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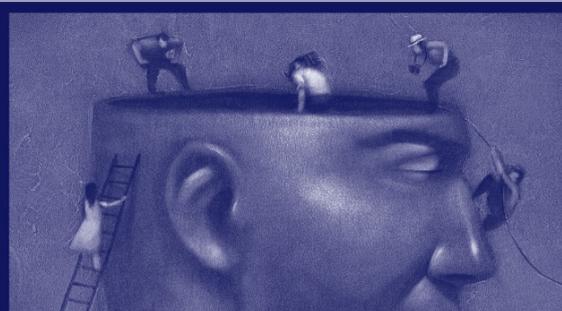
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“I Will Fear no Evil, for I Am with Me”: Mentalization-Oriented Intervention with PTSD Patients. A Case Study

Sharon Palgi · Yuval Palgi · Menachem Ben-Ezra · Amit Shrira

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Abstract Post traumatic stress disorder (PTSD) patients are described as suffering from a collapse of mentalization—the inability to understand and interpret their own behavior and that of others as emanating from intentional mental states. The present paper proposes an integrative focused intervention, called “traumatic mentalization change”, to improve and strengthen the mentalization abilities of PTSD patients. With the assistance of the therapist, patients learn how to embed their present self-states within their retrieved memories of the traumatic event and thus to change their traumatic narrative. These present selfstate images enrich the patients’ narratives with the emotional needs that were missing during the traumatic event by addressing mistaken attributions regarding these memories. In this way, the traumatic narrative changes, and the devastating selffeelings experienced during the original traumatic event are reduced. We demonstrate this intervention with a case study of a veteran PTSD patient who suffered from PTSD for 10 years after being involved in a terrorist attack. The neuro-clinical and clinical implications are discussed.

Keywords PTSD · Mentalization · Empathy · Psychotherapy · Projective self

Introduction

Trauma and Mentalization

The current literature suggests that post traumatic stress disorder (PTSD), is a complex phenomenon whose occurrence can have multifarious causes (Zoladz and Diamond 2013). One major unresolved issue in the trauma literature is the following question: Given that an individual experiences a traumatic event, what conditions can accelerate the development of PTSD, and what can temper or prevent its occurrence? In this paper, we examine one aspect of this question—the role played by mentalization in the relation between the event and the psychological and neuropsychological mechanisms underlying PTSD. Mentalization is defined as a form of mostly preconscious imaginative mental activity, namely the perceiving and interpreting of one’s own behaviors as well as those of others as emanating from intentional mental states (e.g., needs, desires, feelings, and beliefs). It includes the individual’s ability to distinguish inner from outer reality, and internal mental and emotional processes from interpersonal events (Fonagy and Target 2006). Allen et al. (2012) suggested that individuals who suffer from PTSD experience a *collapse of mentalization*. This collapse constitutes the reemergence of modes of thoughts that are developmentally more primitive, and these primitive modes of thought are reflected in the PTSD symptoms. For example, PTSD intrusions such as flashbacks demonstrate the individual’s inability to distinguish between imagination and reality, between past events and present life. Hyperarousal symptoms are the result of difficulties in emotional regulation. Additionally, avoidant symptoms demonstrate the inability to distinguish between feelings of fear and substantive dangers (Fonagy et al. 2002). Finally, the negative alteration in cognition

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and mood now included in criterion D of the DSM-5 (American Psychiatric Association 2013) represents the difficulty to create a cohesive and coherent representation of the traumatic event.

In this study, we expand the mentalization perspective to examine the dynamics of posttrauma and suggest a new integrative intervention based on this perspective. According to our perspective, exposure to a traumatic event may be associated with a collapse in the way the individual mentalizes this event. Internal traumatic memories, feelings, cognitions and beliefs regarding the traumatic event may become intertwined with external events occurring in the present. For example, internal traumatic memories of sirens that sounded during a terror attack may be equated¹ with actual ambulance sirens, even though these do not reflect any observed threat. Hence, the traumatic narrative deviates from reality and impairs the present self-sense of integration and continuity. Previous studies suggested that one way to change this collapse of mentalization is to reconstruct the past trauma through the development of a perspective on the past by means of reworking current experiences affected by the collapse of mentalization (Allen et al. 2012). We further expand this idea by using cognitive and narrative ideas (e.g., Palgi and Ben-Ezra 2010a, b) that help us construct a new perspective by combining the past traumatic self-image with the current self-image. In this way, changing the perspective of individuals diagnosed with PTSD regarding their traumatic narrative may help them reconstruct their collapsed mentalization. The innovative contribution of the present study lies not only in the novelty of the intervention, but also in the integrative conceptualization that combines neuro-cognitive, psychodynamic and narrative concepts. The proposed intervention based on this concept is described in this paper and demonstrated in a case study.

