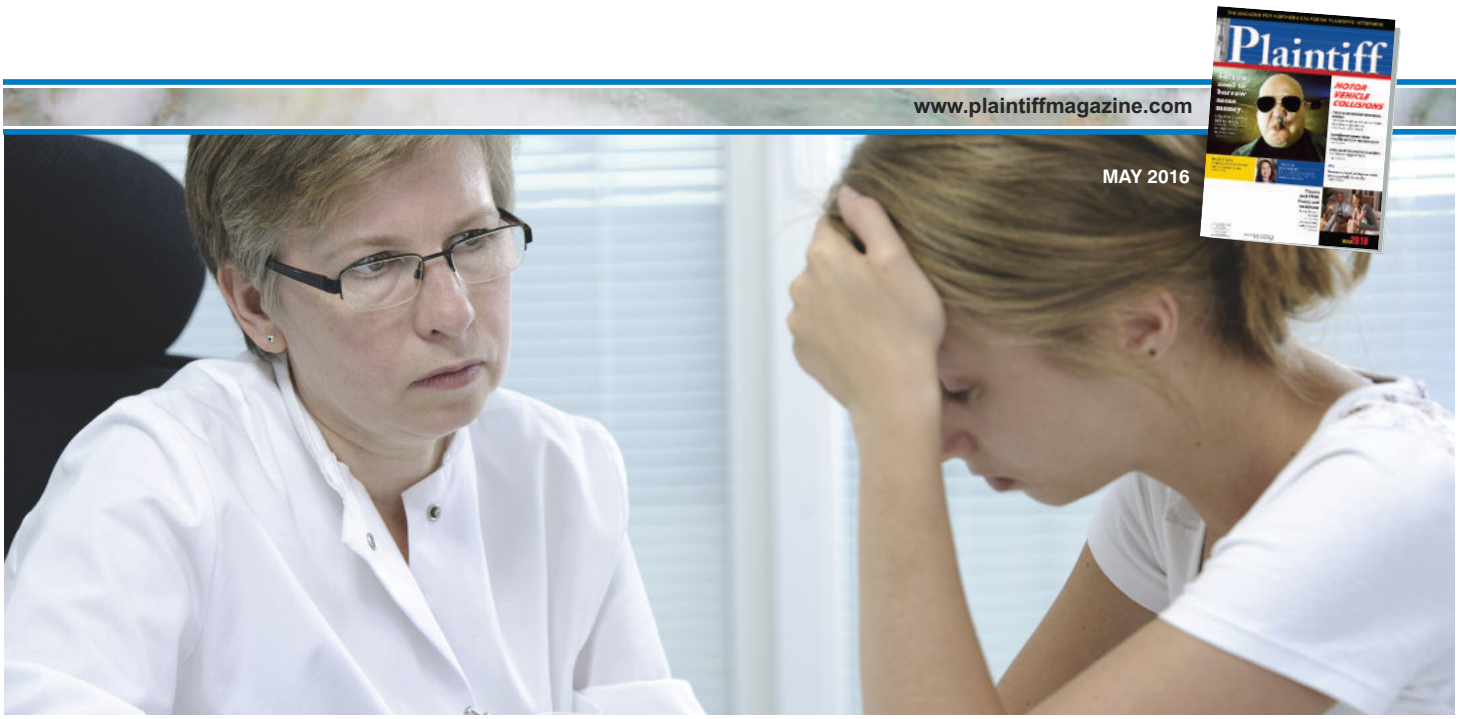

Trauma and PTSD: Theory and treatment

Before you ask a jury to award damages for PTSD or other emotional distress, you should understand the basics of trauma

By Tracy Artson, Ph.D.

The event: A young woman comes to therapy following a boating accident in which the outboard motor severs her leg. Her friends lift her on board applying a tourniquet, as they make their way to shore.

The emotional memory: Falling into the water. As the boat is turning to pick her up, she realizes she is too near to the motor. She cannot get away. She feels panicked, trapped and knows something bad is going to happen. She remembers dog paddling. The motor hits her leg. She is keenly aware as she watches the blood surge and feels the severing of her limb. As she is painfully pulled onto the boat, she is petrified by the fear and panic in her friends' eyes.

The body's physiological response: She falls into the water and is in a heightened state of alert. Her vision narrows as she *orients* to the danger. Her heart rate increases; her blood flow constricts and moves to her extremities. When she realizes the motor is going to strike her, her body moves into flight. When the motor slams her leg, she is still in fight mode, yelling for help. Simultaneously, at the moment of impact, her body goes into shock. Once on board, her body collapses (freeze response) as she falls in and out of consciousness. Her muscles shake; she cannot move her body. Her body enters conservation mode.

