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Posttraumatic intrusive symptoms across psychiatric disorders

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ABSTRACT

Reexperiencing symptoms are a key feature of posttraumatic stress disorder (PTSD). This study investigated the pattern of reexperiencing symptoms in non-PTSD posttraumatic disorders. This study recruited 1084 traumatically injured patients during hospital admission and conducted follow-up assessment 12 months later (N = 817, 75%). Twelve months after injury, 22% of patients reported a psychiatric disorder they had never experienced prior to the traumatic injury. One-third of patients with a non-PTSD disorder satisfied the PTSD reexperiencing criteria. Whereas patients with a non-PTSD disorder were more likely to experience intrusive memories, nightmares, psychological distress and physiological reactivity to reminders, only patients with PTSD were likely to experience flashback memories (OR: 11.41, 95% CI: 6.17–21.09). The only other symptom that was distinctive to PTSD was dissociative amnesia (OR: 4.50, 95% CI: 2.09–9.71). Whereas intrusive memories and reactions are common across posttraumatic disorders, flashbacks and dissociative amnesia are distinctive to PTSD.

Intrusive thoughts and memories are a key symptom of posttraumatic stress disorder (PTSD) (Brewin, 1998). Intrusions are characterized by involuntariness, being difficult to control, and being the source of distress (Berntsen et al., 2003; Clark and Rhyno, 2005). Most theories of PTSD place considerable emphasis on intrusions, and suggest that the reexperiencing nature of intrusions are particularly characteristic of PTSD (Brewin et al., 1996a; Ehlers and Clark, 2000). This aspect of reexperiencing in PTSD involves people feeling that they are reliving the traumatic experience in here and now. Cognitive models posit that PTSD is distinguished from other disorders by this reliving aspect of the trauma memories, which purportedly maintains the sense of current threat (Ehlers and Clark, 2000). Intrusions have been noted, however, across a number of clinical disorders, including obsessive compulsive disorder (Salkovskis, 1985), depression (Brewin, 1998), social phobia (Hackmann et al., 2000), and agoraphobia (Day et al., 2004). Intrusions have also been noted in non-clinical samples (Brewin et al., 1996b; Purdon and Clark, 1993), and many studies have found that stress or trauma is a frequent trigger for intrusions (Parkinson and Rachman, 1981; Sarason et al., 1996).

Various explanations have been offered for intrusive thoughts and memories. These include that (a) encoded memories are not sufficiently embedded in one's autobiographical memory base, and this leads to unintentional occurrences of these thoughts (Conway and Pleydell-Pearce, 2000), (b) certain events are encoded in fragmented and perceptually-based modes that lead to their subsequent intrusion into awareness (Brewin et al., 2010), (c) memories are unintentionally activated by internal or external triggers that were initially conditioned with encoded memory (Foa et al., 1989), (d) attempted thought suppression results in monitoring of the unwanted thought, which results in its increased intrusion into consciousness (Wenzlaff and Wegner, 2000), (e) thoughts that are consistent with immediate and emotionally salient concerns are more likely to intrude (Klinger, 1996), or (f) a thought may be so out of the realm of normally expected cognition that the person seeks an explanation for it, thereby leading to involuntary occurrences of it (Clark and Rhyno, 2005).

A common assumption across a number of these explanations is that trauma results in memories being encoded under conditions of high threat and arousal, which inherently predisposes them to poor integration into one's autobiographical memory, are highly represented in memory networks, often lead to suppression of the unwanted memories, and are highly dissonant with one's expected cognitions. One question that has not been addressed is the extent to which intrusive memories are simply characteristic of PTSD or are they common to the range of psychological conditions following trauma. There is convergent evidence that a range of disorders, other than PTSD, can develop after trauma (Brown et al.,

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2000; Bryant et al., 2010) (Koren et al., 2002; North et al., 1999; Schnyder et al., 2001; Shalev et al., 1998). This study investigated the extent to which intrusive memories are observed across the range of posttraumatic stress disorders or are unique to PTSD.

1. Method

1.1. Participants

Randomized week day admissions to five level 1 trauma centers across three states in Australia were recruited into the study between April 2004 and February 2006. The study was approved by the Research and Ethics Committee at each hospital. Individuals who met entry criteria were randomly selected using an automated, random assignment procedure, stratified by length of stay. This approach was adopted to ensure that we did not differentially recruit patients who had longer hospital stays because they may be more accessible. Inclusion criteria included hospital admission of greater than 24 h following traumatic injury; aged between 16 and 70 years; and could understand and speak English proficiently. Individuals were excluded if they had moderate or severe brain injury; were currently psychotic or suicidal; were non Australian visitors, or under police guard.

There were 1477 trauma patients who met inclusion criteria, and 1084 agreed to participate and completed the initial assessment (73%). Four hundred and thirty-seven (40%) experienced a mild traumatic brain injury (MTBI); MTBI was defined as a documented injury to the head, impaired consciousness for less than 30 min, posttraumatic amnesia of less than 24 h, and a Glasgow Coma Scale score in the range 13–15 (American Congress of Rehabilitation Medicine, 1993). Individuals who refused to participate in the current study did not differ from participators in terms of gender ($\chi^2 = 0.80$, df = 1, $p = .23$), length of hospital admission ($t(df = 1410) = 0.03$, $p = .88$), ISS ($t(df = 1419) = 1.1$, $p = .16$), or age $t(df = 1475) = 1.6$, $p = .14$).