PTSD and the Impairment in Self-Perception

PTSD is defined as being related to trauma and stressor-related disorders (American Psychiatric Association 2013). Yet this disorder can also be viewed as a disorder primarily related to impairment in the perception of others as well as of the self. Criterion D for PTSD includes negative and distorted beliefs, cognitions, and emotions that arose due to directly experiencing, witnessing or learning about exposure to actual or threatened death, serious injury or sexual violence (American Psychiatric Association 2013). This implies that the traumatic event shatters and impairs the integrity of

the self (Janoff-Bulman 1992), resulting in negative expectations about oneself, others or the world, distorted cognitions of blame and negative emotions such as anger, guilt or shame elicited in regard to the traumatic exposure (American Psychiatric Association 2013). In other words, the way these individuals perceive themselves as potent entities in their environment is diminished by the change in their assumptions about the self and the world (Janoff-Bulman 1992). One of the major results associated with impairment of self-perception is a sense of continuous vulnerability, helplessness, and loss of control (Foa et al. 2006). Whereas mentalization helps build the sense of self, the collapse of mentalization increases the feeling that the self has been fragmented (Fonagy et al. 2002). This, in turn, may harm the individual's ability to integrate his or her traumatic experiences with the assemblage of autobiographical memories of the self, leading to a fragmented sense of self.

PTSD and Autobiographical Memories

Another related perspective for understanding the relations between PTSD and mentalization is reflected in the association found in neuroimaging studies, which show similar patterns of activation between mentalization and autobiographic memory (AM) (Buckner and Carroll 2007). AM is a memory system consisting of episodes recollected from an individual's personal life, including episodic and semantic memories.

A diagnosis of PTSD includes impairment of several aspects of AM. The individual's traumatic memories are distorted or erased, and his/her memory ability is damaged (Brewin 2007). Individuals with PTSD tend to avoid direct or indirect contact with these intrusive traumatic memories. According to the self-memory system model of Conway and Pleydell-Pearce (2000), AM is reconstructed through a hierarchical retrieval process that builds memories across three levels of organizational detail, ranging from general phases of lifetime periods through general events and up to narrow specific events. Williams et al. (2007) suggested that traumatic experiences can lead to deficit or repression of working memory that may impair retrieval and lead to overgeneralization and a lack of specificity in autobiographical memories. Therefore, in some cases specific aspects of the traumatic experience are missing, while in other cases the individual experiences difficulties in intentionally recalling AM. Specific autobiographic memories are required to predict and understand our mental world and that of others. Hence, impairment in this ability can cause mentalization difficulties (Buckner and Carroll 2007). Research has consistently shown that PTSD patients have difficulty retrieving specific AM and tend to retrieve generalized AM from either positive or negative events. Moreover, the impairment in retrieving AM was found to be related to the degree of the traumatic symptoms and not

¹ We refer here to the *psychic equivalence mode*: one form of mentalization collapse represented by the individual's tendency to equate internal thoughts, feelings or beliefs with external stimuli. Internal ideas and feelings are not experienced as representation but as real facts.

to the nature of the traumatic event (Williams et al. 2007). We propose that the retrieval of specific information about one's personal past is influenced by constructions of the self, among them self-image, goals, and expectations. In the suggested intervention described below, we assume that the self-memory system shapes cues that activate AM representations (Conway and Pleydell-Pearce 2000; Tulving 2005). Thus, the AM of individuals with PTSD is fragmented and incoherent, and includes generalized remembered events that are vague and therefore not connected to the individual's present experience. As can be seen, impairment of AM is directly associated with impairment of self-perception. In fact, it can be said that a fragmented AM represents the collapse of mentalization.

PTSD, Autobiographical Memory, and Mentalization

Damage to the AM can further impair individuals' ability to perceive themselves as continuous and coherent (Omer and Alon 1994). Usually, individuals use their AM to judge and understand themselves as well as others (Perry et al. 2011). Thus, damage to the AM can impair individuals' ability to understand and mentalize other people's motives due to difficulty in interpreting cause and effect in their own fragmentary AM (Fonagy and Target 2008).

