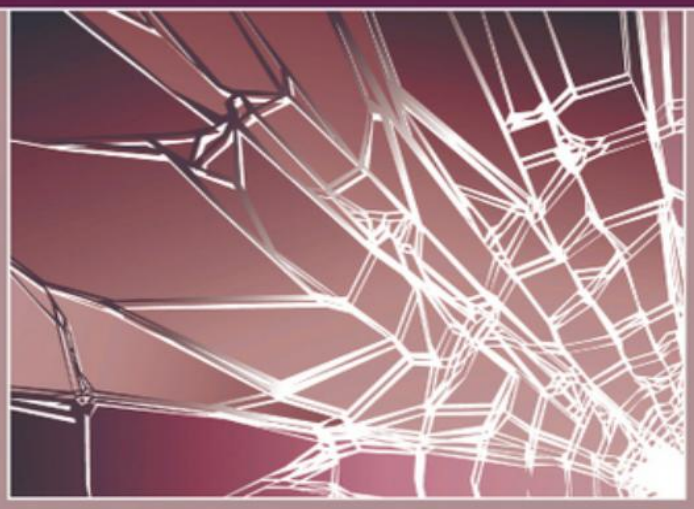
Evidence and Experience in Psychiatry

Post-traumatic Stress Disorder



Edited by Dan J. Stein,
Matthew J. Friedman and Carlos Blanco

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Post-traumatic Stress Disorder

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Preface

Post-traumatic stress disorder (PTSD) is arguably the most controversial of all the psychiatric diagnoses. There are disagreements about the qualifying events that count as sufficiently traumatic to precipitate PTSD, disagreements about the nature of the typical symptoms that follow exposure to trauma, disagreements about how best to prevent and treat PTSD, and disagreements about what kind of compensation is owed to people with PTSD by society.

At the same time, there have been major advances in our understanding of many aspects of PTSD. The diagnostic classifications of both the World Health Organization (WHO) and the American Psychiatric Association (APA) include the same broad symptom categories (e.g. re-experiencing, avoidance/numbing and arousal) and emphasise that exposure to extremely stressful events can produce profound alterations in cognitions, emotions and behaviour that may persist for decades or a lifetime.

There is also a growing appreciation of the public health burden of PTSD. Trauma continues to be a pervasive aspect of life in the 21st century, in high-, middle- and low-income countries [1]. Furthermore, PTSD and other trauma-related disorders are highly prevalent and disabling, are often associated with other psychiatric and medical disorders, and lead to significant costs for society [2, 3].

We are gradually advancing our scientific understanding of how exposure to traumatic events can produce neurobiological and psychological alterations which, if untreated, may persist indefinitely [4]. Furthermore, although there is not complete consensus across different clinical guidelines [5], there is general agreement that cognitive behaviour therapy and certain medications are the most effective clinical approaches for PTSD.

Many challenges remain. Fundamental information on the psychobiology of PTSD must be translated into effective, evidence-based clinical interventions. The development and testing of additional evidence-based treatments, especially treatments that are culturally sensitive and effective in more traditional ethnocultural settings, is required [6]. A further challenge is to move beyond the traditional clinic to the public health arena, where the focus must shift to resilience, prevention and selective interventions for populations at risk following disasters or mass violence [7].

The World Psychiatric Association (WPA) Evidence & Experience series provides a useful opportunity to work towards an evidence-based and integrative approach to different psychiatric conditions. In this volume, expert clinicians and researchers from around the world rigorously synthesise the data on PTSD, and provide balanced and judicious approaches to the controversies and challenges noted above. The chapters cover many aspects of PTSD, ranging from work on epidemiology and nosology, through research on psychobiology, to work on pharmacotherapy, psychotherapy and community approaches to intervention. Commentaries on each chapter, again from authors around the globe, provide additional depth.

