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POSTRAUMATIC STRESS DISORDERS (PTSD) BETWEEN FALLACY AND FACTS: WHAT WE KNOW AND WHAT WE DON'T KNOW?

Miro Jakovljević, Lovorka Brajković, Mladen Lončar & Ana Čima
Department of Psychiatry, University Hospital Centre Zagreb, Croatia

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SUMMARY

Background: *PTSD been recognized as a major problem in public health and has attracted an ever-growing scientific, epistemological and clinical interest. On the other side, PTSD is one of the most controversial diagnosis in psychiatry as well as in medicine in general.*

Method: *We have made an overview of available literature on PTSD to identify what is our real knowledge about PTSD with all dilemmas, controversies and challenges.*

Results: *We have various options as to how to evaluate, explain and describe PTSD and other trauma-related mental and somatic disorders. In this paper we compiled an extensive set of facts and meta-facts in order to to understand the real nature of traumatic stress, negative life events and PTSD.*

Conclusion: *Conflict between various concepts of PTSD and our current knowledge will probably bring with itself a new scientific paradigm with new diagnostic phenotypes and refining the old ones.*

Key words: *PTSD – concepts - facts and meta-facts*

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INTRODUCTION

The relationship between negative life events, psychotrauma and medical disorders has for a long time attracted considerable attention of mental health professionals, the medical community as well as the media. In recent decades PTSD has gained the status of a well-defined disorder and this diagnosis is given to distressed individuals who have been exposed to a stressful event or situation (either short- or long-lasting), of exceptionally threatening or catastrophic nature, which would be likely to cause pervasive distress in almost anyone resulting in intense fear, helplessness, or horror (WHO 1992, APA 2000). Representative examples are natural and man made disasters, war experience and combat exposure, rape, car accidents as well as miocardial infarction and some other life-threatening diseases (see Roberge et al. 2010). However, PTSD is a reliably diagnosed condition only in research setting when structured assessment methods are used, but it is much less reliably recognized in common clinical practice. According to some authors defining criteria for PTSD are too broad, leading to rampant overdiagnosis and „medicalization of normal responses to abnormal situation“ (Shepard 2005).

Although PTSD is one of best known and defined of all mental disorders, this nosologic entity has been surrounded with scientific controversy and debate. Controversial aspects of the PTSD have included the very existence of the disorder and ahistorical concept of a „universal trauma reaction“, the validity of each criteria, the biological and psychological bases for symptoms, and the efficacy of various treatment and prevention modalities, as well as what kind of compensation is owed to patients with PTSD by society (Wessely 2005, Benedek & Wynn 2011, Stein et al. 2011). According to some authors „in the case of PTSD, the cart went before the horse; that the order of the things was, first, social and political; second, theoretical; and only third, emphirical. Thus, a diagnosis was first constructed which would serve the political purpose of getting treatment for veterans; then a theoretical model for it assembled, using hypotheses borrowed from the other fields such as Selye's stress theory; and only then was the phenolmenon studied“ (Shephard 2005).

The current constructs of PTSD are challenged through the next seven questions: 1. Is there any specific neurobiologic aberation or marker in patients with PTSD? 2. Is there any specific theoretical model explaining PTSD not applicable to any other diagnostic entity in psychiatry? 3. Is there any drug treatment or psychotherapy specific for patients with PTSD? 4. Does long-lasting PTSD exist without comorbidity? 5. Is there any of the so called functional mental disorders without significant role of psychotrauma in cumulative lifetime history? 6. May dissociation, hyperarousal, avoidance behaviour and trauma experience repetition have a defensive and adaptive meaning? 7. Is the so called „two hits“ or “multiple hits model“, that is very popular in schizophrenology, universal model applicable also to PTSD as well to other mental disorders? Our transdisciplinary multiperspective integrative model of PTSD based on the seven perspective explanatory approach as well as on the method of multiple working hypotheses (Jakovljevic et al. 2012) may help in the resolution of PTSD controversies.

