



Acute Stress Disorder, Posttraumatic Stress Disorder and Complex PTSD

Specific Populations and Trauma Types

Motor vehicle accident and other traumatic injury survivors

This *Motor vehicle accident and other traumatic injury survivors* information sheet considers background issues and provides presentation, assessment and treatment advice for practitioners working with traumatic injury survivors.

Particular issues to consider in the treatment of motor vehicle accident (MVA) and injury survivors are presented here. The information provided is derived primarily from expert opinion regarding the application of the guidelines for this population, rather than from the empirical literature.

Background issues

With study participants recruited from hospital admissions, most of what we know about MVA and other injury survivors is based on people who have been severely injured and hospitalised, or at least admitted to a hospital emergency department. Non-hospitalised MVA survivors may be less likely to develop mental health conditions following injury.¹ However, MVA survivors with less severe injuries, for example, soft tissue injury, may of course also develop PTSD, and many of the issues here are relevant to that group. The information sheet addresses issues of PTSD in the context of physical injury, and so does not necessarily relate to MVA survivors with PTSD who have sustained no physical injuries. The guideline recommendations can be applied to that group without need for special consideration.

Approximately two per cent of all Australians every year are injured severely enough to require a hospital admission.² MVAs are a major cause of severe injury, comprising 11.7 per cent of all injury-related hospitalisations in Australia between 2016 and 2017,³ and therefore contribute significantly to the PTSD rate in Australia. Consistent with common responses to traumatic experience, many injury survivors will display PTSD symptoms (nightmares, intrusive memories) in the initial weeks after being injured, but for most, these symptoms will resolve within three months.⁴ Estimates suggest that approximately eight to 29 per cent of motor vehicle accident survivors in Australia go on to develop PTSD.⁵

The severity of the injury in terms of its relationship to mortality does not predict the development of PTSD. That is, those with a life threatening injury are no more likely to develop PTSD than those who suffer a serious injury that is not life threatening.⁶ While rates of PTSD in those with soft tissue injury have not been established, rates for particular types of soft tissue injuries such as whiplash appear to be similar to severe injury.⁷ The relationship between injury severity and PTSD is, however, less clear with traumatic brain injury (TBI). There is a large body of work showing the increased risk of PTSD associated with mild TBI, and that those who suffer a mild TBI are just as likely to develop PTSD as those with no brain injury (e.g., Bryant et

al.⁸ or O'Donnell et al.⁹) However, it has been proposed that those with severe TBI may be less likely to develop PTSD. This is probably associated with the high level of amnesia experienced by those with a severe TBI – those with no memory of the event may be less likely to develop PTSD.¹⁰ However, this relationship is complex – recent evidence derived from longitudinal studies suggests that severe TBI and longer posttraumatic amnesia may actually be associated with delayed symptom development rather than necessarily reducing the overall risk for developing PTSD.¹¹

Presentation

Common presenting problems in injury survivors include distressing memories and nightmares about the accident, insomnia, irritability, elevated startle response, and concentration problems. Individuals often avoid situations that are consistent with the event in which they were injured. For example, those injured in an MVA often experience fear of driving and avoidance of traffic. In some cases, individuals become avoidant of hospitals and fail to attend appointments, or do not have follow-up surgery. This may significantly impact their physical recovery. Practitioners should be aware that many injury survivors suffer mild TBI, and have no memory of some parts of the event in which they were injured.¹² Interestingly, although these people may not be able to remember critical aspects of the event they can still be fearful and avoidant of situations which trigger memories of the event.¹³ Depression is very commonly comorbid with PTSD in injury survivors.¹⁴ This is especially the case with those who experience orthopaedic injuries which require long term rehabilitation. The loss of important roles, financial difficulties, and uncertainty about the future often contribute to depression. Many injury survivors also suffer chronic pain, and those with chronic pain post-injury are three times more likely to have probable PTSD than those without.¹⁵ Pain and PTSD may act to drive each other over time, with pain triggering memories of the event, and hyperarousal increasing perceptions of pain.¹⁶ This can result in individuals avoiding situations which may cause pain to escalate such as exercise or physiotherapy.

Assessment

Assessment of PTSD in injury survivors should generally follow standard guideline recommendations. However, there are three main issues pertaining to injury survivors with PTSD that need to be considered during assessment.

