

# Role of psychological trauma in the cause and treatment of anxiety and depressive disorders

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**Current Opinion in Psychiatry** 2010, 23:25–29

## Purpose of review

The role of traumatic events in the development of post-traumatic stress disorder is well established but their importance in the other anxiety disorders and in depression is less clear. We have reviewed recent publications in the medical literature which add to current knowledge regarding the possible causative role of trauma and the efficacy of trauma-focused treatments in these disorders.

## Recent findings

A number of recent studies add further support to the notion that traumatic events increase vulnerability to a range of psychiatric disorders. Furthermore, pretrauma risk factors are shared across different anxiety and depressive disorders. Patients with partial rather than full post-traumatic stress disorder often have their post-traumatic symptoms subsumed within another anxiety or depressive diagnosis. There is very little data relating to trauma-focused treatment of disorders other than post-traumatic stress disorder.

## Summary

There is increasing evidence that clinicians should be cognizant of the possible role of traumatic experience in the cause of patients with diagnoses other than post-traumatic stress disorder. There is, however, a paucity of data for the efficacy of trauma-focused psychological interventions for disorders other than post-traumatic stress disorder and further research is therefore needed.

## Keywords

anxiety, cause, depression, post-traumatic stress disorder, treatment

Curr Opin Psychiatry 23:25–29  
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0951-7367

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## Introduction

A traumatic event can be defined by its capacity to provoke fear, helplessness, or horror in response to the threat of injury or death [1]. Individuals exposed to such events are at increased risk not only for post-traumatic stress disorder (PTSD) but also for major depressive disorder (MDD), panic disorder, generalized anxiety disorder (GAD) and substance abuse as well as somatic symptoms and physical illnesses, particularly hypertension, asthma and chronic pain syndromes [2]. Comorbidity is a common finding in patients with PTSD and can include any of the aforementioned diagnoses. Depression is the most common co-diagnosis and might be the most common disorder following trauma [3].

Furthermore, patients may be diagnosed with a disorder other than PTSD because they have PTSD-type symptoms but have not experienced a severe enough stressor [4] or because they have some PTSD symptoms following a significant traumatic event but insufficient symptoms to make the full diagnosis [5]. In either scenario the

significance of the trauma history may be overlooked by the treating clinician.

The aim of this editorial is to review the recent literature for new evidence relating to the role played by psychological trauma in the cause of anxiety and depressive disorders, including PTSD, and the relevance of traumatic events for the treatment of these disorders.

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## Studies relating to cause

There have been a number of studies within the last 2 years which relate to the causative significance of traumatic events for anxiety and depressive disorders. For the purpose of this review they have been divided into subsections covering prevalence, psychopathology, epidemiology, social and cultural factors, and post-traumatic experiences in children and adolescents.

## Prevalence of diagnoses following trauma

Grant *et al.* [6<sup>\*</sup>] studied 228 adult motor-vehicle accident survivors presenting with emotional difficulties. Results of construct-level analyses indicated that PTSD, MDD

and GAD are distinguishable but highly correlated disorders following a traumatic event.

Klarić *et al.* [7] have studied 367 adult civilian women, comparing those directly affected by war trauma during the war in Bosnia–Herzegovina with those affected only indirectly. The authors reported that PTSD was one disorder in a wide spectrum of post-traumatic reactions following long-term exposure to war and postwar stressors. Postwar stressors did not influence the prevalence of PTSD but they did contribute to the intensity and number of post-traumatic symptoms.

