Current knowledge about psychological trauma: a response to Milton

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Abstract

- We rebut a number of the assertions made by Milton in the October 2005 issue of *ADF Health*.
- A substantial body of epidemiological research informs about the prevalence, risks and burden of disease associated with post-traumatic stress disorder (PTSD). To suggest that PTSD is created by treatment and the possibility of compensation denies the complexity of the issues at stake.
- There is effective treatment for PTSD and the Australian Defence Force has an important duty of care to ensure the early identification and treatment of ADF members adversely affected by their service.
- Equally, many service personnel benefit and are not damaged by the deployment experience, and the challenge is to build resilience and assist those who are injured.
- Early identification and treatment of psychological morbidity in the ADF is critical to operational effectiveness in an age of technological warfare. These disorders are known to have major detrimental effects on the information-processing capacity of individuals, and this presents a major risk for the survival of the individual and the group.

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THE RECENT ARTICLE BY MILTON deserves a response to clarify many of the misconceptions that abound when human response to war is debated.[1] These misunderstandings sit astride several domains, including beliefs about the reality of suffering and the nature of scientific proof.

Most accounts of Australians at war convey a sense of uncomplaining hardiness and endurance in the face of adversity. Typically, the struggle for victory involves putting individual needs for survival secondary to the success of the mission at hand.

However, on repatriation, these individuals have to live again in a world that allows reflection. It is here — perhaps many years later — that the suffering that individuals have contained while in their military roles often becomes apparent.[2] Acknowledging that there is a long time over which the psychological injuries of war can become manifest[3] does not negate the fact that these individuals fought with bravery and performed with skill in the immediacy of war.

When discussing an issue as complex as psychological injury, opinion and belief can distract from knowledge. Nevertheless, the psychological impact of trauma can be studied scientifically. A core question is how to impartially reflect research that is often multidimensional and diverse. In science, the finding that contradicts a hypothesis is central to the development of knowledge. Criticism of ideas is central in the development of knowledge and is to be encouraged. Information is rarely complete, and decisions must be made in the presence of contradictory observations by balancing probability.[4] The nature of chance means that one in 20 results of an experiment tested at the $P<0.05$ level will, by chance, diverge from the expected direction. Therefore, it is almost inevitable that information will not be entirely consistent. However, in medicine, there is an imperative to act in the face of uncertainty. In this situation, the potential for bias must be understood. The Bradford Hill Criteria[5] provide a model for demonstrating causation, and literature reviews and consensus statements use meta-analytic techniques to summarise a body of knowledge in a way that minimises the potential for bias. The Repatriation Medical Authority uses the Bradford Hill Criteria in developing statements of principle about the causal link between particular disorders and combat exposure.[6,7] This strategy was adopted to prevent polarised representations of the literature.

It is against this background that we present our response to Milton's article. The primary problem with his article is that he fails to systematically examine his questions. All of us are vulnerable to finding what confirms our beliefs rather than what contradicts them. We aim to address the issues that Milton raised in a systematic manner.

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Vague notions about trauma and treatment

Bad clinical practice does not negate the validity or relevance of a particular disorder in clinical practice. Improving diagnostic rigour and introducing effective psychological care to traumatised individuals in large organisations are particular challenges. Nevertheless, precise descriptions are available of both the nature of events that can lead to post-traumatic stress disorder (PTSD) and the psychopathological outcomes of exposure to traumatic stress. The Diagnostic and statistical manual of mental disorders, fourth edition (DSM-IV)[8] and the International classification of diseases, 10th edition (ICD-10)[9] provide operational definitions that have been developed into psychometrically valid and reliable instruments, such as the Clinician-Administered PTSD Scale (CAPS)[10] and the Composite International Diagnostic Interview (CIDI),[11] which provide benchmarks against which the diagnostic practice of clinicians can be calibrated.

As with any diagnostic category, the challenge is to define the boundaries of PTSD. In many areas of medicine, the boundaries of disease are difficult to define; hypertension and osteoarthritis are two examples. The debate about PTSD is often presented as though this is the only condition subject to such discourse, when, in fact, such debates are common. For example, the separation of bipolar disorder from schizophrenia is a matter of ongoing debate, and the validity of this separation is still a matter of conjecture.[12] The separation of bipolar and unipolar depression is also still debated.[13]

Epidemiological research has done much to address the concerns expressed by Milton. Studies have examined the disability and associated comorbidities of PTSD in populations where issues of compensation are the exception rather than the rule.[14] PTSD and major depressive disorder account for the greatest burden of disease of psychiatric disorders.[15] If clinicians misapply the construct of PTSD, this is not a problem with a disorder but, rather, with clinical practice.

