

Information Handout

Professional Version | US English

Properties of Trauma Memories



Description

People who have experienced trauma report a wide range of distressing symptoms, many of which are related to the properties of their trauma memories. Helping survivors of trauma to understand these memory properties can help to normalize their experiences, reduce catastrophic appraisals of their memory symptoms (e.g. “I’m going mad”), and prepare them for the ‘memory processing’ elements of trauma-focused therapies.

Important properties of trauma memories include:

- **Involuntary recall.** Although ordinary memories can be subject to involuntary recall, trauma memories are often deliberately avoided and so more likely to be re-experienced involuntarily. This is partly maintained by the way that trauma memories have been encoded and stored, which makes them prone to involuntary recall as a result of perceptual cues that resemble those present at the time of the trauma (Ehlers & Clark, 2000), and partly due to the individual’s attempts to suppress their memories which can lead to an unintended rebound effect (Ehlers & Clark, 2000; Wegner, 1994).
- **Nowness.** A sense of the traumatic event happening in the present moment. Unwanted memories of a trauma exist on a continuum from knowing that the event happened in the past, to feeling as though it is happening again in the present moment. Unlike standard (episodic) memories, stronger versions of re-experiencing are not accompanied by an awareness that the content of the memory is a past event (Ehlers, Hackmann & Michael, 2004). The word ‘nowness’ is sometimes used to describe this phenomenon (Brewin, 2015; Ehlers, Hackmann & Michael, 2004). ‘Nowness’ is observed in children with PTSD (McKinnon, Nixon & Brewer, 2008) and is a property which distinguishes involuntary memory in PTSD from the kinds of involuntary memories reported by people who are depressed (Birrer, Michael & Munsch, 2007; Reynolds & Brewin, 1998).
- **Predominance of sensory representations.** People suffering from post-traumatic stress disorder frequently report that the sensory aspects of their memories are very distressing. For example, they might report seeing an unpleasant expression that was on the face of their attacker, hearing sounds that were present at the time of their road traffic accident, or smelling the deodorant that their attacker wore. The sensory aspects of the memory are sometimes experienced in the absence of other parts of the memory ‘story’ (Van Der Kolk, 1994; Ehlers & Steil, 1995; Ehlers, Hackmann & Michael, 2004). There is emerging evidence that some patients with PTSD who experienced pain at the time of their trauma re-experience the same pain in the form of flashbacks when reminded of their trauma (McDonald et al., 2018; Whalley, Farmer & Brewin, 2007).
- **Fragmentation.** Some accounts of post-traumatic stress disorder (PTSD) have reported that when people who have experienced trauma are asked to describe what happened to them, their narrative can be ‘fragmented’. Evidence regarding the fragmentation of narratives is somewhat contentious (e.g. Rubin et al., 2016; Bedard-Gilligan, Zoellner & Feeny, 2017), but there is some evidence supporting the fragmentation position (Brewin et al., 2016). This fragmentation can be in the form of missing parts of the narrative, or difficulty in describing it verbally, which can affect the client’s appraisal of an event. For example, a client could be ashamed of how they acted during a traumatic event, because they do not recall how they were coerced to do so (Ehlers, Hackmann & Michael, 2004).

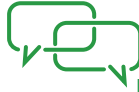
Description

- **Vividness and immutability.** Trauma memories can be startlingly clear, even many years after the event – in a dissociative flashback, the client may even lose all awareness of their present surroundings (Blix et al, 2020; Ehlers, Hackmann & Michael, 2004). Intrusive trauma memories are ‘unchanging’ in that they fail to incorporate new information. For example, the perpetrator might have died since the event, but this is not reflected in the memory (Ehlers & Clark, 2000), or the client may feel a strong sense of guilt, despite having subsequently discovered that they weren’t to blame (Ehlers, Hackmann & Michael, 2004).
- **Re-experienced during the day or night.** During the day, trauma memories can be experienced as flashbacks or unwanted memories. While asleep, traumatic memories – or themes associated with them – may be retrieved and re-experienced in the form of nightmares.
- **High levels of emotion.** Trauma memories are often accompanied by high levels of emotion. This might include replays of emotions that were felt at the time of the trauma (e.g. feeling paralyzed with fear when I have a flashback), or emotions accompanying post-traumatic appraisals (e.g. a sense of shame when I think “I should have fought back”). These emotional reactions can also be observed in the phenomenon of “affect without recollection”, wherein an individual may re-experience emotions relating to a traumatic event, without recalling it (Ehlers & Clark, 2000).

