Online supplement for Bar-Haim et al., Intrusive Traumatic Re-Experiencing: Pathognomonic of the Psychological Response to Traumatic Stress. Am J Psychiatry (doi: 10.1176/appi.ajp.2020.19121231)

Definitions

Intrusive memory: Recurrent, involuntary, vivid, unwanted, and intrusive recollection of a traumatic event that is experienced as occurring again in the present, as if happening in the here-and-now in the form of vivid intrusive images, memories, or other sensations. Unlike flashbacks and nightmares (see below), intrusive memories are typically more static in nature and are not experienced as "live" immersion in the past traumatic event. Nonetheless, intrusive traumatic memories present uncontrolled and unwanted representations that overpower one's natural stream of thought.

Flashback: A sudden, disturbing, and highly vivid memory of a past traumatic incident. Flashbacks are movie-like experiences in which the trauma is re-lived and is either super-imposed on reality or takes over reality completely.

Posttraumatic nightmare: A vivid disturbing dream that is directly related to the traumatic event(s) and results in feelings of extreme fear, horror, distress, or anxiety that often awake the dreamer. Importantly, isolated nightmares, which are recurring dreams that bring extreme terror or anxiety, that do not directly relate to a specific traumatic event may be classified as standard Nightmare Disorder.

Severity of re-experiencing: flashbacks, intrusive memories, and posttraumatic nightmares exist on a continuum of severity reflecting frequency, vividness, and the degree of awareness of one's present surroundings. *Frequency* can range from rare, at the milder end to multiple times a day at the severe end. *Vividness and degree of awareness* of present surroundings are somewhat intertwined and can range from full recognition of the unreal nature of the intrusive memories/flashbacks/nightmares to a complete loss of awareness of present surroundings.

Triggers: Triggers of re-experiencing can be many (visual, auditory, olfactory, internal, external, abstract symbols, specific objects). It is essential to distinguish between *triggers* of re-experiencing and *traumatic re-experiencing* proper. Re-experiencing is highly specific, invariable, and entails vivid perceptual content of the specific trauma(s) one had experienced. The specific memory is experienced as if in the moment whereas the trigger has no bearing in this process but initiating it.

Data on ITRED in Relation to PTSD

Table 1 provides a summary of key statistics on ITRED and PTSD in samples of treatment-seeking Israel Defense Force (IDF) war veterans, active duty combat-exposed IDF and US Army soldiers, and trauma exposed US and Australian civilian patients.

Treatment-Seeking Israel Defense Force (IDF) War Veterans

We examined ITRED- and PTSD-related characteristics in a sample of 1,826 consecutive cases of IDF veterans (*Mage*=35.72 years, *Range*=20-82), who approached the IDF's Unit for Treatment of Combat Stress and PTSD seeking treatment between the years 2006 and 2014. All veterans reported a combat/war-related trauma that complied with DSM-IV criterion A, and underwent a CAPS interview based on DSM-IV criteria[1] administered by trained clinicians with extensive experience in PTSD diagnosis and treatment. The "1, 2" rule[2] was applied to score the individual items of the CAPS and DSM-IV requirement of at least 1 re-experiencing, 3 avoidance, and 2 hyperarousal symptoms was applied to make a PTSD diagnosis. To make an ITRED diagnosis, the "1, 2" rule was applied considering only the re-experiencing symptoms: B1 - Repeated, disturbing, and unwanted memories of the traumatic event; B2 - Repeated, disturbing dreams of the traumatic event; and B3 - Suddenly feeling or acting as if the traumatic event(s) were actually happening again (as if you were actually back there reliving it). As can be observed in Table 1, 83.2% of the veterans met diagnostic criteria for PTSD. In contrast, 93.2% met criteria for ITRED. The data indicates that 98.9% of those diagnosed with PTSD also met ITRED criteria. Importantly however, 10.9% of the veterans who reported considerable intrusive re-experiencing symptoms and met ITRED criteria did not meet criteria for PTSD. Less than 1% of veterans could be diagnosed with PTSD but did not meet ITRED criteria when relying exclusively on symptoms B4 and/or B5 (i.e., Distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event (B4); Marked physiological reactions to internal or external cues that symbolize or resemble an aspect of the traumatic event (B5)).

