Psychology and cognitive processing in post-traumatic disorders

Jamie Hacker Hughes

Diagnostic criteria

The term PTSD was introduced into the American Psychiatric Association’s Diagnostic and Statistical Manual in 1980 and the definition has since been refined into the current DSM-IV (and DSM-IV (TR)) definitions and those in the equivalent ICD-9 and ICD-10 of the World Health Organization. Current diagnostic criteria as set out in DSM-IV require a person to have been exposed to one or more traumatic events where they felt that their life or someone else’s was under threat, or that they or others were going to be injured and where, at some stage, they felt helpless or terrified. It is the phenomenon of suddenly realizing that one is going to die or become seriously injured, accompanied by strong feelings of terror and/or helplessness, which produces the features of PTSD. These symptoms may appear soon after the event or at some time later (see Table 1).

Diagnostic criteria as set out in DSM-IV require symptoms to be present for 4 weeks or more before a diagnosis can be made, with problems emerging before this time being described either as ‘acute stress disorder’ or what are termed ‘adjustment reactions or disorders’. Not all people suffering from acute stress disorder, which requires a certain degree of post-traumatic dissociation to be present, go on to develop PTSD, and many later go on to develop PTSD without prior acute post-traumatic dissociation. If symptoms do not materialize before 6 months then a ‘delayed onset’ is said to have occurred (and these forms of PTSD are usually the more difficult ones to treat psychologically) and if the symptoms last for more than just 1 month, then the disorder is said to be ‘chronic’.

Symptoms

Re-experiencing

There are three types of symptoms with which PTSD sufferers present in differing combinations and at least one of each, and in some cases more, must be found before a diagnosis can accurately be made. The first group of symptoms are re-experiencing symptoms occurring as nightmares or disturbing dreams, unpleasant thoughts, emotions or physiological reactions to sights, smells, sounds or other cues reminding the patient or client of the original traumatic event or, less often, as the classic ‘flashback’ which, again, can occur in any one of a number of sensory modalities. At least one of these symptoms must occur if a diagnosis is to be made.

Avoidance

The second group are symptoms of behavioural or cognitive avoidance (avoiding people, places or activities that remind the client of the event or making efforts to try to avoid remembering or thinking about the traumatic event). There is often diminished interest in activities that the client used to enjoy before the event and sometimes there is a partial or complete inability to be able to remember some of the details surrounding the traumatic event. There is also a recent literature on the possibility of people experiencing post-traumatic symptoms following an event such as, for example, a road accident where there has been a loss of consciousness. Three symptoms of increased avoidance are required by DSM-IV.

Arousal

Thirdly, the changes that occur in the autonomic system after massive psychological trauma produce a number of symptoms of increased arousal. People typically report memory difficulties and difficulties in concentrating on, for example, the plot of a television programme or the thread of a novel. However, a number of other problems also occur, including sleeping difficulties, increased hypervigilance and startle responses and an increase in anger control problems. These latter problems are, again, extremely difficult to treat and often require additional psychological treatment even after the nightmares and avoidance have abated. DSM-IV requires at least two symptoms of increased arousal if diagnostic criteria are to be satisfied.

Impairment

The final requirement is that the patient or client must be experiencing substantial and significant impairment in one or more areas of functioning (see Table 1).
areas of their life as a result of the problems that they are experiencing following their exposure to trauma. These problems may be occurring in their work, home lives, relationships, leisure activities or, indeed, in all the aspects of their post-traumatic life.

Theories of PTSD

Psychobiological theories of PTSD are discussed on pages 221–224.

Cognitive theories of PTSD

Why cognitive theories are necessary: an early psychological formulation of PTSD derives from Mowrer’s two-stage theory. In the first stage, a previously neutral stimulus, perhaps a car of a certain make and colour, acquires the ability to arouse fear and anxiety as the result of a traumatic incident occurring which has involved a car of that colour and make. The second stage involves the victim learning that if they avoid cars with these characteristics, the post-traumatic responses otherwise evoked will be reduced. This theory relies on two basic theories introduced in the first few weeks of undergraduate psychology courses, namely the processes of classical and operant conditioning. However, conditioning theory breaks down when one observes that if the sufferer merely confronts the feared object time after time there is no reduction in strength and intensity of symptoms. This is partly because there is no simple association between just one simple type of stimulus (a car) and one type of response (extreme fear). Manifold other variables are, of course involved such as the time of day, the lighting, the weather conditions, the sound of tyres, glass and metal, the bodily sensation of the impact, the smell of fuel, the taste of blood or whatever. Foa and Kozak introduced the helpful concept of a ‘fear network’ involving not only all of the above variables but also incorporating the thoughts, emotions and physiological sensations of the trauma victim. In order to achieve full resolution, therapy must involve re-exposure to as many elements of the network as possible, paying particular attention to the role of cognitions and cognitive responses, which are often the key to symptom maintenance.

