

Overview of Psychological Trauma

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Abstract: - *The aim of the paper is to provide an overview of different facets of psychological trauma. Psychological trauma otherwise known as Post-Traumatic Stress Disorder, has significant prevalence globally, affecting those who are involved and those around them. This paper is an attempt to provide comprehensive information of psychological trauma, its observation in history, its evolution in diagnostic criteria until the most recent version of DSM. Epidemiology of psychological trauma reveals that PTSD has considerable prevalence in the general population. Gender differences, trauma in children and adolescence, areas of trauma studies in Indian context, assessment tools for measuring PTSD, the biological basis for psychological trauma are also discussed along with the new but controversial field of transgenerational epigenetics. The paper also highlights different evidence-based therapies.*

Keywords: - *Psychological trauma, post-traumatic stress disorder, transgenerational epigenetics, DSM-5, Evidence-based therapies, EMDR*

Introduction

History and evolution of psychological trauma in psychology

The word Trauma is derived from the Greek word for 'wound'. Pierre Janet (1889) and Sigmund Freud (1893) connected psychological effects of traumatic events, particularly sexual trauma (Herman; 1992, Laura K. Jones, Jenny L. Cureton, 2014). Psychological first aid was first developed to help World War I soldiers overcome their symptoms of uncontrollable weeping and screaming, memory loss, physical paralysis (shell shock), and lack of responsiveness (Ringel & Brandell JR, 2011) and which were the basis for current theories and definitions of trauma. Investigations of traumatic stress and interventions for survivors emerged following World War I, as a means of rehabilitating soldiers for redeployment (van der Kolk, 2007).

A distinct PTSD diagnosis was first introduced in the third edition of the DSM (DSM-III; APA, 1980). A very similar syndrome is classified in ICD-10 (The ICD-10 Classification of Mental and Behavioural Disorders: Clinical Descriptions and Diagnostic Guidelines)

The publications of the DSM-IV and DSM-IV-TR brought a considerably more inclusive definition of trauma (APA, 1994, 2000). Varied events as a car accident, a natural disaster, learning about a death of a loved one, and even a particularly difficult divorce were considered variations of traumatic experience. This expanded definition engendered a 59% increase in trauma diagnoses (Breslau & Kessler, 2001). In DSM 5, which was published in 2013, PTSD became "Trauma-and Stressor-Related Disorders" and was removed from the sub-category of "Anxiety Disorders". Psychological trauma is alternately spoken of as trauma and PTSD in this paper.

Epidemiology of trauma

Nearly 90% of the general population endorses experiencing one or more traumatic events (with the modal number of trauma exposures being three), such as sexual or physical assault, combat, motor vehicle accidents, and natural disasters (Lancaster, C. L., Teeters, J. B., Gros, D. F., & Back, S. E. (2016). WHO World Mental Health (WMH) conducted surveys to obtain representative data on trauma-specific PTSD in 24 countries. In total, 70.4% of respondents experienced lifetime traumas,

with exposure averaging 3.2 traumas per capita (Kessler, R. C., et al (2017). Traumas involving interpersonal violence had highest risk. 30.5% were exposed to four or more traumatic events. Five types – witnessing death or serious injury, the unexpected death of a loved one, being mugged, being in a life-threatening automobile accident, and experiencing a life-threatening illness or injury – accounted for over half of all exposures. Rates of PTSD are much higher in post-conflict settings such as Algeria (37%), Cambodia (28%), Ethiopia (16%), and Gaza (18%) (Matthew J. Friedman, National Center for PTSD). Interestingly, being married was the most consistent protective factor. (Benjet, C et al, 2015).

Studies of prevalence and of general population will significantly help in estimating the number of existing trauma cases in order to plan treatment and care. It also helps identify the events that can lead to potential trauma for preventive support.

Gender differences and Trauma in children & adolescence

Post-traumatic stress disorder (PTSD) affects men and women differently. Not only are women twice as likely as men to develop PTSD, they experience different symptoms and comorbidities associated with PTSD. (Pooley et al. (2018). Research has shown that traumatic childhood experiences not only are extremely common but also have a profound impact on many different areas of functioning. Chronic trauma interferes with neurobiological development and the capacity to integrate sensory, emotional and cognitive information into a cohesive whole (van der Kolk, 2009).