Mentalization is part of a broader ability referred to in recent studies as "the projective-self" (Buckner and Carroll 2007). This is a general ability that enables individuals to change their current perspective to other perspectives, such as past or possible future perspectives (past AM and future expectations) of the perspectives of others (mentalization) (Buckner and Carroll 2007). Research suggests that projective-self abilities, and especially AM and mentalization, are moderated by the medial temporal lobes, including the hippocampus and the mid prefrontal cortex (Perry et al. 2011). These areas were found to be impaired among individuals with PTSD. Neuro-imaging studies found lower mid-prefrontal cortex and hippocampus volume and activation among PTSD patients (e.g., Liberzon et al. 2003). This impairment may explain the difficulties PTSD patients experience in retrieving specific AM. Moreover, it can be assumed that the collapse of mentalization is related to this lower volume and activation of the mid prefrontal cortex and the hippocampus found in these patients.

The Rationale for the Present Intervention

Cognitive and behavioral therapies focusing on exposure and trauma, among them *prolonged exposure* (PE: Foa et al. 2007) and *eye movement desensitization and reprocessing* [(EMDR): Shapiro 1995] are generally agreed to be pivotal evidence-based psychotherapies for PTSD (Powers et al. 2010; Seidler and Wagner 2006). These techniques primarily

help decrease intrusive and avoidant symptoms. Nevertheless, exposure and trauma-focused cognitive and behavioral therapies focus less on alleviating the impairment in self-perception (Schottenbauer et al. 2008). *Mentalization-based treatment* (Allen et al. 2012) and cognitive processing therapy (Resick 2001) for traumatized patients emphasize the importance of changing the traumatic narrative while generating a new narrative that is more flexible, allows for change in trauma-related beliefs and facilitates different aspects of mentalization modes of thinking.

The present paper proposes a focused intervention called "traumatic mentalization change" (TMC) that can be incorporated within cognitive *prolonged exposure* or EMDR techniques, as well as in *mentalization-based treatment* and other interventions. Although studies have shown that prolonged exposure technique with cognitive restructuring is no more effective than prolonged exposure alone (Foa et al. 2007), to the best of our knowledge these studies did not examine changes in self-perception and mentalization abilities. Additionally, this intervention shares similar ideas with other cognitive psychotherapy techniques and can be combined with them (e.g., Ehlers and Clark 2000; Grey et al. 2002; Wisco et al. 2013), as well as with narrative interventions (Neuner et al. 2004). Finally, this intervention represents a development of our previous "back to the future" narrative intervention (Palgi and Ben-Ezra 2010a, b). The "back to the future" intervention is based upon the notion that anchoring points, i.e., essential pieces of information that contradict the traumatic narrative and offer past situations of preparedness to cope with the traumatic events, may enhance the individual's healthier, non-traumatic narrative. The proposed TMC intervention has some unique qualities in that it integrates cognitive, emotional and mentalized components, as described below.

The TMC intervention can assist by improving and strengthening the individual's mentalization abilities in relation to her/his self-perception and AM. In this intervention, the therapist assists the patient in learning how to embed present self-states within the retrieved memories of the traumatic event. By articulating the retrieved traumatic memories, patients embed internal or external images from their present life (including themselves, their friends or the therapist), and these images accompany them as they articulate the retrieved memory. These images supply patients with the emotional needs they lacked during the traumatic event (such as comfort, partnership, general outlook on the event, preparation for what was about to occur, and other perspectives for viewing the event). Thus, the traumatic narrative changes and the devastating self feelings experienced during the original traumatic event are reduced. In other words, this intervention serves to support, exercise and improve the individual's projective-self abilities.

Correspondingly, the individual's mentalization of the traumatic event becomes less implicit, nonverbal and automatic, and more explicit, reflective and controlled (Fonagy et al. 2012), as demonstrated in the case study. Some of these ideas resemble the reconstruction of a traumatic narrative, as proposed and empirically tested by *narrative exposure therapy* using randomized controlled trials (Neuner et al. 2004). The proposed technique, however, uses the patient's healthy self-states from the present to accomplish this reconstruction. These present self-images can foster and help patients improve their mentalization of traumatic memories as they are conceived as part of their own ideas rather than as external ideas suggested by the therapist. This intervention achieves better results when a therapeutic alliance has been established and the patient feels trusting and secure in the therapeutic setting. In addition, the alleviation of arousal and avoidant symptoms and the strengthening of current feelings of competence can easily be conveyed into the patient's past traumatic image.