At the 12-months follow-up assessment, 817 participants completed the assessment, representing 75% of the initial sample. Patients at the follow-up assessment did not differ from those who did not participate in terms of gender ($\chi^2 = 0.36$, df = 1, $p = .55$), length of hospital admission ($t(1095) = 1.86$, $p = .07$), marital status ($\chi^2 = 0.87$, df = 1, $p = .53$), or educational level ($\chi^2 = 0.01$, df = 1, $p = .96$). Drop outs were younger [35.44 ± 13.10 vs 38.79 ± 13.61) $t(1088) = 3.60$, $p = .001$)], and were more likely to have lifetime history of PTSD [18.9% vs 12.6%, ($\chi^2 = 6.66$, df = 1, $p = .01$], agoraphobia [19.3% vs 11.4%, ($\chi^2 = 10.83$, df = 1, $p = .001$], generalized anxiety disorder (GAD) [14.4% vs 8.7%, ($\chi^2 = 7.09$, df = 1, $p = .01$], and substance use disorder (SUD) [45.9% vs 36.5%, ($\chi^2 = 7.41$, df = 1, $p = .01$], than those who did participate.

1.2. Measures

The Mini-International Neuropsychiatric Interview (version 5.5; MINI) (Sheehan et al., 1998) was used to screen for psychiatric disorders. The MINI is a short, structured screening interview based on the DSM-IV and the ICD-10 classification of mental illness. We used the MINI to identify major depressive episode (MDE), panic disorder, agoraphobia, social phobia, obsessive compulsive disorder, generalized anxiety disorder, substance abuse and dependence. Lifetime PTSD was assessed using the MINI, but at 12 months postinjury PTSD was assessed using the Clinician Administered PTSD Scale-IV (CAPS-1V) (Blake et al., 1995). The CAPS is a structured clinical interview that assesses both the frequency and intensity of each PTSD symptom on a 4-point scale. We adopted the '1–2' scoring system of the CAPS, in which presence of a symptom was defined as at least a frequency score of 1 (at least once a week) and an intensity score of 2 (causing at least moderate distress) (Blake et al., 1995). A PTSD diagnosis is made when the individual reports experience of a traumatic stressor, at least one reexperiencing, three avoidance, and two arousal symptoms of at least one month duration, and causes impairment or significant distress. The CAPS possesses good sensitivity (0.84) and specificity (0.95) relative to the SCID PTSD diagnosis, and also possesses sound test-retest reliability (0.90) (Blake et al., 1995). The CAPS was used to assess the presence of all PTSD symptoms, and all responses were anchored to the traumatic injury that resulted in the hospitalization.

1.3. Procedure

After obtaining written informed consent, participants were assessed prior to discharge from each trauma center, an average of 7.2 days (±9.6) after injury. They completed the MINI during hospitalization to screen for lifetime prevalence of psychiatric disorders. Information regarding demographic, hospital admission, and injury-related factors were obtained from medical records. At 12 months after injury, participants were contacted by telephone and completed the CAPS assess current prevalence of PTSD related to the original traumatic injury and administered the MINI to screen for other current psychiatric disorders. Satisfaction of diagnostic criteria followed the prescribed timeframes stipulated in DSM-IV criteria (specifically, two weeks for MDE, a month for panic disorder and 6 months for GAD). All assessments were audio-recorded to ensure ongoing adherence to the protocol. Five percent of all CAPS and MINI interviews were rescored blind to the original scoring to test inter-rater reliability. Overall, the PTSD diagnostic consistency for the CAPS interviews was 0.98 at 12 months, and for the MINI there was perfect agreement across all diagnostic decisions at 12 months.

2. Results

2.1. Prevalence of psychiatric disorders

In total, 254 patients (31.0%) had a psychiatric diagnosis at the time of the 12 month assessment. The most common current diagnosis at 12 months was depression (132, 16.3%), followed by generalized anxiety disorder (11.1%), PTSD (9.7%), agoraphobia (9.7%), substance abuse (80, 9.9%), social phobia (6.9%), panic disorder (5.9%), and obsessive compulsive disorder (3.5%). To index the extent to which reexperiencing, avoidance, and arousal were associated with non-PTSD posttraumatic disorders, we excluded patients who developed a psychiatric disorder that was comorbid with PTSD. Overall, there were 175 patients 923.9%) with a non-PTSD disorder. The rates of non-PTSD diagnoses were: depression (71, 9.7%), generalized anxiety disorder (54, 7.4%), agoraphobia (44, 6.0%), substance abuse (68, 9.3%), social phobia (27, 3.7%), panic disorder (22, 3.0%), and obsessive compulsive disorder (14, 1.9%). As there were very few cases of obsessive compulsive disorder, this disorder was not considered in subsequent analyses.

2.2. Prevalence of reexperiencing symptoms

Tables 1–3 present the rate of each reexperiencing, avoidance, and arousal symptoms, respectively, across disorders, as well as the odds ratios of that symptom occurring in each disorder. In terms of reexperiencing symptoms, it is not surprising that PTSD had the highest rates of reexperiencing symptoms because at least one of these symptoms is requisite for the PTSD diagnosis. There was significant occurrence of reexperiencing symptoms across the other disorders; one-third of patients with a non-PTSD disorder satisfied