic Interpretations of Present Activating Events

Basic assumptions about self, others, and the world are important factors in the development and maintenance of psychoses (Garety, Kuipers, Fowler, Freeman, & Bebbington, 2001). These negative schemas develop as a consequence of negative life events such as childhood adversity, being bullied, and experiencing discrimination. The Second Method Approach of EMDR aims to identify and change these negative dysfunctional core beliefs (De Jongh et al., 2010).

First, an assessment procedure aims to conceptualize the clients' problems. Figure 3 presents the general model. Core beliefs and intermediate assumptions, relevant life experiences, and dysfunctional responses are assessed.

Case formulations vary individually—by definition. However, the therapist may keep in mind that, especially, childhood traumas characterized by intention to harm (e.g., sexual abuse, physical abuse, bullying, discrimination), neglect, and being raised in an institution are causally linked to symptoms of psychosis in adults (Bentall, Wickham, Shevlin, & Varese, 2012; Varese et al., 2012). To illustrate the way EMDR can be conceptualized in psychosis via the Second Method Approach, three simplified individual EMDR case formulations are summarized in Table 2.

Based on the case formulation, EMDR via the Second Method Approach is directed at those traumatic life events that are felt by the client to be the most convincing evidence that his dysfunctional core beliefs and intermediate assumptions are true. Each of these pieces of evidence is reprocessed with the standard EMDR protocol. Dysfunctional NCs are reprocessed (note that each traumatic situation may have a different NC and PC) and more functional PCs are installed. The intended effect is that the

TABLE 2. Brief Illustrations of the EMDR Second Method Approach in Psychosis

Trauma	Core Beliefs or Intermediate Assumptions	Activating Event	Dysfunctional Response		
			Cognition	Emotion	Behavior
Punishments by perfectionistic father	"I am a failure"	Hearing a voice ("Hey moron!")	"I knew it. I can't do anything right"	Sad	Socially withdraw myself; ruminate.
Physical abuse by mother and siblings	"I am in danger; Nobody can be trusted"	Mother in law criticizes the way I run my household	"She hates me, she wants to kill me"	Fear, shame	Call on my husband to protect me from his murderous mother.
Childhood sexual abuse	"I am a weakling"	Imperative voices ("Throw yourself off the stairs!")	"I have to give in to them or they will hurt me even worse"	Sad, fear	Self-mutilate; do what the voices tell me to do.