Description of the Intervention

In this intervention as in other CBT therapies and exposure-based therapies, the patient is asked to tell the traumatic story to the therapist. After the patient is habituated to the traumatic narrative, he/she is asked to use directed imagination to embed healthy aspects of her/his present self-image into the narrative, i.e., the self-image that survived and has knowledge about the traumatic event. This integration between past and present self-images improves the individual's mentalization as it enables contradictory and previously unavailable information from the present to integrate with the narrative of the past self-image narrative. Although some aspects of the present self-image are not healthy and can actually be weak and shattered, in most cases there are other healthy aspects as well. This helping self-image can also be attained through other images from which the patient can draw support during the event. These healthy aspects of present self-images are the main facilitating agents for providing an alternative narrative or, in other words, for activating the projective self system. The therapist's directed questions and instructions help the patient pinpoint the places where he or she needed help, the images that might have helped her/him during the traumatic event, and in particular the patient's present self. Our clinical experience has shown that the patient's past self needs the following from the present self:

1. The need for comfort and care. The patient's present self-image provides comfort, care, and physical and emotional support to his/her self-image during the traumatic event. This offers patients the ability to change their ineffective mentalized perception of their

self-image from the traumatic event, which still lacks the support and comfort that were missing during the traumatic event.

2. The need to be prepared for future events. The patient's present self-image helps the traumatized past self-image reduce the startle effect that usually accompanied the traumatic event. By accompanying the patient during terrifying moments and preparing the patient for what is about to happen, the therapist can provide a sense of control over the uncontrolled situation. In this way, the patient can re-mentalize her/his present condition as being different from that which existed during the traumatic event.
3. The need for an external different point of view about the traumatic event. The patient's present self-image serves as an external observer of the traumatic event. Thus it can give the patient's self-image from the traumatic event a different perspective on the traumatic event, one that blends together with the patient's current interpretations of the event, diminishes the horror of the traumatic moments, and helps the patient re-mentalize the event.
4. The need for naming and re-narrating the patient's feelings during the traumatic event. The patient's present self-image articulates sensory non-verbal information or feelings using words and narrates the patient's self-image during the traumatic event.
5. The need for company. The patient's present self-image serves as company for the patient's self-image from the traumatic event, thereby diminishing feelings of loneliness.

To help the patient change her/his mentalization about the traumatic event, the therapist asks the patient to choose the nature of the image s/he would like to embed in her/his traumatic narrative and to elaborate on the need this image can fulfill. The patient assigns his/her present self-image a name that represents a change (e.g., "today's Tom," "Adam 2011," etc.).

The therapist's activation during the process varies. While a more directive approach is preferred in the early stages of the intervention, in more advanced stages the therapist should be less involved and directive. In the first stage, the therapist helps the patient to see the images that are present and to elaborate their potentially self-helping attributes. In addition, the therapist at this stage controls the focus on the images by intermittently stating the narrative of the present self-image and that of the past traumatic image, thus facilitating the mentalization processes by using a different perspective on the traumatic narrative. At this stage the patient narrates the thoughts and feelings that are elicited by the images and decides upon the mode of assistance offered by the present image.

As therapy advances and according to the patient's mentalization ability, the therapist steps back and becomes more passive. At this stage, the patient is asked to narrate her/his story independently. The therapist is much less directive and serves mainly as a witness to the process, usually intervening by reminding the patient of his/her possibilities in the event of mentalization relapses. This is an important stage, as it enables the patient to adapt the presence of the image and the assistance s/he needed during the traumatic event. This serves to fine tune the help, sense of control, and independence needed for the patient to be able to use this intervention outside the clinic. Re-narrating the new reconstructed traumatic story helps to stabilize and consolidate a new, more adapted, flexible narrative.

Support and Rationale for the use of the Intervention

Our experience with this intervention suggests that the dialogue between present and past traumatic images gives patients the chance to express the needs and worries they felt during the traumatic experience. The new inner help they receive from the mentalized new image of their present self enhances their sense of control and competence. This new perspective of the traumatic narrative frames the traumatic memory in a new, flexible, and more comforting way. Such a perspective may help change the traumatic narrative in the future. The new present self-image that survived the trauma is acquainted with the experience the past self-image is going through, and now serves as a self-state with a different perspective that lives inside the patient. The present self-image knows what is to be expected and can help the past self-image prepare for future events (Palgi and Ben-Ezra 2010b). This image can help the patient cope with expected feelings, such as loneliness and fear. Previous studies have suggested that, among other factors, lack of social support during a traumatic event is a significant factor in predicting the development of later PTSD and that social support is a major protective factor against the development of PTSD (for review, Charuvastre and Cloitre 2008). The proposed intervention uses inner present self-images that can accompany a patient's AM and intrusive memories throughout life. Finally, the new present self-image helps preserve the integrity of the self and helps prevent the ongoing vulnerability, helplessness, and loss of control that were a salient part of the patient's traumatic narrative.