Data are limited regarding the mental health effects of natural disasters. One recent study sought to determine the prevalence of and risk factors associated with PTSD, GAD and MDD 6–9 months following the 2004 Florida hurricanes in a sample of 1452 adults [8]. Prevalence for PTSD was 3.6%, for GAD was 5.5% and for MDE was 6.1%. Risk factors varied across disorders except for exposure to previous traumatic events, which increased the risk of all negative outcomes. The authors noted that high social support in the 6 months prior to the hurricanes protected against all types of disorders. Fontenelle *et al.* [9] investigated the history of trauma and severity of dissociative symptoms in 34 patients with obsessive compulsive disorder (OCD) and 30 patients with social anxiety disorder (SAD) using a number of well validated instruments. Patients with OCD reported significantly less exposure to traumatic events than the SAD group whilst severity of dissociative symptoms was not different between the two groups. Although the numbers in the study were not large the tentative conclusion suggested that patients with OCD may be less vulnerable to some types of traumatic experiences whilst dissociative symptoms may cut across different anxiety disorders. The authors noted that trauma appeared to play a significant role in the development of OCD in several cases, however, and discussed the need for further research to differentiate traumatic events as causes of these disorders from traumatic events as consequences of the disorders due to increased vulnerability.

#### **Pretrauma anxiety and post-trauma psychopathology**

The central role of psychological trauma in the cause of PTSD has been recognized within standard nosology since the inclusion of PTSD in the DSM-III in 1980. In their review of the history and development of PTSD as a diagnosis this has been described by Jones and Wessely [10] as a paradigm shift in the conceptualization of psychological trauma. The authors point out a key shift from an emphasis on predisposition creating vulnerability to ‘traumatic neurosis’ to an emphasis on the characteristics of the event itself. Rather than being the responsibility of the subject, traumatic illness became an external imposition and possibly

a universal response to a terrifying and unexpected event.

In spite of this shift in thinking research interest in the causative relevance of possible predisposing factors for the development of psychopathology post-trauma including pretrauma anxiety continues. Furthermore, the identification of individuals vulnerable to PTSD or other disorders post trauma is clearly of clinical importance. Larsson *et al.* [11] studied a sample of 44 Swedish peace-keeping soldiers serving in Kosovo using a prospective design. Results indicated that pretrauma trait anxiety interacted with exposure to traumatic situations predicting a higher post-trauma distress. Both baseline trait anxiety and baseline symptoms of anxiety and insomnia predicted post-trauma symptoms of anxiety and insomnia. The authors conclude that their data support a diathesis stress model in which high trait anxiety interacts with trauma exposure in the elicitation of anxiety-related distress whilst acknowledging the need for further investigation of the model.

In a separate study of 138 active-duty police officers Asmundson and Stapleton [12] sought to evaluate associations between PTSD symptom clusters and dimensions of anxiety sensitivity. Anxiety sensitivity is the fear of anxiety signs and symptoms based on the belief they may have harmful consequences and it serves to amplify fear and anxiety. Depressive symptoms, number of reported traumas and anxiety sensitivity somatic concerns were significant predictors of PTSD total symptom severity as well as severity of re-experiencing. Avoidance was predicted by depressive symptoms and anxiety sensitivity somatic concerns. Only depressive symptoms were significantly predictive of numbing and hyperarousal cluster scores.

A related study of a community sample of 239 individuals who had experienced traumatic events investigated incremental associations between anxiety sensitivity dimensions and post-traumatic stress symptoms (PTSSs) and panic symptoms [13]. In this study the results differed from the previous one in that anxiety sensitivity psychological concerns (rather than somatic concerns) were predictive of avoidance. Anxiety sensitivity somatic concerns predicted panic symptoms. The authors discuss the shared vulnerability and comorbidity between PTSSs and panic which are suggested by the data and by previous studies.

#### **Specific trauma population studies**

Two recent studies conducted in relation to specific types of traumatic experiences are of interest. de Jongh *et al.* [14] investigated 34 patients having wisdom teeth extracted under local anaesthesia. Two patients (8%) met criteria for PTSD 4 weeks after treatment. Previous

exposure to distressing dental events and preoperative anxiety level predicted the anxiety level at 4 weeks post extraction accounting for 71% of the variance. Severity of pain during treatment was a significant predictor variable of PTSD symptom severity. The findings underline the importance of pain-free treatments and awareness of a patient's predisposition to anxiety or trauma-related symptoms to reduce the risk of iatrogenic psychological harm following a surgical intervention.