Due to conceptual problems and confusion and challenging questions, it is timely to consider what we know and what we don't know about PTSD, what PTSD is and what PTSD is not, what are facts and what are meta-facts on PTSD.

WHAT WE KNOW AND WHAT WE DON'T KNOW ON PTSD

It is definitely time to consider where we are and where our current concepts of psychotrauma and PTSD are taking us. The fact is that we have made a great progress since 1980 and our knowledge about PTSD has grown dramatically (Table 1). In spite of the fact that we are definitely advancing our scientific knowledge how traumatic stress events can induce neurobiological and psychophysiological alterations that lead to PTSD, many fundamental issues need clarification and better understanding and still wait for scientific answers (Table 2).

Considering what we now know and what we don't know about PTSD, particularly with regards to the facts that large proportion of PTSD patients fulfil criteria for other diagnoses, that many have incomplete remision and remain severely disabled, and that longitudinal and cross-cultural inconsistencies are common, it is obvious that we have reached the stage when the PTSD basic premises need a serious reconsideration from trans-disciplinary multilevel and multidimensional perspective (Jakovljević et al. 2012).

Table 1. What we know (the facts) about psychotrauma and PTSD

- There are countless types of traumas which individuals may experience that may lead to PTSD. Individual differences regarding the vulnerability, resilience and capacity to cope with traumatic stress have a crucial role.
- Although at least 60% of men and 50% of women, if not all, experience a traumatic event at some point in their lives, only a minor proportion, 5% of men and 10% of women develop a life-time PTSD.
- PTSD reflects pathology of a mechanism which is supposed to use past experiences to avoid current or future hazards. PTSD becomes apparent when an individual processes the trauma in a way that leads to a sense of serious current threat. PTSD may be a consequence of a dysfunctional psychoneurophysiological system trying to understand and predict the world.
- PTSD may significantly change accross time. Nothing can ever undo psychotraumatic event that happened in the past, but there may be a way to undo what the past is doing to a patient in the present.
- Spontaneous recovery as well as recovery after professional help is to be expected unless treated without social support or in ways that increased secondary gain. PTSD can become a chronic mental disorder and persist for decades and sometimes for a lifetime. Psychotic symptoms are present in as many as 15-64% of the PTSD patients.
- PTSD starts up with a normal response to an abnormal situation, has a waxing and waining course and may be an opportunity or chance for psychological and spiritual growth. Trauma is not only injurious but it may also be a source of challenge and personal growth.
- Individuals with PTSD show functional and morphological changes of the brain. Areas implicated include the amygdala, hippocampus and prefrontal cortex. Various and multiple neurotransmitter and neuroendocrine pathways may be involved in the PTSD development. Proposed biological markers (hypocorticalism, supersupression in DST, smaller hyppocampi, etc.) are visible statistically when comparing groups, but they cannot diagnose PTSD.
- The pathways leading to PTSD are complex and usually include sequential processing networks that leads to specific pathologies as well as parallel processing networks that are interconnected and exchange and spread maladaptive informations and beliefs.
- The PTSD has a status of the well defined disorder with a clear point of onset, but in practice it is not always easy diffrentiated from pseudo-PTSD, factitious and the second-gain associated disorders. PTSD diagnosis is commonly used for disability compensation-seeking in both civilian and military domains.
- The simultaneous presence of multiple pathological conditions in patients with PTSD is more a rule than an exception in all populations of patients. According to epidemiological surveys rates of life-time comorbidity are between 62 and 92%. PTSD is strongly associated with at least one measure of suicidality such as suicidal ideation, behaviors, plans, attempts, or completed suicides.
- Exposure to early trauma and chronic stress may be a risk factor for PTSD as well as for many mental and somatic disorders and their comorbidity. Increased vulnerability or decreased resilience may be a risk factor for PTSD as well as for many mental and somatic disorders and their comorbidity.
- Personality features like neuroticism, impulsivity, pessimism, etc., perceived lack of parental care, disrupted circadian rhythms etc., may contribute to the development of PTSD. Unhealthy life styles may be a risk factors for PTSD as well as for various mental and somatic disorders and their comorbidity.
- Demoralization characterized by feelings of helplessness, hopelessness, subjective incompetence, and a loss of mastery and control, was found to be very common syndrome in PTSD. The placebo response rates in patients with PTSD vary from 19% to 62%.