First, be aware of the timing of the assessment. Many PTSD-type reactions that occur in the initial two months will subside in the following period. Intense reactions in this period are less likely to subside without intervention and may need immediate attention. Less severe reactions, however, which are common in this period, are more likely to be transient and resolve without treatment. In identifying individuals whose symptoms are likely to persist, predictors of PTSD after motor vehicle accidents which have been consistently identified within the broader literature include rumination about the accident, lack of social support, persistent physical and/or emotional problems, and involvement in legal/compensation proceedings.⁵

Second, injury survivors are characterised by comorbid presentations that have implications for assessment and treatment planning. As discussed, depression, mild TBI, and chronic pain are the major problems that co-exist with PTSD after severe injury. It is important to ask specifically about each of these problems to determine the primary presenting problem. Often patients will focus on pain because of its highly intrusive and aversive nature, and the clinician needs to focus interview questions specifically on PTSD or depression in order to avoid missing important information. In the case of mild TBI, it should be noted that

people can meet the re-experiencing criteria for PTSD if they are distressed by reminders of the injury-causing event (e.g., returning to driving) even if they cannot recall some critical aspects of the accident. Further, the use of self-report PTSD measures in populations with TBI may result in over-diagnosis of PTSD relative to clinician judgment, as individuals may mistake their TBI symptoms – such as irritability, and disturbances in attention, concentration and sleep – as PTSD-related.¹⁷ As such, clinical interview should be considered the gold standard of assessment. Motivational issues are often a problem for patients who have experienced moderate to severe TBI and should be assessed as these issues may have an impact on engagement in therapy, as discussed below.

Third, many injury survivors are involved in litigation for criminal or civil purposes. This issue can complicate treatment planning because it can confound the motivational stance of the patient, especially if legal advice is suggesting a particular view about PTSD and its treatment. Assessment should explicitly enquire about litigation status.

Treatment

Injury survivors may be entitled to treatment for mental health conditions arising from their accident through third party insurers or other individual state-based authorities. This is especially the case for MVAs and work place accidents. Practitioners should be familiar with entitlements and procedures in the state in which they work.

Treating injury survivors should follow standard PTSD treatment guidelines, with particular attention to several possible modifications that are dependent on comorbid presentations.

Chronic pain is a major obstacle to treating PTSD because it can actively interfere with attention on therapy tasks. Also, pain can act as a reminder of the trauma which complicates treatment for both the pain and PTSD. Depending on the severity of the pain, it may be preferable to achieve adequate pain management prior to the commencement of PTSD treatment. Equally, there is also evidence to suggest PTSD symptoms play a causal role in the development and persistence of pain,¹⁶ implying that pain may improve following successful PTSD treatment.

Depression that is comorbid with PTSD typically leads to a more severe clinical presentation. As outlined in the guideline recommendations, suicidal ideation requires careful assessment and management prior to commencement of exposure therapy.

While some clinicians hold reservations that posttraumatic amnesia relating to TBI may inhibit the efficacy of exposure-based therapies, evidence suggests that exposure therapy is an effective treatment for PTSD which is comorbid with either mild or severe TBI.¹⁸ Patients with brain injury who are amnesic of the accident (or part of it) may benefit more from in vivo exposure to situations that elicit anxiety than imaginal exposure. This approach can be beneficial because imaginal exposure can be limited when there are few memories of the trauma and when attentional deficits interfere with focus on trauma memories for prolonged periods. Those with brain injuries which impact on their ability to engage with therapy may benefit from motivational interviewing strategies.¹⁹ Systematic reviews have supported this idea, providing evidence that administering a short motivational interviewing program prior to cognitive behavioural therapy (CBT) results in greater treatment response in reducing depression and anxiety after a TBI.²⁰ This approach may be particularly useful in cases of moderate-to-severe TBI, where motivation can pose a

substantial barrier to adherence to treatment. For a broad overview of how CBT can otherwise be adapted for people with cognitive impairments following brain injury, see Gallagher et al.²¹

Although exposure therapy is an indicated treatment for people who develop PTSD following injury, clinicians should be aware that any therapy that actively addresses trauma memories has the potential to alter memory and, therefore, may be subjected to scrutiny in court. Some courts are particularly concerned about the use of hypnosis and Eye Movement Desensitisation and Reprocessing (EMDR) as techniques that have the potential to modify trauma-related memories. Thus the use of these treatments may lead to a client's evidence being inadmissible in court. It is advisable to avoid these treatments in cases that are subject to litigation. If such approaches are adopted, the practitioner would be advised to videotape all sessions.

Working with children

PTSD is common in children following a traumatic injury, with a prevalence of approximately 20 per cent.²² Emergency department staff should inform parents or guardians of the risk of their child developing PTSD following emergency attendance for a traumatic injury and advise them on what action to take if symptoms develop. Injured children and young people with PTSD should be offered a course of trauma-focussed CBT adapted appropriately to suit their age, circumstances, and level of development.

Source and contributors

The *Motor vehicle accident and other traumatic injury survivors* information sheet was initially developed by Phoenix Australia in collaboration with Professor Richard Bryant, Clinical Psychologist, University of New South Wales, and has since been updated by Mr James Agathos and Professor Meaghan O'Donnell from Phoenix Australia.

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