Another study of a specific clinical population but with a quite different methodology was carried out by Mykletun *et al.* [15<sup>•</sup>], who questioned the assumption that whiplash trauma is causal of increased anxiety and depression. They hypothesized that the causal relationship was in the opposite direction and investigated this using data from a Norwegian public health survey involving almost 38 000 individuals and conducted in two waves. Symptoms of anxiety and depression (self-rated at baseline) increased the likelihood of self-report of whiplash trauma at follow-up. The authors suggest that their findings give support to the possibility that the increased level of psychopathology found in individuals with a history of whiplash injury might partly be present already prior to the injury. This study challenges clinicians and researchers to be careful in making assumptions regarding causality and reminds us of the importance of research which tests different hypotheses.

### **Social and cultural factors**

A number of recent studies have focused on the roles of social and cultural variables in psychopathological reactions to traumatic experiences. The role of the visual media in presenting distressing material to viewers and the consequences has attracted increasing research interest in recent years especially following the 9/11 terrorist attacks [16]. Otto *et al.* [17] studied pre-event characteristics and the impact of indirect media exposure to the 9/11 attacks on 166 children and 84 mothers who had no direct exposure to the attacks. Children's identification with victims of the attacks and, for younger children, the amount of television viewing predicted increased risk of PTSD symptoms. Parental depression was associated with higher symptom levels and pre-event levels of family support were associated with a lower risk for PTSD symptoms. Children with traits consistent with a cautious and fearful approach to novelty were less vulnerable to PTSD symptoms after exposure to media-based traumatic images. These findings have important implications for parents, clinicians and all involved in the welfare of children.

Previous research suggests that social support is important in regulating post-traumatic adjustment. In an analogue study of the impact of social support on the aftermath of trauma 93 participants were shown a distressing videotape

followed by a video portrayal of positive, negative or neutral social reactions to the distressing event [18<sup>•</sup>]. Whereas negative reactions increased initial negative affect, neutral reactions increased later frequency and severity of intrusive thoughts. The authors suggested that neutral social reactions following trauma exposure can be highly invalidating and may therefore have more negative later effects than overtly negative reactions.

In a review of the literature relating to PTSD following civilian war trauma and torture Johnson and Thompson [19] found evidence that preparedness for torture, social and family support and religious beliefs may all be protective against PTSD in these circumstances. A further article from the same research team describes a qualitative study, using interpretative phenomenological analysis, of nine UK-based interpreters who had suffered trauma in their countries of origin [20]. The aim of the study was to investigate how they managed their experience of trauma. Three key themes were trauma in the context of wider shared oppression, resisting and responding and cultural protection and growth. A sense of shared victimization provided a protective backdrop from which the participants could make sense of the personal traumas they experienced. The role of interpreting was important as it helped to maintain cultural identity.

### **Children and adolescents**

A number of recent studies in children and adolescents have increased our knowledge of the prevalence of traumatic experiences and their relationship with psychiatric disorders. A particularly notable study by Copeland *et al.* [21] followed 1420 children through to 16 years of age. More than two-thirds of the children reported at least one traumatic event by 16 years of age. Some PTSSs were present in 13.4% but only 0.5% of children met the full criteria for PTSD. Violent or sexual trauma and multiple traumas were associated with the highest rate of symptoms. Lifetime co-occurrence of other psychiatric disorders with traumatic events and PTSSs was high, with the highest rates for anxiety and depressive disorders. The authors concluded that traumatic events in childhood are related to many forms of psychopathology with the strongest links being with anxiety and depressive disorders.

Other studies have investigated the role of pretrauma traits and symptoms in the development of post-traumatic psychopathology in children and adolescents. In a community-based sample of 68 trauma-exposed youth Leen-Feldner *et al.* [22<sup>•</sup>] have found that fear of the physical and mental consequences of anxiety (anxiety sensitivity) is associated with relatively higher levels of PTSSs subsequent to traumatic event exposure. Data from a study of youths affected by hurricane Katrina indicated that predisaster negative affect predicted

postdisaster PTSSs and GAD symptoms. PTSSs were also predicted by number of hurricane exposure events and female sex. Predisaster GAD symptoms predicted postdisaster GAD symptoms and predisaster trait anxiety predicted postdisaster depressive symptoms [23].