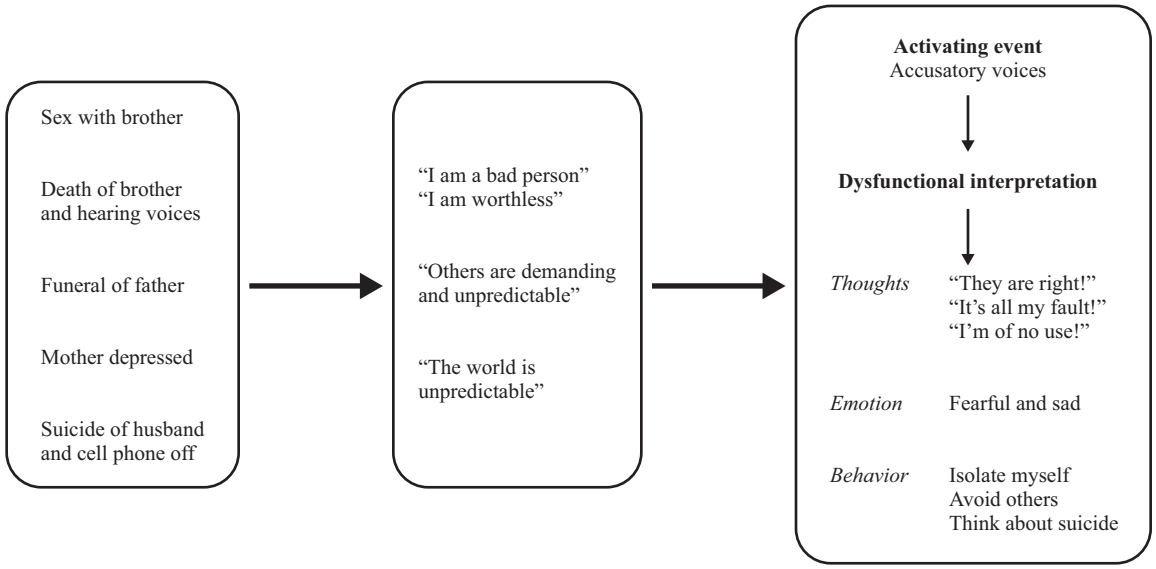

FIGURE 4. Second Method Approach case formulation: Irene.

conglomerate of newly established PCs helps to disprove the overall dysfunctional core beliefs. They also help the client to recognize that his symptoms are understandable responses to extraordinarily adverse life experiences.

Case Example: Second Method Approach With Voices

Irene was a 49-year-old woman who was diagnosed with schizophrenia and major depressive disorder in her early 20s. She suffered several psychotic episodes and was, on average, admitted once a year. Irene received intensive case management and lived in a sheltered home. In her 40s, things started to improve for Irene. Psychotic episodes occurred less frequently, she got her own apartment, and eventually she married a man she had met during one of her admissions. Last year, things went wrong when Irene's husband committed suicide while she was admitted. She turned off her cell phone because he kept calling her over and over. That night he committed suicide. This resulted in a lengthy admission during which Irene tried to commit suicide herself more than once. She was discharged from hospital after 10 months. She was then referred for psychotherapy. Irene was hearing voices that insulted her and accused her of being hurtful to other people. She was depressed and had a lot of suicidal thoughts. Irene had strong negative core beliefs about herself, others, and the world. Her most dysfunctional core belief was "I am a bad person." A lot of different traumatic life experiences contributed to this core belief and the therapist introduced the Second Method Approach to determine what target memories to reprocess. Irene was asked what life experiences still felt like evidence to her core belief. This proof was part of her case formulation (see Figure 4): When Irene was 7 years old, a brother forced her into having sex several times. Irene got used to it and felt increasingly indifferent about it. The same brother died in a car accident when Irene was 12 years. The day after his death, Irene started hearing voices. A few years later, Irene froze and was unable to speak at the funeral of her father. Mother labeled this moment as the worst moment of the day and the starting point of her major depression that lasted for 4 years. Last was the fact that Irene switched off her cell phone the night her husband committed suicide.

The EMDR therapy was focused on the following targets: Not picking up the phone when husband was panicking (NC: I am a bad person); having sex with brother (NC: "I am a stupid slut"); and listening to mother's comments on her funeral speech (NC: "I am worthless"). One by one, the targets were processed and PCs were installed. Together, the PCs helped diminish the intensity and credibility of the negative core belief, I am a bad person. The voices intensified during the first weeks of treatment. The therapist normalized this. Irene and her therapist discussed what to do about this situation and agreed on continuing with the EMDR therapy.

As the EMDR treatment progressed, Irene began questioning and disputing the voices. She learned to view them as "phantoms of her past" and became