Case Presentation

The Patient

We now present an intervention with a patient, who gave his informed consent to participate in the case study.

Husain (a fictitious name, like the other disclosure information) is a 30-year-old Bedouin man who is married and the father of three children. He reports normal development and describes himself as a sociable and successful person. He served as a commander at a checkpoint located on the border between Israel and the Palestinian Authority. During his military service, he was involved in a terrorist attack in which two terrorists blew themselves up in front of him after throwing hand grenades at him. Believing that Husain had been killed, the soldiers under his command started shooting at the checkpoint in order to kill the terrorists. Husain, whose face was injured in the explosion, found himself under friendly fire from his own troops. He managed to extract himself from the area and to reach a doctor who treated him. Although he immediately began experiencing a moderate level of posttraumatic symptoms, he only began taking psychoactive medications after 5 years had elapsed. After another 5 years he was hospitalized in a daycare psychiatric ward with a diagnosis of chronic severe PTSD. Upon arrival, he was suffering from intrusive memories of the terrorists and the explosion. He reported symptoms of social, interpersonal, and occupational avoidance. He also reported symptoms of hypervigilance, mainly expressed through aggressive behavior toward his family members. In addition, he explained that the reason for his hospitalization was that his condition had become aggravated after he was fired from a temporary job.

Measurement Tools

Several measurement tools were administered to Husain before, during and after the therapy.

Posttraumatic Stress Diagnostic Scale

The PSS (Foa et al. 1997) is a 17-item self-report measure the level of PTSD symptoms. It was administered after every second session. The PSS identifies clinical levels of PTSD symptoms according to *DSM-IV* criteria and serves as a measure of PTSD symptom severity. It demonstrates high internal consistency ($r = 0.92$) and good test-retest reliability ($r = 0.74$ for the diagnosis of PTSD and 0.83 for symptom severity) and has shown good diagnostic agreement with the Structured Clinical Interview for *DSM-IV* (American Psychiatric Association 2000).

Beck Depression Inventory-II (BDI-II)

The BDI (Beck et al. 1996) is a 21-item self-report measure of depression that in previous research has been shown to have good reliability and validity. It was administered

after every second session. The BDI's internal consistency ranges from 0.58 to 0.93, and its test-retest reliability estimates range from 0.69 to 0.90. The BDI correlates highly ($r = 0.96$) with clinician ratings of depression.

The *Interpersonal Reactivity Index (IRI; Davis 1983)* is a 28-item instrument with four separate 7-item sub-scales evaluating different dimensions of empathy, which are considered independently. We chose to include the two IRI sub-scales, which measure the cognitive (Perspective Taking Sub-scale) and affective (Empathetic Concern Sub-scale) domains of empathy. Cognitive empathy is directly associated with explicit and reflective mentalization abilities. Emotional empathy is related to implicit, nonverbal, and automatic mentalization. The IRI sub-scales have been shown to be reliable and reproducible measures of sensitivity to the views and feelings of others, and this tool has been used in a wide variety of research settings. This measure was administered twice, at the beginning and at the end of the therapy.

Procedure

When Husain first arrived at the psychiatric ward, he was treated with conventional PE. The therapy began with psycho-educational elements to help him understand his problem, and behavioral and cognitive elements to help him control his aggression, along with several sessions of prolonged exposure. After the eight sessions of *prolonged exposure*, the impact of his intrusive memories was somewhat alleviated. He learned to deal with his intrusive memories of the terrorists, and was less frightened when he pictured the terrorists' face in front of him. Additionally, his avoidance symptoms were also markedly reduced, enabling him to reconstruct previous relations and contact friends. Nevertheless, he continued to report intrusive memories, nightmares, and feelings of fear whenever he remembered specific elements from the traumatic event during the in vivo exposure. In order to reduce these feelings as well as to enhance his sense of confidence and security during the event, we decided after eight sessions to integrate TMC intervention into the therapy for another three sessions and one termination wrap-up session. All twelve therapeutic sessions were given by the first author (S.P.), who is a qualified PE therapist. Moreover, the therapy was supervised by an accredited PE instructor. During the preparation for the TMC intervention, Husain chose to call his image from the present "Husain 2011" and his past self-image "Husain 2001."