It is important to establish the factual basis of individuals' traumatic exposures. In an environment where compensation is at stake, the need for vigilance and commonsense is critical. While clinicians need to recognise that individuals can retreat into the glorification of victimhood and make false attributions, this does not negate the reality of the suffering of many of those affected. Further, the opposite is often the case — mental illness remains a stigma and is rarely an opportunity for boasting. Furthermore, clinicians often fail to diagnose PTSD.[16]

With regard to treatment, there are several clinical practice guidelines, based on systematic reviews of the literature, that attest to the benefits of treatment.[17-19] Currently, PTSD guidelines are being developed on behalf of the National Health and Medical Research Council (NHMRC) by the Australian Centre for Posttraumatic Mental Health. Taken together, these guidelines provide substantial evidence that there are effective psychological and pharmacological treatments for PTSD. Rather than acknowledging this evidence, Milton draws attention to a single US veterans' health administration study,[20] as well as the Koach project from Israel,[21] concluding that "the VHA [Veterans Health Administration] does not cure PTSD — it teaches PTSD". However, let us not forget that those who seek compensation are those who have had the greatest combat trauma and the most severe symptoms.[22]

To report negative findings alone, without mentioning the substantial literature[23] that contradicts the cited examples, misinforms the reader. As a further example, Milton fails to mention the positive outcomes from Australian PTSD programs for Australian Defence Force veterans.[24] His conclusion that "if a trauma management program does anything, it should at least not hinder the natural reparative process, as current methods appear to do" is not in keeping with an unbiased consideration of the treatment literature.

Milton concludes his discussion about the issues of trauma by stating that "it is usual to regard people who recover without help as deceiving themselves (being 'in denial')". This is a "straw man" argument. The data are unequivocal — the significant majority of individuals do not develop mental health problems after traumatic exposure, regardless of the presence or absence of professional assistance.[14] Further, successful psychological adaptation in the face of horror and threat takes many forms (including responses such as suppression, altruism and humour) which are often seen as being positive adaptations that do not need to be systematically unravelled. Debriefing based on catharsis is not advocated or supported by the literature.[25]

Specific problems with the definition of how people react to trauma

PTSD inevitably provokes interest and social discussion.[23] The complex social dialectic which this field embraces is an invigorating aspect of its intellectual core, rather than "a malicious agenda to silence the voices of survivors". To represent the field of trauma researchers as having a universal voice is to deny the considerable research of the past two decades, exploring the constructs behind PTSD and the margins of this condition.[26] Further, there has been substantial interest in the role that trauma plays in the aetiology of other psychiatric disorders, particularly depression.[3,27] Indeed, several studies raise the question of whether depression may be a more common outcome following trauma than PTSD.[28] This raises important theoretical questions about the aetiology and classification of depression. Similarly, if the role of traumatic stress and PTSD in relation to substance misuse were given greater attention, much might be gained in terms of developing appropriate public health interventions to deal with drug use.[29]

To pretend that this body of knowledge is complete and sacrosanct denies the importance of ongoing research into human adaptations to traumatic stress. Several recent studies of the UK forces in Iraq have found significantly lower rates of PTSD compared with US forces, raising the issue of cultural and organisational factors in the aetiology of stress-related conditions.[30-32] However, rates were still substantial, in the order of 20% of both the deployed and comparison sample having a possible psychiatric disorder, including 4% with PTSD, findings similar to Australian veterans from the first Gulf War.[28] The comparison groups had significant cumulative levels of trauma exposure, with 69% having been deployed in their military career. These studies suggest that to

focus on PTSD alone negates the complexity of adaptations to traumatic stress.

Deceit and malingering

In any environment where people are paid compensation for being sick, the potential exists for fraud and malingering.[33] To extrapolate from this and imply that all or most individuals who report mental health problems following trauma are malingering is to deny the wealth of evidence that attests to the reality of these conditions independent of compensation. An anonymous survey of US service personnel returning from Iraq revealed that nearly one-fifth experienced significant mental health problems following their return.[30] Importantly, a substantial proportion of those individuals stated that they would not disclose these problems to anyone and would not seek treatment; this is not the behaviour of malingerers.

In considering the complexities of compensation following trauma, it should not be forgotten that these systems were created because of a respect for the decency of human beings and a sense of responsibility to protect those who, through no fault of their own, have suffered injury. Inevitably, some people will take advantage of this environment. Military medical officers are familiar with the dilemma of allowing appropriate relief from duties as against encouraging people who wish to avoid their responsibilities and so escape danger. Ultimately, any humane system should both readily provide compensation for people with genuine injuries, and prosecute those who attempt to defraud. It is important that the genuine[22] not be tarred with the brush of the malingerer, because this can lead to substantial conflict and persecution of those who deserve help.