Table 2. What we don't know about PTSD?

We don't know:

- what is the underlying psychopathophysiological essence and nub of PTSD as well as what are causes of the failure of posttrauma natural recovery.
- what precisely causes the physical, cognitive, emotional and behavioral dysfunctions in psychotraumatized individuals, when these dysfunctions set in as PTSD, why they are manifested in the way they are and how they evolve.
- how much and what kind of adversity someone can face and still be healthy or normal as well as when and how a traumatic event may lead to psychological and spiritual growth.
- whether or not there are specific types of traumatic events and emotional experiences and levels of exposure to them that are associated with a syndrome that is cohesive in terms of clinical presentation, biological correlates, familial patterns, and longitudinal diagnostic stability.
- why some individuals develop PTSD and others depression, traumatic neurasthenia, traumatic simple phobia, psychotic disorder, borderline personality disorder or dissociative disorders following exposure to the same psychotraumatic events.
- whether PTSD represent only a developmental phase of DSM Axis I psychopathology or DSM Axis I indenpendant and nosologically specific pathological condition.
- whether vulnerability factors for depression, anxiety disorders and psychotic disorders may serve as vulnerability factors for PTSD as well as whether peritraumatic dissociation reliably predicts PTSD.
- what are possible antecedent biomarkers which indicate the risk of developing PTSD, whether lower cortisol levels shortly after trauma predict subsequant PTSD and whether corticosteroid injection really prevents it as well as whether small hippocampal volume represents a pre-trauma risk factor or a permanent „brain scar" from the psychotrauma.
- how to distinguish multiple kinds of traumatic (iconic, attributed, factitious, fictitious or malingering, belated, etc.) memory.
- how we can really distinguish „traumatic" from „nontraumatic" stressors as well as how to make appropriate differentions between real or true PTSD, the second-gain related disorde and false or factitious PTSD.
- what is the clinical course of pharmacologically untreated PTSD, what are the effects of ethnicity and culture on the clinical phenomenology of PTSD and how to distinguish pathogenic from pathoplastic factors in PTSD.
- if there are different subtypes of PTSD, e.g. dissociative vs. hyperarousal (hyperconditioned), as well as what is the relationship between PTSD and complex PTSD.
- if PTSD, posttraumatic mood disorders (PTMD), posttraumatic psychotic disorder (PTPD) and posttraumatic embitterment disorder (PTED) represent different types of the traumatic stress induced mental disorders or different dimensions of the same unitary phenomenon.
- how to make differentiation in clinical practice between PTSD that is a reactive transient mental disorder from PTSD which is a Large Gate into various psychiatric disorders and somatic diseases.
- whether the substantial psychiatric comorbidity associated with PTSD is a real fact or an artefact of similarity in the definition of various mental disorders and of the overlaping symptoms.
- if it is better to conceptualize PTSD as a disorder lying at a continuum of responses to traumatic stress than as a discrete entity and if there is a difference between single-blow and repeated trauma related PTSD.
- if PTSD has a real and stable psychopathological structure or its structure is variable as well as whether the latent structure of the PTSD is categorical (taxonic) or continuous (dimensional).
- why about twice as many women as men develop PTSD, even though men in general are exposed to more traumatic events.