Description of the TMC Intervention

In the first stage, Husain was asked to tell about his traumatic event again, from the beginning.

Husain: "After a hard day of work with many inspections at the checkpoint, two people approached me. One of them wanted to pass through the checkpoint. I looked at him and told him he had no permit to pass through. He started to argue with me, but I was insistent and did not allow him to go through. I told him to go back where he came from and gave him back his identity card. He smiled at me, turned around and then, all of a sudden, I heard a huge explosion."

Therapist: "Now, before you describe how you fell down, I want you to call on Husain 2011. Let him enter and help Husain 2001."

Husain: "I am now Husain 2011. I am trying to help Husain who was injured, Husain 2001, after he was really badly injured. I try to calm him down, to help him. I tell him, 'It is true that you are injured, and you are all covered with blood...But you are lucky, since God saved you and spared your life. You should first take care of yourself, be strong ... keep fighting for your life; life has not stopped, you are still alive. Slowly it will all pass, the nightmares, the dreams, the disturbances. I believe everything will pass...'"

Although Husain was given no previous directed instruction, he clearly tried to help himself by providing ample solutions for his requested needs, such as preparation for future events, support, and comfort. At this point, the therapist helped him by distinguishing the different points of view, noticing when his mentalization relapsed, and providing him with a different perspective.

Therapist: "Husain, everybody who saw Husain 2001 could see that his eye was okay. From the inside, it was very scary, but from the outside everyone could see that the eye was fine, that its color was still green. That is what the doctor told you. I want you now, as Husain 2011, to make an effort to see this. If you manage to do this, tell it to Husain 2001."

At first Husain was silent and very focused. Then he said: "Even though Husain 2001 is suffering from an injury to his left eye, and he thinks that his eye has been destroyed, that he has lost his eye, I tell him as Husain 2011 that his left eye is still in place. I can see its green color, I can see that it is injured but I can see that it is in place. There are just a few splinters and a bit of blood. Once he arrives at the hospital the doctors will treat his eye. I tell him to relax, his left eye is still in place."

Through the change in his mentalized perspective, Husain can see that from the outside the injury that had most frightened him during the event was not as severe as he thought. This change and his ability to see things from the "outside" later brought about an improvement in his mental condition and a change in his most traumatic moment from the event.

After this instructed work, Husain is asked to use this intervention independently.

Therapist: “Now tell your story in the way you want. You can call upon Husain 2011 whenever you want and can use his help however you want.”

Husain: “After a hard day of work, two people arrived. One was shaven and one was wearing a coat, a black coat. The one who was shaven was wearing a suit. I did not really find them suspicious. Then, the first one wearing the suit came toward me. I looked at his identity card, and saw he had no permit to pass through the checkpoint. I explained to him that he had no permit, but he started arguing with me. I was lucky that I really functioned well, and insisted on telling him I was not going to let him pass through. I gave him back his papers, and then he smiled at me, turned around and exploded.”

Although at this stage Husain's present self-image has not yet entered, a change can be seen in the perspective of his self, in his mentalization ability, and in the way he views his functioning during the event. He describes himself as functioning better during the event, having more control, and being more competent.

Husain (continues fluently): “It seems that the other man was also a terrorist, but he protected himself by taking cover. So, after the first terrorist exploded I did not understand what exactly was going on, and did not understand it was a terrorist attack and that the terrorist had exploded. Then suddenly, another guy with the same name as me, Husain, arrived, but he looked strong and healthy and like someone who loves to help. So, after a few seconds he tells me, ‘Wake up, it's a terrorist (who exploded), you have not been hit. You are okay, you are alive’...Husain 2011 started to calm him down and told him, ‘there is another terrorist who is still alive and you must gather the strength to escape and find shelter to protect yourself. If you survived the first explosion, it would be a pity if the second terrorist killed you.’ I listened to him carefully and was convinced, and started crawling toward the shelter.”

The mentalized processes Husain provides for himself are related to future calming narratives that are full of caring. He provides an alternative narrative that changes the existing mentalized narrative of collapse.