The failure of a widely practised treatment

In criticising debriefing approaches, Milton is again creating a straw man. Psychological debriefing following trauma has not been routine in the ADF since 2002, when the critical incident mental health support (CMS) model was introduced in response to concerns about the efficacy of debriefing. Further, debriefing is not, and was never proposed as, a treatment for PTSD. Rather, it was developed in the belief that it might have some preventive value. To state that it is "actually harmful" is to overstate the case.[34]

Although some studies have found that individually conducted debriefing had a worse outcome than placebo, this is only a small effect and is by no means universal. Methodological issues raised by these studies (including, for example, the likelihood that assessment alone may have therapeutic benefit) render interpretation difficult. Some studies of debriefing with military populations have shown mildly positive outcomes. In one study, debriefing had no effect on psychological symptoms, but decreased rates of alcohol misuse in a cohort of British veterans from Bosnia.[35] A recent study in the US military showed better rates of retention in the debriefed group, particularly among those with high levels of combat exposure (Dr A Adler, Science Co-ordinator, US Army Medical Research Unit — Europe, presentation to the ADF, December 2005).

On a more subjective level, individuals consistently claim that these interventions are beneficial and appreciated. Hence, apart from the role as a potential psychological intervention, debriefing may have a role in maintaining morale. Debriefing may have a place — not as a routine procedure following every incident but, on occasions, as part of an informed clinical response tailored to the needs of the affected population. It is exactly this considered and stepped approach that characterises the ADF's CMS model.

That is not to say the practice of debriefing and its widespread adaptation has not more often been driven by simplistic notions, overly keen and poorly trained mental health professionals, and a desire to meet basic occupational health and safety obligations than by rigorous application of the evidence. In this regard, we concur with Milton's comments.

General criticisms of formal counselling as useless and intrusive

Elsewhere, we have expressed similar concerns that early intervention and counselling in the immediate aftermath of traumatic events is conducted in an intrusive and poorly informed manner.[36] However, Milton has not addressed the primary motivation for introducing early intervention following traumatic exposure. The fact that there is predictable psychological morbidity after exposure to traumatic events such as combat presents a public health challenge.[37] Given the substantial burden of disease and the cost to the community, to ignore the challenge of prevention is negligent.

Prevention can take many forms. Firstly, individuals who are known to be at greater risk should not be put in roles with a strong probability of exposure to high levels of traumatic stress. However, the low predictive ability of most risk factors means that, with our current state of knowledge, this approach has little to offer in preventing PTSD. The greatest known risk factor is exposure. By the process of sensitisation, some individuals with repeated exposures have a progressive increase in their risk of developing adverse psychological outcomes. Therefore, when individuals are repeatedly placed in the face of danger, one of the most important preventive strategies is to limit the duration and regularity of the exposure. This was recognised by the US military in World War II, particularly in the Italian campaign.[38]

Secondly, with any population exposed to an environmental factor that is associated with a significant risk of adverse health outcomes, screening becomes important. Screening should only be implemented if instruments with acceptable sensitivity and specificity exist; a strong body of evidence supports the use of some measures in the trauma field.[39] Critical to implementation of a screening program, however, is the existence of adequate health resources and effective treatments to manage people who are identified. A further challenge with PTSD is that there is often a long window of effect, with many individuals being relatively asymptomatic in the immediate aftermath of combat, only to develop a clinical disorder at a later time.[2,14] This prolonged period of risk is a powerful argument for a health surveillance program, as currently being developed within the ADF.

Unfortunately, organisations often use simplistic approaches such as debriefing, hoping that this will be a panacea, rather than developing a sophisticated public health approach to dealing with populations at risk. The ADF is progressively developing strategies for addressing these issues and is a leader in this field both nationally and internationally.

Relying on medical authority in a political area

Milton claims that "the compensation claims for PTSD now match or exceed that epidemic [RSI] on grounds that enjoy medical authority but are not supported by reliable evidence". In making this claim, Milton fails to address the contributions of objective evidence to what, in part, is a political area. Epidemiological research with populations that have no access to compensation demonstrates the significant impact of these events on the health and wellbeing of individuals affected.[14] Epidemiological studies provide case–control designs and can remove the debate from the courtroom, where competing narratives at times distort the truth. The Repatriation Medical Authority[7] was constituted to prevent the politicisation of opinion in the courtroom. There are Statements of Principle which provide specific guidelines as to when PTSD, anxiety disorders and affective disorders are seen to be related to the combat environment. These can be downloaded from the Repatriation Medical Authority website. These Statements of Principle are an example of how the careful application of the Bradford Hill Criteria[5] systematically looks at:

- temporality of the relationship;
- strength of the relationship;
- response relationship;
- consistency of the relationship;
- plausibility of the relationship;
- consideration of alternative explanations for the trends;
- experimental evidence;
- specificity of the relationship; and
- coherence of the evidence.

These criteria provide a method of bringing together divergent bodies of knowledge, including animal research, epidemiology, and case–control studies, to look at associations of aetiological agents and diseases.