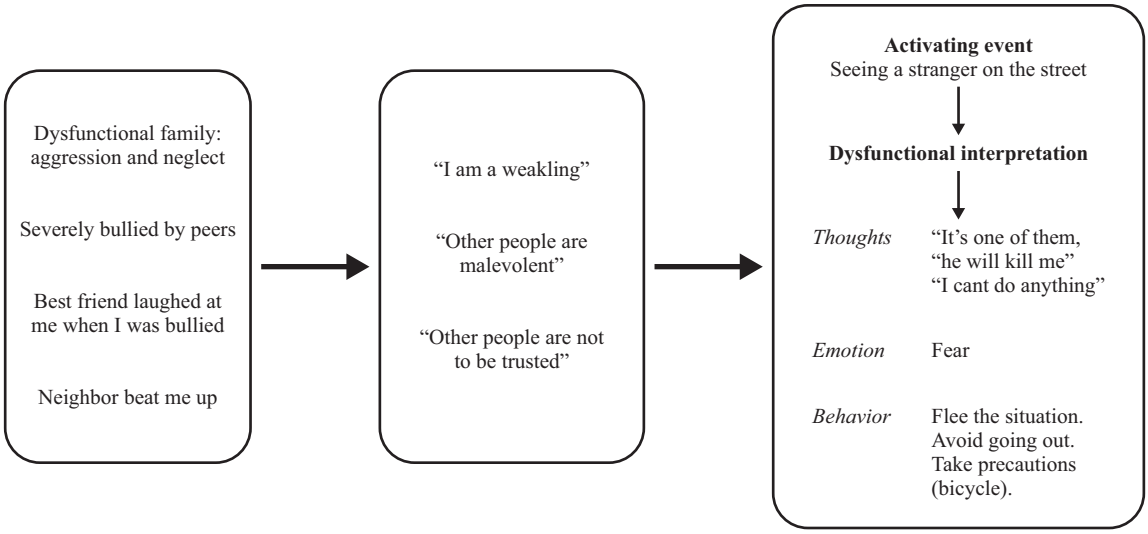

FIGURE 5. Second Method Approach case formulation: Albert.

less responsive to them. Although feelings of guilt decreased, the fear of becoming overwhelmed again by the voices remained strong. To address this, the therapist and Irene constructed an imaginary future image that they used as a target for EMDR reprocessing (see "Imagery in Psychosis" section). The image was of Irene, sitting in her room, surrounded by voices coming from mother, brother, father, pillows, wires, and tables. The NC was "I am powerless." The SUD dropped to 0 in two sessions. The PC ("I can cope with this") was installed in two sets of eye movements. A series of future templates was directed at specific situations to help Irene engage in normal daily activities such as not avoiding men and meeting her sister again. At the end of treatment, Irene was still hearing voices, but she paid less attention to them and was less occupied with fears of getting overwhelmed. Her self-esteem improved significantly and she felt less depressed.

Case Example: Second Method Approach With Paranoid Delusions

Albert was a 36 year-old-man. Ten years ago, Albert was diagnosed with paranoid schizophrenia when he started hearing voices that insulted him. He suspected his neighbor to be behind this. He confronted his neighbor, who told Albert to "piss off" and stop his "crazy allegations." The two men ended up in a fistfight and Albert was beaten up quite severely. Albert came into the custody of mental health services. Medication made the voices abate. His paranoid thinking, however, remained. Albert was still convinced that his neighbor and his friends were watching him and waiting to kill him in revenge for his accusations. Albert stayed at home as much as possible, only leaving his house on a bike to be able to quickly flee if necessary.

In CBT, Albert learned to question and doubt his delusional beliefs. Albert revealed important life experiences. His parents were addicted to alcohol and neglected him. Albert repeatedly witnessed his father beating up his mother. Peers in primary school bullied Albert. In high school he succeeded in developing a friendship with a classmate, but the next year, when fellow students again beat him up and threw him in the dumpster, his "best friend" laughed. All this brought about his core beliefs: (a) "I am a weakling" and (b) "people are malevolent and not to be trusted." See Figure 5 for the case formulation.

Albert expressed his conviction to the therapist that many life experiences proved his beliefs to be true. The decision was made to apply EMDR via the Second Method Approach. Albert and his therapist listed specific traumatic experiences that fuelled Albert's core belief I am a weakling: Father punches mother, I freeze (NC: I am powerless); a bullying experience at elementary school (NC: I am a weakling); being beaten up and thrown into the dumpster, best friend laughing (NC: I am a fool); and beaten up by neighbor (NC: I am in danger). Each of these memories was reprocessed via the standard EMDR protocol. During EMDR processing, Albert spontaneously rescripted some of the targets, imagining that he protected his mother from his abusive father and that he fought off his aggressive neighbor.