Husain (continues fluently): “But then the soldiers started shooting, so I (Husain 2001) said to him, ‘the first terrorist did not kill me, the second did not kill me, so now am I going to be killed by my own soldiers?’ But he (Husain 2011) said to me, ‘No, you are not going to die.’ He gave me more strength and told me, ‘you must escape now and everything is going to be fine.’ We went together, he held me and helped me into the shelter and calmed me down because I felt I had lost my eye and my throat was injured. Then he calmed me down by telling me that my throat injury would be healed and that I had not lost my eye. He helped me into the kitchen tent where the doctor

was. He started talking to the doctor, as I felt I could not because I was so weak and scared that I had lost my eye. Husain 2011 told the doctor what had happened, that it was a terrorist who exploded himself at me, and he told the doctor to treat me and calmed me down. Then the doctor told me that my eye was injured but it was okay. I asked him whether what Husain 2011 told me about my eye being in place was true, and whether you can see its green color and the doctor said it was true, that I was injured but everything was going to be fine. Then an ambulance arrived and they sent me to the hospital.”

Although Husain had told his story many times before during the PE, for the first time he now referred directly to his fears of being killed by his soldiers' friendly fire. It seems that when he was given other mentalized narratives, his dreadful fears could be exposed since they were no longer unbearable. In addition, his present self-image comforted him, helped him prepare for the future, supported him, and enabled him to name and voice his previously unarticulated needs. In this way, his own story now had more layers and he could give it different perspectives.

Results

At the end of the therapy, Husain was asked about the therapy as a whole as well as about the intervention in particular. Did it help him, and if so, how?

Husain: “It helps... I wish there had been a soldier like me who would have helped me like Husain 2011 did, who would have helped the injured Husain 2001. Because I listened to him and was convinced by his words, I knew what had happened, but I also knew that I was still alive and that I did not lose anything, that life goes on.... When somebody is in trouble and he is stuck in a place, and he has no place to go to, you call upon somebody stronger, with the will to help, who knows exactly what he is going through and he gives him a hand. This is how I help myself... Every time I think I am going to feel bad, I call upon Husain 2011, the part of me that knows how to help me look at things from the right perspective, today's perspective, the one where I feel fine.”

In the first stage of our analysis, we compared Husain's PTSD symptoms (PSS) and depression symptoms (BDI-II) prior to the PE sessions (before the first session), prior to the TMC intervention (after the 7th *pe* session), and at the end of the intervention (after the 12th session). Prior to the PE sessions his PSS level was 38 and his BDI level was 43. Before the TMC intervention his PSS level had decreased to 27 and his BDI to 21.

At the end of the TMC intervention his PSS level was 17 and his BDI level was 8. Clearly both the posttraumatic and the depression symptoms showed a decrease from pre-PE

to pre-TMC intervention. Before the TMC intervention his PSS decreased from a clinical level of PTSD symptoms to the cut-off point level (27; Brewin 2005). This level further decreased, until by the end of the TMC intervention it had dropped below the clinical level of PTSD symptoms. Before the TMC intervention his BDI decreased from a severe level of depressive symptoms (BDI-II > 29) to a moderate level of depressive symptoms (BDI-II = 20–28), and by the end of the TMC it further decreased to below a mild level (BDI-II = 14–19) (Beck et al. 1996). These results indicate that the TMC intervention reduced both Husain's distress and his symptoms.

In a second step we examined the effect of the treatment as a whole on the empathy scale (cognitive and emotional IRI; Davis 1983), before the beginning of the PE intervention and at the end of the TMC intervention.

The results show that before the PE sessions Husain's cognitive IRI level was 38, lower than the affective IRI level of 44. At the end of the therapy, his cognitive IRI was 41, higher than the affective IRI of 37. These results indicate that the treatment improved Husain's mentalization abilities and reduced his implicit, non-verbal distress and emotions.

Discussion

The present study proposes a new integrated perspective for understanding the inner dynamics of PTSD patients. The mentalization theory suggests that a traumatic event may cause a collapse of mentalization (Allen et al. 2012). Thus, individuals perceive the event/s related to their traumatic exposure in a static, inflexible way and are unable to see changes in their self-process that occur over the course of time. Moreover, they believe that other individuals also see these events in the same way. The assumption is that due to this collapse, the individual's self that was shattered by the traumatic event cannot change his/her present perception of the event, nor can the individual's own perspective of her/himself within that event change. Therefore, her/his perspective of the traumatic events and of the self remains negative and inflexible. An improvement in avoidance symptoms may be associated with an improvement in mentalization abilities. As avoidance symptoms actually reflect the inability to distinguish between inner and outer realities, as well as between past and present events, Husain was afraid in his inner world, but he also believed there was danger in his outer world. Additionally, he thought that past events were still threatening him in his present life. By adding the support of the present self-image, the intervention changes the patient's self-perspective of the relapsed mentalization of the event. In addition in providing the habituation resulting from

consistent exposure to the traumatic event, the TMC intervention facilitates narrative flexibility by changing the way “real events” happened. The present self-image strengthens the patient's past self-image by supporting, encouraging, and comforting the hurt self, and by increasing the individual's expectation of a change. Moreover, the intervention also helps strengthen the present self-image. The individual, who in the present seldom feels without self-control, helpless, and weak, can suddenly help “another” self—his past self-image. The present intervention compels the hurt past self-image to integrate with other present self-states, as formulated by Bromberg (2003), who claimed that in traumatic conditions, integration between the dissociative self and other self-states is required for healing.