Trauma studies in India

Studies from India have shown presence of PTSD as a psychiatric morbidity after various natural as well as man-made disasters, though to a variable extent (Pillai, Lalitha & G. Mehta, Suresh kumar & L. Chaudhari, Bhushan. (2016), the impact of various traumatic events in Kashmiri on its population, especially children (Mushtaq, R., Shah, T., & Mushtaq, S. (2016), the December 2004 tsunami in Tamil Nadu, recorded prevalence of

posttraumatic stress disorder among adults at 12.7% (Kumar, M. S., Murhekar, M. V., Hutin, Y., Subramanian, T., Ramachandran, V., & Gupte, M. D. (2007). There are no significant studies in PTSD with relation to children and women who are victims of human trafficking in India. As per the Ministry of Women and Child Development estimates, out of the three million females in prostitution in the country, an estimated 40 percent are children (Karandikar et al., 2013; Pandey, Sonal. (2018).

Assessment of trauma

There are two main types of measures used in PTSD assessment (evaluation): Structured interviews like the Structured Clinical Interview for DSM (SCID) and Self-report Questionnaire like PTSD Checklist (PCL) (see: www.ptsd.va.gov) .

Biological basis for trauma

Neurobiological research indicates that PTSD may be associated with stable neurobiological alterations in both the central and autonomic nervous systems like hyperarousal of the sympathetic nervous system, increased sensitivity and augmentation of the acoustic-startle eye blink reflex, and sleep abnormalities. Neuropharmacological and neuroendocrine abnormalities have been detected in most brain mechanisms that have evolved for coping, adaptation, and preservation of the species. Structural brain imaging suggests reduced volume of the hippocampus and anterior cingulate. Functional brain imaging suggests excessive amygdala activity and reduced activation of the prefrontal cortex and hippocampus. (Friedman, M.J., Charney, D.S. & Deutch, A.Y., (1995); Shiromani, P. J., Keane, T. M., & LeDoux, J. E. (Eds.), (2009).

Transgenerational epigenetics and psychological trauma

There has been a broad, interdisciplinary approach to the question of whether and how the experience and consequences of surviving trauma is passed from one generation to the next

(Lehrner.A and Yehuda.R, 2018). At present, there are more than 500 published articles and numerous

books on the intergenerational transmission of trauma, with a small body of work investigating affects in the third generation (Lehrner.A and Yehuda.R, 2018).

Epigenetic mechanisms are highly dynamic and allow cells to respond to changes in their environment, thereby contributing to the plasticity of the brain and thus the way the brain responds to environmental challenges such as stress and, as a consequence, facilitating learning

And memory Evidence indicates that stressful events can have an effect on the offspring in utero, and that epigenetic marks altered early in life may persist into adulthood. A new and controversial area of research, however, suggests that epigenetic modifications could be inherited through the germline, a concept known as transgenerational epigenetics.

Treatment for Trauma

Evidence-based therapies:

PTSD is rooted in both biological and psychological factors with regard to onset of symptoms, development of PTSD diagnosis, and maintenance of the disorder. Across several controlled clinical trials, both pharmacological and psychological interventions have been shown to significantly reduce PTSD symptoms. Hence with regard to treatment for PTSD, commonly used modalities are evidence-based psychotherapies and pharmacotherapies (Lancaster, C. L., Teeters, J. B., Gros, D. F., & Back, S. E. (2016). Posttraumatic Stress Disorder: Overview of Evidence-Based Assessment and Treatment. *Journal of clinical medicine*, 5(11), 105. Doi: 10.3390/jcm5110105)

(i)Evidence-based psychotherapy

Among psychotherapeutic approaches, evidence-based approaches include cognitive-behavioral therapies (e.g., Prolonged Exposure and Cognitive Processing Therapy) and Eye Movement Desensitization and Reprocessing.

(ii) Exposure-Based Interventions. Exposure-based interventions are from the school of behaviorism in the 1920s. The therapist helps the patient to systematically approach, instead of avoid,

safe but feared stimuli in the absence of the feared consequences. One of the most commonly investigated and empirically-supported exposure-based protocols for PTSD is **Prolonged Exposure therapy**. The majority of patients who complete PE evidence significant and reliable reductions in PTSD symptoms. The patient revisits and describes the trauma memory aloud for a prolonged time (e.g., 30–45 min) in order to extinguish the fear response associated with the memory. This is called imaginal exposure. In addition, the patient is taught to approach safe, trauma-related situations that have been avoided because they remind the patient of the trauma. This is called in vivo exposure.

Cognitive-Based Therapies

Cognitive Processing Therapy, relies more heavily on interventions that directly target maladaptive thinking patterns. This helps the patient discover over-generalized or unhelpful automatic thoughts and to develop strategies for generating more useful or accurate thinking patterns.