Taken together, this work documents the many advances in empirical work on PTSD, negotiates a middle path through the theoretical controversies and provides clinicians and policy-makers with a practical approach to clinical and community interventions. Given that the field has learned much in recent decades about the kinds of trauma that are typically associated with PTSD, about the natural course of symptoms in response to such traumas, about optimal ways to evaluate and measure such symptoms, and about the best pharmacotherapeutic, psychotherapeutic and community approaches to the prevention and management

of PTSD, we believe that this volume is timely. We hope that it will be useful to a broad range of readers.

We thank the many individuals who contributed to this volume, particularly the chapter authors. We also thank Joan Marsh of Wiley-Blackwell, Helen Herrman and Mario Maj of the WPA, and Marianne Kastrup, for their guidance and support; their vision and enthusiasm were pivotal in ensuring the initiation and progress of the volume. We wish to dedicate it to those individuals who have shared their symptoms and histories with us, teaching us the clinical aspects of PTSD and providing inspiring models of courage and resilience in the face of immense adversity.

Dan J. Stein, Carlos Blanco, Matthew J. Friedman

References

1. Green, B.L., Friedman, M.J., de Jong, J. *et al.* (2003) *Trauma Interventions in War and Peace: Prevention, Practice, and Policy*, Kluwer Academic/Plenum, Amsterdam.

2. Watson, P.J., Gibson, L. and Ruzek, J.I. (2007) Public health interventions following disasters and mass violence, in *Handbook of PTSD: Science and Practice* (eds M.J. Friedman, T.M. Keane and P.A. Resick), Guilford Press, New York, pp. 521–539.

3. Blumenfield, M. and Ursano, R.J. (2008) *Intervention and Resilience after Mass Trauma*, Cambridge University Press, Cambridge, UK.

4. Friedman, M.J., Keane, T.M. and Resick, P.A. (2007) *Handbook of PTSD: Science and Practice*, Guilford Press, New York.

5. Forbes, D., Creamer, M.C., Bisson, J.I. *et al.* (2010) A guide to guidelines for the treatment of PTSD and related conditions. *Journal of Traumatic Stress*, **23**, 537–552.

6. Marsella, A.J, Johnson, J.L., Watson, P. and Gryczynski, J. (2008) *Ethnocultural Perspectives on Disaster and Trauma: Foundations, Issues and Applications*, Springer, New York.

7. Friedman, M.J. (2005). Every crisis is an opportunity. *CNS Spectrums*, **10**, 96–98.

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Chapter 1

PTSD and Related Disorders

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Introduction

Of the many diagnoses in the Diagnostic and Statistical Manual IV-TR (DSM-IV-TR) [1], very few invoke an aetiology in their diagnostic criteria: (i) organic mental disorders (e.g. caused by a neurological abnormality); (ii) substance-use disorders (e.g. caused by psychoactive chemical agents); (iii) post-traumatic stress disorder (PTSD); (iv) acute stress disorder (ASD); and (v) adjustment disorders (ADs) [2] – the latter three are all caused by exposure to a stressful environmental event that exceeds the coping capacity of the affected individual. The presumed causal relationship between the stressor and PTSD, ASD and AD is complicated and controversial, as will be discussed below. Controversy notwithstanding, acceptance of this causal relationship, initially in the DSM-III [3], has equipped practitioners and scientists with a conceptual tool that has profoundly influenced clinical practice over the past 30 years.

PTSD is primarily a disorder of reactivity rather than of an altered baseline state as in major depressive disorder or general anxiety disorder. Its psychopathology is characteristically expressed during interactions with the interpersonal or physical environment. People with PTSD are consumed by concerns about personal safety. They persistently scan the environment for threatening stimuli. When in doubt, they are more likely to assume that danger is present and will react accordingly. The avoidance and hyperarousal symptoms described below can be understood within this context. The primacy of traumatic over other memories (e.g. the reexperiencing symptoms) can also be understood as a pathological exaggeration of an adaptive human response to remember as much as possible about dangerous encounters in order to avoid similar threats in the future.