Multifaceted trauma

The trauma, in this case, is multifaceted. The accident itself and the multiple surgeries, nerve pain, phantom limb pain and sensations, reactions from friends, adjustment to her disability, the lawsuit that re-traumatizes her – defines a single incident trauma. Yet, this is not the complete story. Traumatic events do not occur in a vacuum. They are set within a context across generations of geopolitical strife, family dynamics, individual temperament, psychological vulnerabilities and resilience, as well as medical conditions and treatments.

It is significant that her family survived the Armenian genocide and the migration to a new country. Trauma left its mark as family members attempted to cope with alcohol abuse, depression and emotional dysregulation. This woman suffered, the result of the transmission of family trauma with childhood abuses (interpersonal traumas). When this current traumatic experience occurs (single incident trauma), it triggers the memories of past traumas (complex trauma). As she struggles to cope and manage the emotional and physical pain brought on by the trauma, she self-medicates with alcohol and drugs.

Defining trauma

According to the American Psychological Association (www.apa.org/topics/trauma) trauma is defined as an "emotional response to a terrible event;" but trauma entails so much more than the emotional response. Trauma is a global assault on the body, on one's identity and on one's ability to construct meaning.

Trauma is not the event, but the reaction to the event. "The symptoms have their origin in the entire body's response to the original trauma." (Van Der Kolk, B. (2014). The Body Keeps Score: Brain, Mind and Body in the Healing of Trauma, New York, New York: Penguin Group. pp. 11.)

In other words, when trauma occurs, our entire system reacts, affecting the wiring of our brains, our autonomic nervous system, the functioning of our organs, blood oxygen levels, hormone and immune systems, synaptic connections and neural pathways down to a molecular level. Current epigenetic research demonstrates how unspoken transgenerational trauma makes its mark in the body even among third-generation survivors.

(See Giladi, L & Bell, T., (2013). *Psychological Trauma*. And, Yehuda, R. et al. (2015). Holocaust Exposure Induced Intergenerational Effects on *FKBP5* Methylation. *Biological Psychiatry*.) Repeated experiences of trauma are etched into our brains and specific neurological pathways. Unless healed, the experience of trauma will make its way to another generation.

• ***Single incident trauma*:** Single incident trauma entails the exposure to single traumatic experiences; car accidents, natural disasters, crimes and pregnancy/birth traumas are examples of single incident trauma.

• ***Complex trauma*:** Complex trauma involves multiple traumas, oftentimes originating in childhood. Examples of complex trauma are neglect and verbal, sexual, and physical abuse of childhood (including bullying). Other examples include war trauma, geo-political unrest, slavery (trafficking), cultural dislocation (refugees), transgenerational trauma, and the re-traumatization of survivors caused by a current and often unrelated event.

Stressors versus trauma

When a stressor occurs, the body's biological response is identical to that of a traumatic event. That is, the physiological reaction and sequence is uniform. First, we orient to the danger by turning our heads in its direction (arrest response and orienting). Our vision narrows and becomes hyper-focused on the source of danger. Simultaneously, we exhibit a startle response that prepares us for action (sympathetic arousal) and, if the threat is significant, we involuntarily respond by going into flight or fight mode. Sympathetic arousal raises blood pressure and heart rate. Blood flow moves to the extremities so we may escape. When we cannot run, we fight.

When does stress convert to trauma? Trauma occurs, at any point along the stress/threat response cycle when it is *disrupted or thwarted*. A thwarted response cycle inevitably leads to trauma. It is the actual physical or perceptual experience of inescapable circumstances, immobility, helplessness and fear that inevitably lead to symptoms of hyperarousal such as extreme agitation, angry outbursts, anxiety, reliving, hypervigilance or/and collapse such as depression, numbing, depersonalization and dissociation. To move from one extreme state to another is common. The switch becomes stuck in on or off. All creativity, flexibility, curiosity, self-regulatory and executive functioning is muted and the ability for human connection is deeply compromised.

Trauma and PTSD

The definition and evaluation of *trauma* is more nuanced, complex and less easily categorized than the definition and evaluation of *PTSD*. All PTSD involves trauma, however, not all trauma develops into PTSD as it is defined in the Diagnostic and Statistical Manual — 5th Edition. The DSM-5 diagnosis of PTSD requires that specific criteria be met (American Psychiatric Association, 2013):

1. Exposure to actual or threatened death, serious injury or sexual violence.
2. Presence of at least one intrusive symptom associated with the traumatic event(s).
3. Persistent Avoidance of stimuli associated with the traumatic event.
4. Negative Alterations in cognitions and mood associated with the traumatic event:
   - Inability to remember (dissociative amnesia)
   - Negative beliefs about oneself
   - Distortions in cognition that lead to self-blame
   - Persistent negative emotional state (fear, horror, anger)
   - Markedly diminished interest or pleasure in activities
   - Feelings of detachment or estrangement from others
   - Inability to experience positive emotions
5. Marked alterations in arousal and reactivity:
   - Irritability and Angry outbursts.
   - Reckless or self-destructive behaviors
   - Hypervigilance
   - Exaggerated Startle Response
   - Problems with Concentration
   - Sleep Disturbance

Trauma without PTSD

Additionally, one can experience trauma and have one's life turned upside down without meeting the criteria for PTSD in the DSM-5.