Medicine cannot hide from the investigation of critical questions concerning the health and welfare of members of a community because of political concerns. Inevitably, when individuals are put at risk by third parties, the politics of workers' rights and the law of torts come into play. Members of the medical profession must not become pawns in a game in which their expert knowledge is distorted or expressed, ignoring important evidence that can inform these questions. It is commendable that some professional groups have published guidelines for expert witnesses.[40] The Code of Conduct for expert witnesses has been a development in Australian courts to address the potential for bias among medical witnesses.

The ongoing failure to resolve the asbestos compensation claims for those who worked for James Hardie Industries is indicative that, even when there is little debate about causation, politics and financial interests continue to intrude. The relationship between asbestos exposure and poor health was known by the insurance industry as early as 1908, indicating the slowness of industry to respond to knowledge from the public health domain.

Areas of agreement

A critical issue is that treatment cannot be provided in the absence of diagnosis.[16] There is a substantial body of evidence about the effectiveness of psychological and pharmacological treatments for PTSD.[17-19] However, one of the most critical problems is the failure to diagnose these conditions early and ensure early treatment. The natural hardiness of individuals and a willingness to deny suffering means that many struggle with their symptoms over a long period.[41] This leads to secondary disabilities and adverse social consequences. Marital relationships are likely to suffer, as is work performance.[14]

Frequently, drugs and alcohol are used for self-medication of the psychological effects of trauma exposure. Therefore, the challenge is how to minimise this secondary morbidity through the introduction of screening programs.

There is a substantial body of research into the neurobiology of PTSD.[42-44] Milton suggests that the theories about the neurobiology of this condition are "increasingly discounted, and recent evidence given in one of the Melbourne–Voyager 1964 collision cases was that it is not now accepted that PTSD can be defined by a specific neurobiological response". This statement is incorrect. That legal case involved a much more complex legal argument, and it was accepted that PTSD is a disease.[45] Only one aspect of the argument was the evidence regarding a neurobiological basis for PTSD. Although there are no PTSD-specific treatments at this stage, it is probable that our growing knowledge of its neurobiology will lead to advancements in pharmacological treatment and prevention.[43,44]

Recognition that PTSD is associated with important information processing disorders is a matter of concern to the modern military.[46,47] The fact that these individuals' target detection ability and reaction times are degraded cannot be ignored when dealing with human-factors issues around highly technical combat systems. An environment that ignores such impairments is not advantageous for the individual or for the system. Optimal performance is critical to defence forces in a day when computer interfaces are becoming a standard component of the battlefield.

Milton correctly identifies the importance of dealing with individuals' basic needs and assisting those who have faced the horrors of war with a sense of safety and camaraderie. Similarly, training in an understanding of fear and how to survive in the face of extreme threat are basic skills that commonsense would dictate. However, if an individual has become clinically unwell, peers are not likely to be the most "effective help".

The challenge that exists in the ADF is how to maintain a sense of hardiness and externally driven behaviour while making individuals aware of their basic reactions and responses to fear. Doubt always exists that these characteristics are mutually exclusive. However, individuals who understand their fear reactions are less likely to be disorganised by them and are better able to restore their homeostasis in the aftermath. It is critical for individuals to understand when an emotional response is driven by the environment, as against when an

affective state has become internally driven. A state of mind is pathological when an individual's reactivity fails to return to physiological baselines when the external threat has been withdrawn. Understanding when this homeostatic process has become destabilised and likely to progressively worsen is an area of critical interest in preventing and better treating the adverse psychological consequences of combat.[48]

Conclusion

It is critical that ADF policies and procedures regarding traumatic stress be driven by the scientific understanding that has emerged in the past 25 years, rather than by individual opinion. There is longstanding knowledge of the pathological effects of traumatic events, going back to the 1880s. We cannot afford to forget these lessons. Equally, it is important not to overdramatise the potential for psychological injury within a defence force environment. Psychological injury is the exception rather than the rule.

Given that there are effective treatments, and that the functioning of individuals with untreated disorders is a potential risk to the organisation as well as the individual, systems for early identification and treatment should become a major priority. The emerging knowledge challenges many of the prejudices that have existed in this field. Central to government policy on this issue is having a method of systematically reviewing the literature and minimising the polarisation of argument by the selective quoting of this extensive body of knowledge.

Competing Interests

Professor Alexander McFarlane is Chair of the Mental Health Consultative Group and Chair of the ADF Mental Health Surveillance and Research Advisory Group. In these roles he is involved in developing policy within the ADF. He is an expert witness in litigation that involves controversies in this field for plaintiffs and defendants, for which he is paid. Professor Mark Creamer is an advisor to the ADF and Department of Veterans' Affairs (DVA). The Centre for Military and Veterans' Health and the Australian Centre for Posttraumatic Mental Health receive financial and in-kind support from the ADF and DVA.

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