The sustained anxiety about potential threats to life and limb, pervasive and uncontrollable sense of danger, and maladaptive preoccupation with concerns about personal safety and the safety of one's family can be explicated in terms of psychological models such as classic Pavlovian fear conditioning, two-factor theory or emotional processing theory [4–6]. The traumatic (unconditioned) stimulus (the rape, assault, disaster, etc.) automatically evokes the post-traumatic (unconditioned) emotional response (fear, helplessness and/or horror). The intensity of this emotional reaction provokes avoidance or protective behaviours that reduce the emotional impact of the stimulus. Conditioned stimuli, reminders of such traumatic events (e.g. seeing someone who resembles the original assailant, confronting war-zone reminders, exposure to high winds or torrential downpours reminiscent of a hurricane, etc.), evoke similar conditioned responses manifested as fear-induced avoidance and protective behaviours.

Such psychological models can also be explicated within the context of neurocircuitry that mediates the processing of threatening or fearful stimuli. In short, traumatic stimuli activate the amygdala, which in turn produces outputs to the hippocampus, medial prefrontal cortex, locus coeruleus, thalamus, hypothalamus, insula and dorsal/ventral striatum [7–9]. In PTSD, the normal restraint on the amygdala exerted by the medial prefrontal cortex – especially the anterior cingulate gyrus and orbitofrontal cortex – is severely disrupted. Such disinhibition of the amygdala creates an abnormal psychobiological state of hypervigilance in which innocuous or ambiguous stimuli are more likely to be misinterpreted as threatening. To be hypervigilant in a dangerous situation is adaptive. To remain so after the danger has passed is not.

Fear-conditioning models help to explain many PTSD symptoms such as intrusive recollections (e.g. nightmares and psychological/physiological reactions to traumatic reminders), avoidance behaviours and hyperarousal symptoms such as hypervigilence. Emotional numbing, another important manifestation of PTSD, has been explicated in terms of stress-induced analgesia [10]. Such emotional anaesthesia is potentially even more disruptive and disturbing to the affected individual and loved ones than other symptoms because it may produce an insurmountable emotional barrier between the PTSD patient and his or her family. Such individuals are unable to experience loving feelings or to reciprocate those of partners and children. As a result, they isolate themselves and become emotionally inaccessible to loved ones to whom they had previously been very close. They also cut themselves off from friends. Finally, there are PTSD symptoms that jeopardise the capacity to function effectively at work, such as diminished ability to concentrate, irritability and loss of interest in work or school.

In short, there is a perceived discontinuity between the pre- and post-traumatic self. People with PTSD see themselves as altered by their traumatic experience. They feel as if they have been drastically and irrevocably changed by this encounter. Others have described this discontinuity as a ‘broken connection’ with the past [11]; or as ‘shattered assumptions’ about oneself and one's world [12].

Historical Antecedents

Before the mid-nineteenth century, the psychological impact of exposure to traumatic stress was recorded by poets, dramatists and novelists. Trimble [13], Shay [14] and others have pointed out that Homer, Shakespeare and Dickens (to name only a few) had sophisticated understanding of the profound impact of traumatic stressors on cognitions, feelings and behaviour. Medicalisation of such invisible wounds, usually (but not always) received in combat, occurred on both sides of the Atlantic during the mid-nineteenth century. Explanatory models pointed to the heart (e.g. soldier's heart, Da Costa's syndrome and neurocirculatory asthenia), the nervous system (e.g. railway spine, shell shock) and the psyche (e.g. nostalgia, traumatic neurosis) as the (invisibly) affected system.

In the 1970s, spurred on by social movements in the USA and around the world, what had previously been contextualised primarily as a problem among military personnel and veterans was broadened to include victims of domestic violence, rape and child abuse. The women's movement emphasised sexual and physical assault on women while child advocacy groups emphasised physical and sexual abuse in children. Thus, new clinical entities took their places alongside combat-related syndromes. These included: rape trauma syndrome, battered woman syndrome, child abuse syndrome and others [15–17].