Even though DSM-5 removed the criterion of helplessness and fear at the time of the traumatic event, and even when the event is not clearly or consciously recalled, it does not mean that the trauma is not stored in the body. Moreover, the details of the trauma later learned from other sources may form a visual image that loops and becomes a source of re-traumatization.

All traumas, including PTSD, involve the presentation of one or more stressors that emerge out of either a single incident trauma or complex trauma, which entails multiple, enduring or prolonged periods of exposure (developmental and attachment traumas in childhood). Since trauma is not the event itself but the reaction to the event, any incident or experience has the potential of creating traumatic reactions.

Complex trauma

Traumatic experiences in infants and children negatively correlate with their neurodevelopment (Perry, B. et al. (1996). Childhood Trauma, the Neurobiology of adaptation and Use-dependent Development of the Brain: How States become Traits. *Infant Mental Health Journal*).

Indeed, childhood trauma can be damaging but may not grow into full PTSD symptoms. The narrowing of sensory and interpretive abilities places trauma victims at risk for further trauma. Poor decision-making in setting personal boundaries is common. If a victim blames himself, he may override his intuition, and reject it, thereby placing himself in unsafe traumatizing situations. His growing mistrust of people generalizes and affects his ability to establish and maintain caring relationships. His attempts to ameliorate symptoms caused by trauma with self-destructive behaviors such as cutting,

sexual addictions, drugs and alcohol can increase impulsive decisions that potentiate an already bad situation.

The psychological "eggshell" plaintiff

Early childhood neglect and abuse increases the risk of developing PTSD in adulthood for those exposed to later traumas (Journal of Trauma Stress). In legal terms, the eggshell plaintiff who is in a tort or criminal case for a current trauma may not be held responsible for their fragility caused by past trauma. This fragility is researched most clearly in soldiers and veterans. The risk of developing PTSD for soldiers with childhood histories of family alcoholism, physical abuse and neglect are 25 percent higher than the 10 percent in the civilian population with similar histories (Blosnich, J. (2014). Veterans Affairs Pittsburgh Healthcare System).

Assessing trauma is further complicated due to how an individual defines trauma, and the ways symptoms unfold over time. For example, soldiers, linguists and other government contractors serving overseas in combat zones may develop trauma-related symptoms while deployed (Combat Stress Reaction) or months to years after returning stateside (Delayed Onset).

Countless times I ask patients, "Have you ever experienced any trauma?" The reply is "No!" I may prod, "So, tell me about your background." Three sessions into the therapy the patient reports some small but curious detail. Upon further inquiry, a history of trauma unfolds. The patient is not being deceitful nor has s/he repressed or suppressed the memory (although that can occur). More likely they do not define their experience in terms of "trauma." People will rationalize. It was not a natural disaster or a brutal attack. "Yeah, my father would hit us but only when we acted out," or, "I was really close to my mother," followed by "She used to tell me I would never amount to anything but only after drinking at night." Victims of geopolitical trauma may minimize their experience by stating, "Well, everyone was living in the same condition. It was normal."

Treating trauma and PTSD

Treating trauma, including PTSD, changes the way mental health professionals view the diagnostic system. The various and more subtle types of trauma may be missed, and diagnoses such as Generalized Anxiety Disorder, Agoraphobia, Panic Disorder, Borderline Personality Disorder, Narcissistic Personality Disorder, Oppositional Defiant Disorders, and Major Depression disguise the etiology of trauma, and consequently, the treatment. Trauma is not a disease or a disorder; rather, it is a reaction to a dreadful life event. When trauma is reprocessed in therapy and healing occurs, the majority of symptoms often disappear or decrease significantly.

Trauma, by and large, is located in the right hemisphere of the brain. Research by Scott Rauch, M.D. and Bessel Van Der Kolk, M.D. used functional magnetic resonance imaging (fMRI) to visualize how the brain is activated by memories, sensations, emotions and beliefs when reminded of past events, traumatic and non-traumatic. The results revealed that the largest area of activation, when reminded of the trauma, occurred in the limbic area (emotional/ survival), specifically the amygdala (memory storage). This activation elicits all of the physical changes that provoke the fight or flight reaction, or collapse.