His core belief "people are malevolent" was addressed in the same way: listing past experiences that functioned as evidence for this negative core belief, applying EMDR procedure, and installing positive cognitions. After all this, Albert felt his negative core beliefs to be less convincing. This increased his motivation to test his paranoid predictions in a series of behavioral experiments that were supported by EMDR, reprocessing the negative imagery of these predictions. At the end of treatment, Albert was able to leave the house for walks or shopping. His paranoid preoccupation had diminished considerably.

Imagery in Psychosis: EMDR Aimed at Unrealistic and Fearful Expectations or Negative Imagery Related to Psychosis

The "Third Method" of EMDR is directed at two of the types of imagery that were found to be most dominant in psychosis (Morrison et al., 2002): (a) images of feared catastrophes (i.e., flash-forwards) and (b) visualizations of the perceived origin, appearance, or content of a symptom (i.e., activating event).

Reprocessing "worst case scenarios" (often intermediate assumptions, "if I do . . . , then . . . will happen") with EMDR can greatly reduce anxiety and associated avoidance behaviors. In this EMDR procedure, the client is asked to describe his worst-case scenario. In some clients, this concerns intrusive imagery they are familiar with (i.e., intrusive flash-forwards), in others this target imagery is formed within the session. Next, client and therapist identify the most unpleasant image of this scenario, that is, the regular way of target selection but in this case not on a memory but on a fantasized disaster image. The NC is per definition in the domain of loss of control (i.e., being powerless to the intrusive image), the PC is "I can handle this," and the SUD are usually high enough to jumpstart the processing of client's flash-forward. The regular protocol for desensitization is used.

The second type of psychosis-related imagery that EMDR can target is mental imagery that the client has of the perceived cause, appearance, or content of a psychotic symptom. In the context of voices or paranoia, a client may for instance form a mental image of his "assailants." Reprocessing this image can reduce emotional involvement and preoccupation. A target image might for instance be that the client sees himself sitting on the bed with a man besides him who is yelling nasty things at him through a loudspeaker. EMDR is applied in the regular way. The NC and PC can be in any domain in this type of imagery.

It is recommended not to use flash-forwards and imagery until the client has developed at least some awareness of the possible hallucinatory nature of his/her perceptions. For reprocessing of imagery to be effective, the client needs to have at least some awareness of the fact that the feared expectations might not be realistic or that intrusive experiences really should not receive that much attention. During processing the healthy, adult, nuanced perspective on reality needs to become dominant. When emotionality decreases, it creates space for distance and nuance. Similar to a client with PTSD, the client with psychotic symptoms need to start realizing that there is no current threat, that he/she is now safe. Therefore, it is best to start with cognitive work and then use EMDR on imagery when the client has at least some doubt about his/her psychotic appraisals. This can then, if necessary, be followed up with cognitive behavioral interventions such as behavioral experiments or exposure assignments.

Case Example: Voices and Imagery

Marjorie was 21 years old, diagnosed with paranoid schizophrenia, and burdened by auditory verbal hallucinations. This started 4 years ago when her grandfather died. She felt very lost and alone, and she was unable to express her emotions. She felt responsible for the suffering in her family. Above all, she worried about her younger sister. The first time she heard a woman's voice, she was in the bathroom. The voice instructed her to commit suicide and threatened to harm her sister if she did not comply. Marjorie started to think that this voice was a powerful spirit that could actually kill her sister. To prevent this from happening, Marjorie undertook three very serious suicide attempts. She was anxious, torn by guilt, and suffered from dissociation and automutilation. The main trigger of these symptoms was not the voice itself but an intrusive image of her dead sister lying in bed.