In the present intervention, the mentalization of Husain's traumatic memories helped render them more reflective and explicit rather than automatic and implicit, and his improved mentalization abilities were in turn related to an improvement in his condition (Fonagy et al. 2012). This impression is also supported by the finding of the IRI questionnaires, which show an increase in his scores on the cognitive scale and a decline in his scores on the emotion scale after the TMC intervention.

From a functional neuroanatomical perspective, the present intervention may be seen as activating the projective-self system. More specifically, it is possible that the TMC intervention activates the neuronal networks included in the mid prefrontal cortex and the medial temporal lobes, including the hippocampus, which is related to the mentalization function (Buckner and Carroll 2007). Previous studies suggest that these regions function to a lesser extent in PTSD patients, and that these patients have a smaller hippocampus volume and decreased activation of the mid prefrontal cortex and the hippocampus (Bremner 2007). The present intervention may activate the projective self by increasing the activation of the mid prefrontal cortex and the hippocampus, which in turn decreases the PTSD symptoms. Moreover, this assumption is supported by the finding that mentalization abilities, as represented by cognitive empathy, were also elevated during the intervention. Future studies can examine these assumptions using brain imaging before and after the intervention.

The results show that whereas cognitive empathy was elevated, emotive empathy was diminished at the end of the intervention. Previous findings suggest that emotional empathy is more primitive, represents a lower level of empathy (Shamay-Tsoory 2011), and is more prevalent among individuals with personality disorders (Harari et al. 2010). Cognitive empathy, however, is considered a higher level and more developed ability, and has been associated with better mentalization abilities (Shamay-Tsoory 2011). Thus, changes in the IRI scales following the TMC may

indicate that the therapeutic intervention led to improvement in the patient's mentalization abilities. Nevertheless, this result must be examined with caution as the present study did not specify whether the source of the change was due to PE or TMC techniques.

Finally, the data from this case study support our theoretical assumptions. This simple intervention, which can be applied in combination with any known therapy, was associated with a decrease in Husain's depressive and PTSD symptoms, specifically his avoidance symptoms, and with an increase in his cognitive empathy abilities, which are related to better mentalization abilities. To implement this intervention, the therapist does not have to undertake a long and complicated qualification procedure. The intervention can easily be taught and can be embedded in most known treatment models.

Limitations

Although this therapeutic theoretical intervention was supported by a case study, and although we have used this intervention in several other cases with good clinical results, it still needs to be examined in a randomized control trial design. The case study therefore does not serve as proof of the efficacy of the intervention, but rather supports and demonstrates the application of the theoretical ideas presented in the study.

In summary, the proposed mentalization-based treatment suggests that developing the trauma narrative in a more mentalized way is an important aspect of therapeutic work with PTSD patients (Allen et al. 2012; Fonagy and Target 2008). The TMC is a novel intervention that is therapeutic in that it improves and strengthens the individual's mentalization abilities. By using functioning present self-images to support, comfort, and assist the traumatic self-image, individuals can reconstruct and rementalize their traumatic narratives. This process changes their AM and strengthens their self-perception.

The TMC intervention encourages patients to make their trauma narrative more flexible by changing their perspective of the trauma event, and to use their present self-image to help themselves in their past traumatic narrative. By means of this procedure the gap between patients' impaired mentalized capacities of the past and their present self-image become narrower.

We assume that the TMC intervention may activate brain areas that modulate mentalization (i.e., the *mid prefrontal cortex* and the hippocampus), and whose function is abnormal in PTSD patients.

TMC is a straightforward intervention tool that can easily be implemented in a broad spectrum of traumatized patients, and can be integrated with many psychotherapy approaches (CBT, *mentalization-based treatment*, and

narrative approaches). Moreover, after learning and working with TMC, patients can use the intervention on their own, for example, after waking up from a nightmare or experiencing a flashback.

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