One influential theory of trauma memory proposes that under normal circumstances, sensory aspects of a memory (e.g. sights, sounds, smells) and contextual aspects (e.g. time, place, situation, context) would be encoded at the same time and stored as a coherent memory. However, during the heightened emotion of a trauma, the brain regions which process memory – particularly the hippocampus – do not operate as effectively. The hippocampus usually ‘stitches together’ memories, but aberrant hippocampal function prevents memories from being properly contextualized. As a result, the sensory and contextual aspects of an event are stored incorrectly, leading to them being re-experienced. (Brewin, Gregory, Lipton, Burgess, 2010). *Properties Of Trauma Memories* is an illustrated information handout which describes these unique aspects of trauma memory. It is designed to help clients and therapists to explore client’s experiences of their trauma memories.

Instructions

Suggested Question



Psychologists have found that memories of traumatic events often have some properties that make them different from normal memories, and that this is why trauma memories can be so distressing. As a first step in managing these memories it can be helpful to learn about these qualities. Would you be willing to look at some of these properties of trauma memories with me, and to think about whether any of them could apply to your memories?

References

- Bedard-Gilligan, M., Zoellner, L. A., & Feeny, N. C. (2017). Is trauma memory special? Trauma narrative fragmentation in PTSD: Effects of treatment and response. *Clinical Psychological Science, 5*(2), 212-225.
- Birrer, E., Michael, T., & Munsch, S. (2007). Intrusive images in PTSD and in traumatised and non-traumatised depressed patients: A cross-sectional clinical study. *Behaviour Research and Therapy, 45*(9), 2053-2065.
- Blix, I., Birkeland, M. S., & Thoresen, S. (2020). Vivid memories of distant trauma: Examining the characteristics of trauma memories and the relationship with the centrality of event and posttraumatic stress 26 years after trauma. *Applied Cognitive Psychology, 34*(3), 678-684.
- Brewin, C. R. (2015). Re-experiencing traumatic events in PTSD: New avenues in research on intrusive memories and flashbacks. *European Journal of Psychotraumatology, 6*(1), 27180.
- Brewin, C. R. (2016). Coherence, disorganization, and fragmentation in traumatic memory reconsidered: A response to Rubin et al. (2016). *Journal of Abnormal Psychology, 125*(7), 1011–1017.
- Brewin, C. R., Gregory, J. D., Lipton, M., & Burgess, N. (2010). Intrusive images in psychological disorders: characteristics, neural mechanisms, and treatment implications. *Psychological Review, 117*(1), 210.
- Ehlers, A., & Clark, D. M. (2000). A cognitive model of posttraumatic stress disorder. *Behaviour Research and Therapy, 38*(4), 319-345.
- Ehlers, A., Hackmann, A. & Michael, T. (2004), Intrusive re-experiencing in post-traumatic stress disorder: Phenomenology, theory, and therapy. *Memory, 12*(4), 403-415.
- Ehlers, A., & Steil, R. (1995). Maintenance of intrusive memories in posttraumatic stress disorder: A cognitive approach. *Behavioural and Cognitive Psychotherapy, 23*, 217-249.
- Rubin, D. C., Berntsen, D., Ogle, C. M., Deffler, S. A., & Beckham, J. C. (2016). Scientific evidence versus outdated beliefs: A response to Brewin (2016). *Journal of Abnormal Psychology, 125*(7), 1018–1021.
- Macdonald, B., Salomons, T. V., Meteyard, L., & Whalley, M. G. (2018). Prevalence of pain flashbacks in posttraumatic stress disorder arising from exposure to multiple traumas or childhood traumatization. *Canadian Journal of Pain, 2*(1), 48-56.
- McKinnon, A. C., Nixon, R. D., & Brewer, N. (2008). The influence of data-driven processing on perceptions of memory quality and intrusive symptoms in children following traumatic events. *Behaviour Research and Therapy, 46*(6), 766-775.
- Reynolds, M., & Brewin, C. R. (1998). Intrusive cognitions, coping strategies and emotional responses in depression, post-traumatic stress disorder and a non-clinical population. *Behaviour Research and Therapy, 36*(2), 135-147.
- Wegner, D. M. (1994). Ironic processes of mental control. *Psychological Review, 101*(1), 34.
- van der Kolk, B. A., Ffischer, R. (1995). Dissociation and the fragmentary nature of traumatic memories: Overview and exploratory study. *Journal of Traumatic Stress, 8*, 505-525.
- Whalley, M. G., Farmer, E., & Brewin, C. R. (2007). Pain flashbacks following the July 7th 2005 London bombings. *Pain, 132*(3), 332-336.