### Trauma-focused treatment studies

There has been dispute in regard to the relative efficacy of psychological interventions at the different stages following trauma. A systematic review and meta-analysis conducted by Bisson *et al.* [24] focused on psychological treatments for chronic PTSD. They found 38 randomized controlled trials to be eligible for analysis. Trauma-focused cognitive behavioural therapy (TFCBT), eye movement desensitization and reprocessing (EMDR), stress management and group CBT improved PTSD symptoms more than waiting list or usual care. There was inconclusive evidence in regard to other therapies. Of the effective therapies TFCBT and EMDR were superior and were recommended as first-line psychological treatments for chronic PTSD on current evidence.

EMDR is a therapy which has continued to cause controversy within the trauma field over recent years in spite of its now established evidence base as a treatment for PTSD [24]. van der Kolk *et al.* [25] have compared EMDR with the antidepressant fluoxetine and pill placebo in 88 adult patients with PTSD over 8 weeks. Outcome measures included depression symptoms as well as PTSD symptoms. EMDR was more effective than fluoxetine in achieving sustained reductions in both PTSD and depression symptoms. The authors noted a greater treatment effect for those patients with adult-onset trauma and suggested that future research should investigate the effect of lengthier intervention, combination treatments and treatment sequencing for patients with childhood-onset trauma.

Sijbrandij *et al.* [26] evaluated the efficacy of brief TFCBT (four sessions) against wait list control in 143 patients with acute PTSD with 4-month follow-up. The active treatment group had significantly fewer PTSD, anxiety and depression symptoms 1 week post treatment compared with the control group but this difference was no longer significant after 4 months. Interestingly, subgroup analyses indicated that brief TFCBT showed enhanced efficacy in patients with baseline comorbid depression.

### Conclusion

There is an increasing interest from researchers and clinicians in the role of trauma in the cause of psychiatric disorders other than PTSD. This interest extends not only to other neuroses but also personality disorders

and even psychotic disorders [3]. Some of the recent research summarized in this article adds further support to the notion of a range of post-trauma disorders in both adults and children and adolescents of which full PTSD is one.

Recent research also supports previous findings of high levels of comorbidity for PTSD and marked symptom overlap between PTSD, other anxiety disorders and depressive disorders.

In addition there is growing evidence that risk factors, such as anxiety sensitivity and low social support, are also shared across different post-trauma diagnoses.

The accumulating evidence in regard to these issues should encourage clinicians to think of the potential relevance of trauma in the cause of anxiety disorders other than PTSD and also in depressive disorders. Often a sub-syndromal partial PTSD is subsumed within another diagnosis. The taking of a detailed trauma history and enquiry regarding re-experiencing, avoidance, numbing and hyperarousal symptoms is, therefore, an important component of the psychiatric assessment.

Furthermore, it seems reasonable to suggest that clinicians should give consideration to the use of trauma-focused treatments in these patients. Antidepressants such as selective serotonin reuptake inhibitors (SSRIs) are effective in PTSD as well as depression and other anxiety disorders. Psychological treatments are more specific with TFCBT, exposure therapy and EMDR currently regarded as first-line interventions for PTSD. Recent studies give some indication that these trauma-focused interventions can successfully reduce comorbid symptoms in addition to PTSD symptoms but at the current time there is limited evidence for using trauma-focused treatments to treat disorders other than PTSD. There is need for randomized controlled trials of trauma-focused treatments in non-PTSD diagnoses in which trauma is judged to be of causative significance.

### References and recommended reading

Papers of particular interest, published within the annual period of review, have been highlighted as:

- of special interest
- of outstanding interest

Additional references related to this topic can also be found in the Current World Literature section in this issue (pp. 74–75).

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