PTSD CONCEPTS RECONSIDERATION

Current PTSD concepts have rested on several basic assumptions (see Rosen 2005). The first and fundamental, a specific class of traumatic stress events (known as the etiological criterion) is associated with a particular set of reactions and symptoms (phenomenological criteria), so PTSD represents a well-defined diagnosis and pathological entity. However, there has been disagreement about the most suitable definition of psychotrauma as well as about the factor structure and latent structure of the PTSD and its overlap with other psychiatric disorders. The distinction between real or true and false or malingering PTSD is not an easy task. PTSD diagnosis is commonly used for disability compensation-seeking in both civilian and military domains and compnesation-seeking status is associated with both higher pathological scores on clinical measures and lower treatment effectiveness (Frueh et al. 2005, Rosen 2005). According to some opinions PTSD is only one phase in a dynamic process of individual adaptation on adversities in life, and not a final, really well-defined diagnostic entity (Young 1995).

Second, characteristics of the trauma itself, rather than individual vulnerability or resilience, are the primary determinants of post-trauma morbidity. According to ICD-10 „the patient must have been exposed to a stressful event which would be likely to cause pervasive distress in almost everyone (WHO 1992). According to DSM-IV-TR the patient must have experienced, witnessed, or have been confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self and others inducing intense fear, helplessness, or horror (APA 2000). Here are two contrasting possibilities: that trauma aftereffects are the consequence of pretrauma personality defects, and alternatively, that psychotrauma largely overshadows the entire pretrauma personality (Maercker et al. 1999). A psychic trauma causes its effect through the meaning the stressful event has for the person (McNally 2005). Developmental age and level as well as inteligence seem to be very important in coping with traumatic events (Shepard 2005).

Third, PTSD is a universal phenomenon and diagnostic entity that is a consequence of traumatic stress. The fact is that PTSD is not a simple conesquence of traumatic stress but a result of the complex traumatization process and interaction of the universal aspects of responses on psychotrauma and violence with the culture-bound reactions on trauma and the personal history of the traumatized person (Chemtob 1996, Bracken 2001). Current ICD-10 and DSM-IV-TR PTSD concepts do not take into account the broad spectrum of very important issues like core beliefs changes, dissociative aspects, ruptures in personal growth and development, massive comorbidities, sociopolitical and economical context

Fourth, PTSD patogenesis is based on the peritraumatic and posttraumatic dissociative processes with unique mechanisms of the overconsolidation of traumatic memories as well as on the hyperarousal associated with process of fear hyperconditioning. A relationship between peritraumatic dissociation and subsequent PTSD is reported by many authors, but it seems that appraisals of peritraumatic dissociation, rather than peritraumatic dissociation itself, may be of bigger importance (Bryant 2005).

Fifth, there have been unique neurobiological markers that could distinguish PTSD from other mental disorders. A host of biological, psychological, social and cultural factors have been suggested as being implicated in all three important issues: the risk, the course and the outcome of PTSD. The presence of increased physiological reactivity to cues that resemble an aspect of traumatic situation is neither necessary nor sufficient for conferring the PTSD diagnosis (Orr et al. 2005). Biological (genetic) markers of the risk for developing PTSD are expected to provide some insight in this important issue (Domschke 2012). However, for the time being, neurobiological markers including molecular genetic linkage or associations to PTSD have been of minute effect size, inconsistenty replicated, and usually involved in other diagnostic categories. Better understanding of the PTSD biological markers could have significant effect on its prevention and treatment. By searching for biological markers of PTSD, biological psychiatry attempts to define this disorder as a „real“ medical condition. According to fervant critics, modern neurobiological models of PTSD are only a reflection of the fragmented, de-socialized, individualistic, consumerist ethos of the twenty-first-century United States as well as of the biochemical sense of self which now pervades popular culture, and the power of the pharmaceutical industry in modern medicine (Shepard 2005).

Sixth, it is possible to develop specific treatment methods for PTSD like psychological debriefing, neurobiofeedback or EMDR (Shapiro 2009). It will be interesting to determine whether certain symptom clusters or subtypes of PTSD are more responsive to specific treatment methods. We have various options as to how to evaluate, explain and describe simultaneous existence or sequential appearance of PTSD, PTMD, PTED, PTPD and other mental and somatic disorders. Each option includes its own hypothesis about the etiology and pathogenesis of the phenomenon, specific terminology and determines the appropriate treatment interventions.