Properties Of Trauma Memories

Memories of traumatic experiences often have special properties that make them different from ordinary memories.



Involuntary

Trauma memories often come to your mind against your will, even when you try **not** to think about what happened. You might find that they are triggered automatically by things around you which remind you of the trauma.



Nowness

When you have an unwanted memory of your trauma, it can feel as though the events are happening **right now in the present moment**. Some trauma memories are so strong that you might temporarily lose touch with where you are. Psychologists call this 'nowness'.



Sensory

Trauma memories are powerful and can be experienced in any of your senses. You might see, hear, smell, or taste the events happening again. You might experience feelings in your body that you felt at the time. You may even re-experience pain that you felt during the trauma.



Fragmented

Ordinary memories usually have a beginning, a middle, and an end. In contrast, trauma memories are sometimes fragmented. Instead of remembering the whole story, it is common to have unwanted memories of the worst parts.



Vivid & unchanging

Ordinary memories tend to fade with time – you might remember an overview of what happened, but you forget the details. Many people who have experienced trauma find that their memories don't fade or change, even after many years.



During day or night

Trauma memories can be experienced as unwanted 'flashbacks' during the day, or as nightmares while you sleep.



Emotional

When your trauma memories are triggered, you might feel the same strong emotions that you felt at the time of the trauma, such as fear, terror, shame, or disgust. Re-experiencing your trauma memories can also trigger strong new emotional responses.

Psychology Tools develops and publishes evidence-based psychotherapy resources. We support mental health professionals to deliver effective therapy, whatever their theoretical orientation or level of experience.

Our digital library encompasses information handouts, worksheets, workbooks, exercises, guides, and audio skills-development resources.

Our tools are flexible enough to be used both in-session and between-session, and during all stages of assessment, formulation, and intervention. Written by highly qualified clinicians and academics, materials are available in digital and printable formats across a wide range of languages.



Resource details

Title: Properties Of Trauma Memories
 Type: Information Handout
 Language: English (US)
 Translated title: Properties Of Trauma Memories

URL: <https://www.psychologytools.com/resource/properties-of-trauma-memories>
 Resource format: Professional
 Version: 20230721
 Last updated by: JP

Terms & conditions

This resource may be used by licensed members of Psychology Tools and their clients. Resources must be used in accordance with our terms and conditions which can be found at: <https://www.psychologytools.com/terms-and-conditions/>

Disclaimer

Your use of this resource is not intended to be, and should not be relied on, as a substitute for professional medical advice, diagnosis, or treatment. If you are suffering from any mental health issues we recommend that you seek formal medical advice before using these resources. We make no warranties that this information is correct, complete, reliable or suitable for any purpose. As a professional user, you should work within the bounds of your own competencies, using your own skill and knowledge, and therefore the resources should be used to support good practice, not to replace it.

Copyright

Unless otherwise stated, this resource is Copyright © 2023 Psychology Tools Limited. All rights reserved.