War Exposed IDF and US Army Active Service Soldiers

We examined ITRED- and PTSD-related characteristics in a sample of 531 active duty IDF soldiers (*Mage*=20.17 years, *Range*=19-27, all male) constituting the maneuver component of a first-tier infantry brigade. These soldiers took part in 50 days of intense combat during operation Protective Edge in Gaza in 2014, and all reported at least one combat-related event that complied with DSM-IV criterion A. CAPS interviews applying the same diagnostic rules for PTSD and ITRED described above were conducted 4 months post-combat. Only 1.9% of the soldiers met full diagnostic criteria for PTSD. In contrast, 11.9% of the soldiers met criteria for ITRED reporting severe re-experiencing ITRED symptoms 4 months post-combat. The data indicate that 100% of those diagnosed with PTSD also met criteria for ITRED. However, 10% of the soldiers who reported considerable intrusive re-experiencing symptoms and met ITRED criteria did not meet criteria for DSM-IV PTSD.

We further examined ITRED- and PTSD-related characteristics in a sample of 4,227 US Army soldiers (*Mage*=26.12 years, *Range*=18-64, 95% male) deployed to Afghanistan and participating in the Army STARRS study (Army Study to Assess Risk and Resilience in Servicemembers).[3] All participants reported at least one combat-related event that complied with DSM-5 criterion A. Participants completed the PTSD Checklist for DSM-5 (PCL-5)[4] and were assigned a provisional PTSD diagnosis if DSM-5 requirement of at least 1 re-experiencing, 1 avoidance, 2 negative changes in thoughts and mood, and 2 hyperarousal symptoms was met. Each item rated as 2 = "Moderately" or higher was treated as a symptom endorsed. To make a provisional ITRED diagnosis one of the re-experiencing items 1 (Repeated, disturbing, and unwanted memories of the traumatic event), 2 (Repeated, disturbing dreams of the traumatic event), or 3 (Suddenly feeling or acting as if the traumatic event were actually happening again - as if you were actually back there reliving it) had to be endorsed. 5% and 9% of the soldiers met diagnostic criteria for PTSD 3-months and 9-months post deployment, respectively. ITRED criteria were met by 15% and 18% of the soldiers 3- and 9-month post deployment, respectively. In total, 91.3% and 92.6% of those diagnosed with PTSD also met criteria for ITRED at 3- and 9-month post deployment. However, 10.4% and 10.7% of the soldiers who reported considerable intrusive re-experiencing symptoms and met ITRED criteria at 3- and 9-month post-deployment, respectively, did not meet criteria for DSM-5 PTSD. Here too, less than 1% of veterans

could be diagnosed with PTSD without meeting ITRED criteria by relying exclusively on symptoms B4 and/or B5.

Trauma Exposed Civilian Patients

We examined PTSD- and ITRED-related characteristics in a sample of 987 survivors of either motor vehicle accidents or nonsexual assaults who were referred to the PTSD Unit at Westmead Hospital, Sydney, New South Wales, Australia (*Mage*=37.87 years, *Range*=18-71, 73.3% male). All patients experienced a trauma that complied with DSM-IV criterion A. CAPS-IV interviews were administered and scored as described above. 9.4% of the patients met diagnostic criteria for PTSD, 20.9% met criteria for ITRED. 86% of those diagnosed with PTSD also met ITRED criteria. However, 14.2% of the patients who met ITRED criteria did not meet criteria for PTSD. Unlike the military-related samples in which the utility of the B4 and B5 criteria was negligible, in this civilian sample, 13.9% of the patients could be diagnosed with PTSD without meeting ITRED criteria (i.e., relying exclusively on symptoms B4 and/or B5 in making the diagnosis).

We further examined PTSD- and ITRED-related characteristics in a sample of 384 trauma-exposed participants meeting criterion A who contacted the Trauma and PTSD Program of the Anxiety Disorders Clinic at Columbia University Medical Center between 2010 and 2019 (*Mage*=40.75 years, Range=18-77, 53.64% male). 202 participants were interviewed using CAPS-IV and 182 using CAPS-5. Diagnostic criteria for PTSD and ITRED were applied as described above. 71.6% of the sample met PTSD diagnostic criteria, whereas 76.3% met ITRED criteria. 96.4% of those diagnosed with PTSD also met ITRED criteria. However, 7.3% of the patients who met ITRED criteria did not meet criteria for PTSD. In this sample, 2.6% of the patients could be diagnosed with PTSD but did not meet ITRED criteria (i.e., relying exclusively on symptoms B4 and/or B5 in making the diagnosis).

References

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