EMDR

EMDR is similar to cognitive-behavioral therapies in that PTSD is viewed as a result of insufficient processing of the traumatic memory. The therapist asks the patient to bring to mind a vivid visual representation of the traumatic memory, along with the distorted belief (i.e., cognitive exposure), and to focus on the physical sensations related to the traumatic memory (i.e., interoceptive/visceral exposure). The patient is then instructed to engage in bilateral/saccadic eye movements, following the clinician's finger from left to right for several repetitions. The patient visualizes the memory while continuing to engage in the bilateral stimulation. The patient is asked what experiences emerge next (e.g., thoughts, images, emotions, or sensations), and the cycle is repeated. The patient later practices thinking the desired thought (e.g., "I can handle tough situations") with the visual image of the trauma brought to mind.

Relaxation-Based Psychotherapies

One of the most commonly investigated relaxation-based therapies for PTSD is Stress Inoculation Training. The primary goal in SIT is to increase the

patient's sense of mastery over their anxiety, and to "inoculate" patients against future episodes of pervasive anxiety and stress. Treatment therefore focuses primarily on skills training in a vast array of anxiety-management strategies such as breathing retraining, muscle relaxation, negative-thought stopping, and restructuring/challenging maladaptive cognitions. (Lancaster, C. L., Teeters, J. B., Gros, D. F., & Back, S. E. (2016).

Evidence-based pharmacotherapy

A wide variety of pharmacotherapies have received some level of research support for PTSD symptom alleviation, although selective serotonin reuptake inhibitors have the largest evidence base to date. However, relapse may occur after the discontinuation of pharmacotherapy, whereas PTSD symptoms typically remain stable or continue to improve after completion of evidence-based psychotherapy (Lancaster, C. L., Teeters, J. B., Gros, D. F., & Back, S. E. (2016).

Selective Serotonin Reuptake Inhibitors

Most of the current research on pharmacotherapy for PTSD is focused on the selective serotonin reuptake inhibitors (SSRIs) to treat PTSD. SSRIs have a broad effect on PTSD symptoms, including improvements in re-experiencing, avoidance, numbing, and hyper-arousal symptoms, and related quality of life improvements associated with the symptom reductions. (Lancaster, C. L., Teeters, J. B., Gros, D. F., & Back, S. E. (2016).

Comparison of psychotherapy & pharmacotherapy shows that the discontinuation of SSRIs is associated with the relapse of PTSD symptoms. In contrast, symptoms typically remain stable or continue to improve after completion of evidence-based psychotherapy for PTSD.

Discussion and future directions

Psychological trauma has progressed enormously from being documented as hysteria/shell-shock to PTSD and now to Trauma and Stress Related Disorders. Its diagnosis has been under constant controversy for being restrictive and less accommodating. In its evolving definition, more trauma patients are able to be diagnosed accurately

for their experiences rather than just or being deconstructed to clinical features or symptom-based treatment. Therapies that help patients look into their traumatic experiences and acknowledge associated emotions have helped alleviate their condition better. Research in transgenerational epigenetics also shows that traumatic events can pass through generations, affecting more individuals.

In India, cultural factors add to the burden of trauma, esp sexual abuse, domestic violence, molestation, making it more difficult to seek help, put words to their experience and find sufficient social support.

Conclusion

Though considerable research has been documented in relation to psychological trauma, changing social dynamics and trending research in biological sciences paves way for more work to look at.

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Appendix

Diagnostic criteria for PTSD/TSRD

Table showing the criteria for diagnosing post-traumatic stress disorder (PTSD) in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5)

Criterion	Symptoms	To qualify for diagnosis
Criterion A	Exposed to one / more event(s) that involved death / threatened death, actual / threatened serious injury / threatened sexual violation	One symptom
Criterion B	at least one of following intrusive symptoms associated with the traumatic event	One symptom
Criterion C	Frequent avoidance of reminders associated with the traumatic event, as demonstrated by one of the following	One
Criterion D	At least two of the following negative changes in thoughts and mood that occurred or worsened following the experience of the traumatic event	Two
Criterion E	At least two of the following changes in arousal that started or worsened following the experience of a traumatic event	Two
Criterion F	The above symptoms last for more than one month.	
Criterion G	The symptoms bring about considerable distress and/or interfere greatly with a number of different areas of your life	
Criterion H	The symptoms are not due to a medical condition or some form of substance use	

Sourced from DSM 5, 2013.