Developments in cognitive theory of PTSD: Brewin et al. have produced an extremely helpful theoretical account of how the phenomena observed in PTSD might result in an imbalance between two putative forms of memory which they describe as situationally accessible memory (SAM) and verbally accessible memory (VAM). They argue that flashbacks are accounted for by all the situational (visible, audible, tactile, olfactory, gustatory, etc.) elements of the traumatic memory being recorded in SAM and that, for resolution to occur, these elements must be connected to the verbal and cognitive elements accessible through VAM. Flashbacks, they argue, result from dissociation between the two types of psychological information that have been encoded in each store.

Ehlers and Clark developed Clark’s influential model of panic into a theory which posits that PTSD results from the patient processing the memories of their past trauma such that they feel that they continue to be under serious threat. The similarity between their theory and Brewin’s is that they, too, see the process of recording material in autobiographical memory as having been disturbed by strong associative memory and poor elaboration. Ehlers and Clark see PTSD as being maintained by a number of subconscious cognitive strategies involving, for example, cognitive avoidance. It is a classic phenomenon that thought suppression serves only to increase the frequency and intensity of the memory being suppressed (see, for example, Shiperd and Beck7) rather than the opposite. Try not to think of a yellow hippopotamus for a few moments and this phenomenon will become clear!

The other element of Ehlers and Clark’s theory that is important, however, is that it stresses the importance of beliefs. It was Janoff-Bulman who initially proposed that it is the shattering of previously held beliefs and assumptions (about personal safety, the honesty and reliability of others, etc.) that is the most significant effect of trauma and that the task of post-trauma therapy is to help the sufferer to rebuild or modify those beliefs. Cognitive theory holds that it is the persistence and strength of victims’ negative beliefs and schemas about themselves, the world and others that predicts the subsequent persistence of PTSD. All of the above elements are summarized in Table 2.

Cognitive treatments for PTSD

The primary recommended psychological treatments for PTSD are cognitive behaviour therapy (CBT) and eye movement desensitization and reprocessing (EMDR), both cognitively based treatments (see Table 3).11

Table 2

Cognitive elements in the origin and maintenance of PTSD

- Classical and operant conditioning responses
- Fear networks
- Emotional processing
- Dissociation between different types of memory
- Poor elaboration
- Cognitive avoidance
- Negative beliefs and schemas

Table 3

Examples of cognitively based treatments for PTSD

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<thead>
<tr>
<th>Cognitive therapy, focused on:</th>
<th>Eye movement desensitization and reprocessing</th>
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<tbody>
<tr>
<td>Exposure to intrusive thoughts and images, especially ‘hot spots’</td>
<td>Desensitization to recurrent images and thoughts</td>
</tr>
<tr>
<td>Challenging of underlying and maintaining beliefs, assumptions and schemas</td>
<td>Installation of adaptive alternative cognitions</td>
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Table 3
CBT has traditionally been carried out by clinical psychologists and behavioural nurse therapists, but is increasingly now also being taught to psychiatrists. Building upon the cognitive theories for PTSD described above, CBT involves relaxation training, cognitive and in vivo exposure and, most importantly, cognitive processing and restructuring with the aim of modification of underlying beliefs and thoughts and the reduction of cognitive avoidance strategies.

EMDR involves imaginal therapeutic exposure to as much as possible of the material encoded within the fear structure achieving both in-session and between-session reduction and habituation of the fear response together with substituting unhelpful self-referent cognitions and beliefs with ones that are more adaptive and which will help the client to achieve the goal of post-traumatic growth.

Conclusion

Psychological processes, and in particular cognitive processes, have a key role in the development and maintenance of PTSD. By understanding current theorizing about these processes, clinicians may be helped to appreciate the crucial role of cognitive treatments in the amelioration and hopeful resolution of the very distressing and disabling symptoms that develop in those unfortunate enough to have been exposed to severe psychological trauma.

REFERENCES


FURTHER READING