The last, but not the least, despite frequent references to possibilities of personal, psychological and spiritual change and growth, current PTSD concepts remain dominated by a pathogenic and deficit-oriented paradigm. Mental health professionals commonly lack the conceptual and technical tools to evaluate strengths and resources as well as to intervene to enhance salutogenesis and the resilience of the traumatized people. The strength and salutogenesis perspective does not argue against adressing the problems and pathology perspective (Jakovljević 2008), but the greater the potential growth perceived, the grater the possibility for actual growth through psychotrauma. However, the premature insisting on strength related questions might lead the traumatized patient to feel misunderstood and even manipulated. The process of moving a PTSD patient from the „problem-saturated story“ towards „personal growth-oriented story is a very complex treatment strategy (Jakovljević et al. 2012).. It is not so easy to translate certain aspects of strength-resiliene theory in clinical field, but the strength-resilience perspective is an efficient framework for putting together fragmented models under a common transdisciplinary umbrella (see Jakovljević et al. 2012).

CONCLUSION

The current concepts of PTSD as an unitary nosological entity are mired in controversies, so that we are still far from general consensus. Psychiatry is more and more expected to heal the grief after losses and traumas, explain evil, provide clues to the meaning and purpose of life and promote adaptive strategies, personal growth and public mental health. Therefore, psychiatry should be familiar with concepts such as positive mental health, sinchronicity, free will, the self-determination theory, transcendence, context-specific meaning, sense of purpose in life, life mission, resilience and vulnera-

bility in addition to its medical model rooted in phenomenology and neurosciences. Transdisciplinary, multiperspective models may provide integration of these forementioned concepts in theory and practice of PTSD. With regards to the resolution of PTSD puzzle various disclipnes are involved like the medicine of stress, psychotraumatology, general and special psychopathology, abnormal psychology, anthropology, psychosomatic medicine, behavioral medicine, mind-body medicine, biopsychosocial medicine, and integrative psychiatry. Conflict between various concepts of psychotrauma-related disorders and our current knowledge will probably bring with itself a new scientific paradigm with new diagnostic phenotypes and refining the old ones. In this paper we compiled an extensive set of facts and meta-facts in order to understand the nature of traumatic stress and negative life events and their role in the genesis of PTSD. A growing body of controversial evidence and concepts and its critical reconsideration remind us that we are still at the beginning of our understanding of the complexity of psychotraumatic processes.