Significantly, Broca's area, a speech center on the left side of the brain goes "offline" when the flashbacks are triggered. A therapist who engages solely in talk therapy (left hemisphere dominated) may treat a person with trauma for years while the patient continues to feel flooded or dissociative by life events. Indeed, trauma is held in the body in pre- or non-verbal form. The body, oftentimes, provides the therapist a "memory" of the trauma. For example: a woman who cannot recollect sexual abuse recalls a time, at five years of age, visiting her neighbor's house, and simultaneously experiences a strange sensation in her pelvic region. Insight-oriented therapy may help create associative networks of understanding and meaning, and may be used following or integrated into other therapies to help create a cohesive narrative but not without first addressing the body memory. Good trauma treatment requires an integrated, multi-pronged, client-centered approach for healing trauma.

Specific trauma treatments

•Eye Movement, Desensitization and Reprocessing (EMDR)

The American Psychiatric Association, the World Health Organization and the Veterans Administration endorse EMDR therapy for its efficacy in treating trauma and PTSD. EMDR is utilized for single incident and complex trauma. EMDR targets and *integrates* the traumatic material thereby re-wiring the felt sense of the trauma. It addresses the memory through feelings, body sensations, and negative self-beliefs associated with the memory and reprocesses through the trauma until it changes from a subjective triggering memory located in the present to an objective one that resides in the past. Clients are not re-traumatized by needing to provide the details of their trauma, and may reprocess the trauma silently while guided by the therapist.

•Cognitive Behavioral Therapy (CBT): Exposure Therapy

Clients are repeatedly exposed to the details of the trauma or to the nightmares. The idea of voluntarily engaging in this activity may be overwhelming for participants. Symptoms may intensify before they begin to abate. "In addition, although exposure therapy is highly successful in reducing the key symptoms associated with PTSD, such as intrusive memories, it does not address other issues such as feelings of detachment from others, excessive anger and feelings of alienation" (National Council on Disability,

March 4, 2009). *Although CBT has proven effective for phobias, it has not fared as well for traumatized individuals with PTSD resulting in high dropout rates and significant adverse reactions* (Schnurr, et al., (2007). "Cognitive Behavioral Therapy for Posttraumatic Stress Disorders in Women," *JAMA* 297, no. 8:820-30. Bradley, R, et al., (2005). "A Multidimensional Meta-Analysis of *of Psychiatry*, 162, no. 2: 214-27).

•Somatic therapies

Somatic Experiencing (Peter Levine, Ph.D.) and Sensorimotor Psychotherapy (Pat Ogden, Ph.D. & Janina Fischer, Ph.D.) are two leading somatic therapies. Since trauma is imprinted and carried in the body, it makes sense that the body is the vehicle for healing. Somatic treatments track and explore body sensations, movements, gestures and postures and other non-verbal cues as a venue for creating greater internal awareness of emotions/sensations as they relate to the body. The focus is on creating safety, stabilization, grounding, self-regulation, trust and trauma repair.

Neurofeedback

Research into the efficacy of Neurofeedback supports its use with stress-related conditions, including PTSD. This form of treatment helps to calm the fear responses and increases the ability to self-regulate. (Fisher, S. (2014). Neurofeedback in the treatment of developmental Trauma: Calming the Fear-Driven Brain. New York: Norton; and Peninston, E.G., and Kulkosky, P.J. (1991). Alpha-Theta Brainwave Neuro-feedback Therapy for Vietnam Veterans with Combat-Related Post-traumatic Stress Disorder," *Medical Psychotherapy*, Vol.4: 47-60).

• Yoga and guided mindful awareness/ meditation

Recent research reinforces the benefits of Yoga as a viable, supplementary therapy. It is one way to increase emotional self-awareness and Heart Rate Variability (HRV), which is abnormally low in trauma subjects. Heart rate variability is an important factor in psychological and physical health. Guided meditation also uses slow and steady breaths to regulate emotions and calm the nervous system. (See Van Der Kolk, B., et al. (2014). Yoga as an adjunctive treatment for posttraumatic stress disorders: A randomized controlled trial. *Journal of Clinical Psychiatry*, 75, e559-e565; and Johnston, J. et al., (2015). Yoga for Military Service Personnel with PTSD: A Single Arm Study. *Psychological Trauma: Theory, Research, Practice and Policy:* Vol. 7, No. 6 555-562).

• Healing communities and socialization

Creating connection and compassion through music, theater, art, animal therapy and writing is a vital part of the healing process. Being able to put wordless experiences into a narrative decreases a sense of isolation, provides a method of expression in which a community that has experienced trauma, bears witness. The arts help survivors begin to create a relationship with their bodies and mind, reconfiguring and integrating a new identity.


Artson

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