The EMDR focused on the intrusion of her dead sister, for it was hypothesized that this would reduce symptoms. The image became less vivid and symptoms began to abate. Marjorie's motivation to investigate her beliefs about the voice with CBT techniques increased. She dared to test what would happen if she did not obey the voice's instructions. She found out that less submissiveness did not actually result in injury to her loved ones (especially

her sister). Therefore, it was easier for her to ignore the voice and both frequency and intensity of hallucinations declined.

Case Example: Delusions and Imagery

Faye was 45 years old and had been diagnosed with schizoaffective disorder about 20 years ago. A year ago, she started building up debts. To pay these debts and save some money, she let her attic to a student. She relapsed into psychosis and started developing delusions about the tenant and especially about his Rastafarian friend. She became obsessed with black magic and was afraid that she was targeted with voodoo. Faye was admitted to a mental hospital.

During the admission, Faye received antipsychotic medication and CBT, which helped her recover. Faye was released from hospital after 3 months, continuing the CBT. She performed several behavioral experiments and concluded that the tenant had no bad intentions toward her. Because he knew it was difficult for her to be confronted with his friend, he stopped seeing him at the house. Several times, Faye intended to tell her tenant that it was okay if he wanted to invite his friend again. But when she tried to do this, she had an intrusive image of a voodoo doll with blood streaming from its eyes. Although she was no longer convinced of the voodoo, the images frightened her and prevented her from carrying out her plan.

The therapist proposed to use EMDR for this image. The NC formulated was I am in danger. SUD scores dropped fast, with the targeted image changing rapidly. The first time they went back to target, the picture had changed: there were crusts of blood on the eyes now. The second time, Faye started laughing. Daisies had replaced the crusts and the SUD was 0. The future template dealt with Faye opening the door for a visit of her tenant and his friend.

A few days later, Faye sent an e-mail to her therapist:

> This afternoon my tenant and his friend dropped by for a visit. It was nice. I don't know whether it was the EMDR that worked or me deliberately recalling the daisy-image in advance, but it went fine. Thank you so much, Faye.

Obstacles and Related Treatment Strategies

Several obstacles that may be specific to using EMDR in clients with psychosis are presented, accompanied by possible treatment strategies that may be useful (also see Table 3).

Ongoing Traumatization Because of Psychotic Experiences

When a client attributes auditory hallucinations, such as voices, to the actual aggressor of a traumatic experience in the past, then this client may continue to feel threatened and unsafe. Similarly, paranoid delusions may cause ongoing traumatization. For example, a client may feel that criminals, long after they have mugged him with a weapon, are still watching him and are out to get him. These clients might be unable to feel safe in the present situation, even in the therapist's room because they are convinced that people are still out to hurt or kill them.

TABLE 3. Adaptive Strategies for EMDR in Clients With Psychosis

Obstacle	Strategies
Limited concentration	Repeat the instructions whenever required during the session.
Low energy and poor continuous attention	Work slowly, possibly with shorter session duration.
Low working memory	Prevent complete flooding of the working memory by either traumatic flashbacks or the distracting stimulus. The distraction should closely match the intrusiveness of the target image. Vary the distractive stimulus accordingly.
Lessened affective expression	Explicitly discuss how the client will rate his/her distress and levels of anxiety.
Ongoing traumatization because of external attributions of psychotic experiences	Cognitive behavior therapy, cognitive interweaves, or resource development installation.
Medications that block the cholinergic system disrupt the learning effects of EMDR	If possible and safe: do not take the medications on the day of the EMDR session.

Although it is not always the case, external attribution of psychotic experiences can prevent the client from developing distance between past and present. During EMDR sessions, the SUD levels will be high, irrespective of the target selection, and will not go down. External attribution may function as a "blocking belief" within EMDR, preventing the traumatic experiences to be reprocessed. Here, CBT may be necessary to correct dysfunctional attributions. Other options are *cognitive interweaves* (CIs) or *resource development and installation* (RDI).