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REFERENCES

1. *Benedek DM & Wynn GH: Introduction. In Benedek DM & Wynn GH (eds): Clinical Manual for Management of PTSD, 3-9. American Psychiatric Publishing, Inc., Washington 2011.*
2. *Bracken P: Post-modernity and posttraumatic stress disorder. Social Science and Medicine, 2001; 53:733-743.*
3. *Bryant RA: In the aftermath of trauma: Normative reactions and early interventions. In Rosen GM (ed): Posttraumatic Stress Disorder – Issues and Controversies., 187-211. John Wiley & Sons, Ltd, 2005.*
4. *Chemtob C: Posttraumatic stress disorder, trauma and the culture. In Lieh Mak F & Nadelson C (eds): International Review of Psychiatry, 257-292. APA, Washington, DC, 1996.*
5. *Domschke K: Patho-genetics of posttraumatic stress disorder. Psychiatria Danubina 2012; 24:267-273.*
6. *Drozdek B: The rebirth of contextual thinking in psychotraumatology. In Gregurek R, Drozdek B, Lindy JD & Bras M (eds): Therapist' Affective Responses in Intercultural treatment of Complex Posttraumatic States, 23-55. IX International Summer School of Psychotrauma, Dubrovnik 2007.*
7. *Frueh BC, Elhai JD & Kaloupek DG: Unresolved issues int he assessment of trauma exposure and posttraumatic reactions. In Rosen GM (ed): Posttraumatic Stress Disorder – Issues and Controversies., 63-84. John Wiley & Sons, Ltd, 2005.*
8. *Jakovljević M: Neurobiology of psychotraumatic experience – Is PTSD really a unique psychopathological and diagnostic entity? Psychiatria Danubina 1998; 10:75-78.*
9. *Jakovljević M: Transdisciplinary holistic integrative psychiatry – A wishful thinking or reality? Psychiatr Danub 2008; 20:341-348.*
10. *Jakovljević M: Post-traumatic stress disorder (PTSD): A tailor-made diagnosis for an age of disenchantment and disillusionment? Psychiatria Danubina 2012; 24:238-240.*
11. *Jakovljević M, Brajković L, Jakšić N, Lončar M, Aukst-Margetić B & Lasić D: Posttraumatic stress disorder (PTSD) from different perspectives: A transdisciplinary integrative approach. Psychiatria Danubina 2012; 24:246-255.*
12. *Maercker A, Solomon Z & Schutzwohl M: Introduction: Developmental-related trauma studies. In Marcker A, Schuetzwohl M & Solomon Z (eds): Post-Traumatic Stress Disorder – A Life Span Developmental Perspective, 1-4. Hogrefe & Huber Publishers, Seattle, 1999.*
13. *McNally RJ: Conceptual problems with the DSM-IV criteria for posttraumatic stress disorder. In Rosen GM (ed): Posttraumatic Stress Disorder – Issues and Controversies, 1-14. John Wiley & Sons, Ltd, 2005.*
14. *Orr SP, McNally RJ, Rosen G & Shalev AY: Psychophysiologic reactivity: Implications for conceptualizing PTSD. In Rosen GM (ed): Posttraumatic Stress Disorder – Issues and Controversies., 101-126. John Wiley & Sons, Ltd, 2005.*
15. *Roberge MA, Dupuis G & Marchand A: Post-traumatic stress disorder following myocardial infarction: Prevalence and risk factors. Can J Cardiol 2010; 26(5):e170-175.*
16. *Rosen GM: Preface. In Rosen GM (ed): Posttraumatic Stress Disorder – Issues and Controversies, xi-xii. John Wiley & Sons, Ltd., 2005.*
17. *Shapiro R (ed): EMDR Solutions II: For Depression, Eating Disorders, Perfomance, and More. W.W. Norton & Company, New York & London, 2009.*
18. *Shephard B: Risk factors and PTSD: A historian's perspective. In Rosen GM (ed): Posttraumatic Stress Disorder – Issues and Controversies., 39-61. John Wiley & Sons, Ltd, 2005.*
19. *Southwick SM, Litu BT, Charney D & Friedman MJ (eds): Resilience and Mental Health: Challenges Across the Lifespan (Preface), xi-xv. Cambridge University Press, 2011.*
20. *Stein DJ, Blanco C & Friedman MJ: Preface. In Stein DJ, Friedman MJ & Blanco C (eds): Post-traumatic Stress Disorder,xi-xiii. Wiley-Blackwell, Oxford, 2011.*
21. *Tedeschi RG & McNally RJ: Can we facilitate posttraumatic growth in combat veterans? American Psychologist 2011; 66:19-24.*
22. *Vaillant GE: Positive mental health: is there a cross-cultural definition. World Psychiatry 2012; 11:93-99.*
23. *Wessely S: War stories: Invited Comentary on… Documented combat exposure of US veterans seeking treatment for combat-related post-traumatic stress disorder. British Journal of Psychiatry 2005; 186:473-475.*
24. *Young A: The harmony of Illusions. Inventing Post-Traumatic Stress Diisorder. Princeton University Press, New Jersey, 1995.*

Correspondence:

Prof. dr. Miro Jakovljević, MD, PhD
Department of Psychiatry, University Hospital Centre Zagreb
Kišpatićeva 12, 10000 Zagreb, Croatia
E-mail: predstojnik_psi@kbc-zagreb.hr