Cognitive Impairments

Poor concentration may be an obstacle. It is often present as a cognitive impairment in psychotic disorders (Bora, Yucel, & Pantelis, 2009). During EMDR, clients may have difficulty following instructions and concentrating on the target image. Some clients are unable to follow the fingers of the therapist (or other distracting stimulus) with their eyes for a long time, and need repeated instructions to keep doing so. Voices that are talking to them during the session also distract some clients. Preferably, the therapist nevertheless continues in the usual way. In case of severe impairments, sessions may be cut short in time. Yet it is advised only to do so when absolutely necessary.

Some clients with psychosis have poor working memory (Bora et al., 2009). Working memory is assumed to play a central role in the desensitization phase of EMDR (Andrade, Kavanagh, & Baddeley, 1997; Gunter & Bodner, 2008). Vividness and the emotionality of traumatic imagery have been found to decrease following the taxation of one's working memory (Van den Hout et al., 2010). Too little distraction does not work because a client may get lost in flashbacks, yet too much distraction may prevent the client from thinking about the memories at all. An optimal taxation of working memory seems best (Gunter & Bodner, 2008). Some clients with psychosis may benefit from a working memory demanding task that is not too demanding; that is, not taxing their working memory too much. On the other hand, severely intrusive traumatic imagery requires strong distraction for the client not to get overwhelmed. Therefore, individual fine-tuning is needed.

Difficulty With Eye Movements

Some people with schizophrenia have impaired saccadic eye movements (Krebs et al., 2010); these are directional movements over a large angle, often with the eyes following a stimulus. In people with psychosis, saccadic eye movements can be slower or sometimes impaired by involuntary movements. Impaired saccadic eye movements may reflect general impairments in sensomotor processes in the frontal cortex (Lee & Williams, 2000; Reilly, Lencer, Bishop, Keedy, & Sweeney, 2008). Specifically, impaired saccadic movements may be connected to prefrontal impairments in motor inhibition (Krebs et al., 2010).

It is unknown whether these impairments are an obstacle for EMDR. Obviously, they may cause some difficulty with eye tracking of a distracting stimulus. But recent findings suggest that EMDR's working mechanism is mostly rooted in the taxation of the working memory while thinking about traumatic images (Van den Hout et al., 2010), and this probably does not get obstructed by saccadic impairments. If needed, other working memory tasks may be useful instead of eye movements, for example, bilateral auditory beeps, mental calculations, drawing something, games, walking around, and tapping objects.

Antipsychotic Medication

Some researchers have concluded that EMDR may work because it activates the cholinergic system in the brain (Elofsson, von Schèele, Theorell, & Söndergaard, 2008). This system is associated with learning, memory, and attention. However, antipsychotic medication sometimes blocks cholinergic receptors, with consequential side-effects such as a dry mouth, constipation, increased heart rate, pupil dilatation, and restlessness. Some clients get a specific anticholinergic agent prescribed as a remedy for motor side-effects of antipsychotics (e.g., benztropine or trihexiphenidyl). While on such medications, EMDR may turn out to be less effective; unable to activate the cholinergic system. This is not yet certain, however; but it may be useful to consider such interactions when EMDR is not working and a client is heavily medicated. Lowering the anticholinergic dosage may help.

Low Affective Expression

Apathy, anhedonia, and affective flattening are some of the negative symptoms in psychotic disorders. Research indicates that affective flattening mainly consists of lessened emotional expression, not an absence of the subjective emotional experience (Foussias & Remington, 2010; Myin-Germeys, Delespaul, De Vries, 2000). This, however, can make

it hard to tell how the client is feeling during EMDR. Sometimes a client reports high SUD, while at the same time his facial expression shows no signs of distress. This makes it harder to help a client stay within the "optimal arousal zone" or "window of tolerance" (Ogden & Pain, 2006). It is advised to discuss this in advance: which SUD scores indicate what type of experience to the client? The therapist may not see it on the outside, but the client can experience intense emotions within. It is usually no problem to talk about this.

Unusual Side-Effects and Destabilization

Sometimes unusual reactions occur. The authors have encountered clients who keep hearing the beeps of the auditory bilateral distracting stimuli for some days after an EMDR session. These effects have thus far always disappeared again within a couple of days.

Psychotic symptoms may temporarily increase during EMDR (e.g., voices might increase in frequency or intensity for a few days). We advise to mention this possibility in advance so the client feels less alarmed when this happens. In all the years that the authors of this article have been using EMDR in psychosis (in outpatients and inpatients), no complete psychotic breakdowns have occurred. However, one cannot exclude this possibility for the future. A plan for signaling an increase in psychosis and close contact with colleagues and the client's social network are important.

Dissociation symptoms may occur during EMDR. The authors view dissociation as a dysfunctional coping mechanism for high levels of stress. In the case of dissociative reactions, it is important for the therapist to stay calm and present. Most clients are able to hear the therapist. Say something like "stress apparently rose too high. We will just wait until the stress is manageable again." It may help to make the client focus on details of the surroundings. It can also be useful to discuss strategies beforehand, such as a touch on the shoulder or naming 10 blue things in the room. Clients themselves often know what strategy is effective for them. Dissociation itself is harmless and it is our experience that it always passes.

Discussion

In this article, we provided guidelines for the conceptualization and use of EMDR. The illustrative case examples show that psychotic disorders are generally complex. They compose biological, psychological, and social factors and there is almost always comorbidity (Buckley et al., 2009). The authors therefore advocate integrating EMDR in a more comprehensive psychological treatment. In clinical practice, we combine EMDR with CBT. For an extensive description of CBT in psychosis, the authors refer to one of the many protocols (e.g., Morrison, Renton, Dunn, Williams, & Bentall, 2004). Clinical practice shows that EMDR and CBT can be combined very well. Quite often, cognitive challenging is necessary to create a context within which EMDR has a good chance of success. And in many clients, EMDR needs to be followed up by exposure assignments or behavioral experiments to realize further improvement. It is important to note that in CBT for psychosis, treatment effects are greater when full treatment programs are executed (Dunn et al., 2012). The authors believe that delivering EMDR and CBT combined has a synergic effect. Research into this field is needed.

Being familiar with the phenomenon psychosis and relevant treatment strategies is a requisite when working with EMDR in psychosis. Psychoses are often complex and are usually accompanied by comorbid disorders. On the other hand, therapists who are experienced in working with psychoses know that they don't have to be too careful and that clients can handle a lot more than is generally assumed by clinicians that are unfamiliar with psychoses. It is emphasized that there is no scientific evidence that any psychotherapy for psychosis is harmful. In our experience, most difficulties in executing EMDR in psychosis occur in the presence of comorbid personality disorders in which emotional instability is a key symptom. This may for instance increase chances of dissociation. The authors usually don't use any stabilizing techniques, however, and adopt standard EMDR procedures. It has to be noted that the clients we generally treat with EMDR are predominantly diagnosed with schizophrenia or schizoaffective disorder and that these clients usually receive extensive case management and antipsychotic medication. In other words, often quite some stabilizing interventions have already been implemented. Unfortunately, there are no data that show clear indications and conditions for EMDR. At this time, every therapist should judge what can and can't be done given his or her clinical expertise. Of course, clinicians should be attentive to factors that influence the ability of clients to undergo EMDR. When there are clear contraindications, treatment should be postponed or a different treatment strategy should be adopted. However, the

authors note that these factors are no different in clients with psychosis than in any other group of clients. Moreover, it is emphasized that one of the main problems in the care for people with psychosis is the fact that effective psychotherapeutic interventions are not delivered.

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Acknowledgment. The authors appreciate the editorial guidance of Daeho Kim in the preparation of this article.

Correspondence regarding this article should be directed to David P. G. Van den Berg, Parnassia Psychiatric Institute, Zoutkeetsingel 40, 2512 HN, Den Haag, The Netherlands. E-mail: d.vandenberg@parnassia.nl