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Review Article

Psychiatry Section

Post-traumatic Stress Disorder (PTSD) in Children of Conflict Region of Kashmir (India): A Review

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ABSTRACT

Post-traumatic stress disorder (PTSD) occurs due to traumatic events. The last two decades have seen various traumatic events in Kashmiri population, which has led to psychological impact on all population, especially children. PTSD is one of the psychiatric disorders occurring after witnessing of traumatic events. A review of literature regarding PTSD in children of Kashmir (India) has been done to assess the prevalence, causes, neurobiology, risk factors and psychiatric co morbidity associated with it.

Keywords: Neurobiology, Psychiatric comorbidity, Traumatic events

INTRODUCTION

Human being has progressed through these passing years, however not without a price. Each epoch of progress has seen man inflicted with trauma and its consequences. In India; intra state conflicts have been frequent in the event of terrorism, paradigm of modernization and globalization. Three aspects of the conflicts are worth mentioning. The first is the increasing incidence of death rates and the process of war. Second is the divergent perception of terrorism in India, and third is the process of capitalist globalization. All these three aspects of the conflicts create internal fissures and turbulence in development of the nation. The major states in India involving internal conflicts are northeast regions like Assam, Nagaland, Mizoram and Manipur. The unapproachable lands and the little known ways of the people of the northeast keep them isolated from the country, with little interaction from rest of Indian social and economic fields. Punjab, West Bengal and Jammu and Kashmir have also been known to suffer from internal conflicts.

The last two decades have seen a lot of bloodshed in Kashmir [1]. In the last two decades, a liberation struggle between India and Kashmiri extremists has led to around 20,000 deaths and 4,000 disappearances in Kashmir (Indian). Due to this continuous turmoil, traumatic events and political insurgency, kashmiri population, especially children have been affected. The total lifetime prevalence for any traumatic experience in the community in Kashmir is 58.69% [2,3].

PTSD is one of the many responses that can occur following exposure to traumatic events. PTSD is defined by diagnostic and statistical manual of mental disorders IV (DSM IV TR) as a psychiatric disorder, in which there is development of symptoms of arousal, hypervigilance and avoidance after person has experienced or witnessed or involved with an event that involves threat to self or others and patients response occurs with fear, horror or helplessness [4,5].

A review of literature regarding PTSD in children of Kashmir (India) has been done to assess the prevalence, causes, neurobiology, risk factors and psychiatric co-morbidity associated with PTSD. We reviewed the published literature on PTSD in children in Kashmir (India) from 2006 to 2013. Further studies on Kashmiri populations exposed to traumatic events were taken. We choose 2006 to begin our review, in order to update the literature, since the study by Margoob et al., was first done in 2006. We used the DSM IV TR criteria for direct exposure PTSD to define a traumatic event and included studies published in English that measured prevalence, causes, riskfactors, comorbidity on PTSD and ECT and genetic studies done on PTSD in adults, children and special population. Our search strategy for this review involved two stages. First we used MEDLINE and Goggle scholar databases to find various studies on PTSD in Kashmir (India). Second the citations were cross referenced to remove duplicates prior to reviewing abstracts. The articles that provided information regarding PTSD in Kashmir (India) only were marked for further review.

NEUROBIOLOGY OF EARLY LIFE STRESSES AND PTSD IN CHILDREN

Heim et al., revealed that in paediatric PTSD, elevated levels of cortisol, dopamine, norepinephrine in 24 h urine sample were found. He also found elevated levels of cortisol in salivary gland of children. Abnormalities in brain electrical activity on electroencephalogram were also noted. Children with PTSD were found to perform poorly on attention, abstract reasoning and executive functioning. Although it is not possible to interpret susceptibility of PTSD patients and their family members following traumatic events, as evidence of neurobiological or genetic factors. Further it has been seen that siblings of PTSD patients have increased chances of getting PTSD [6,7].

SOCIO DEMOGRAPHICAL PROFILE OF PTSD IN CHILDREN OF KASHMIR

Although traumatic events are found in most of the societies, but prevalence of traumatic events has been investigated mostly in industrialised societies. In the last two decades Kashmir (India) has been a chronic conflict area. There has been continuous violence with political insurgency, leading to death of thousands of people, family instability, sexual abuses, damage to property and various natural disasters like earthquake, snowstorms etc. All the above factors have thus contributed towards trauma in human lives in Kashmir (India). Majority of children diagnosed as PTSD were in the age group 11-15 y. The children diagnosed as PTSD were detected in schools because of their deteriorating performance and behavioural changes. In some studies, males outnumbered females. In all the studies, it was found that most of the cases were from rural areas compared to urban areas. The reason for this was attributed to violent and traumatic events occurring more in rural areas. Further majority (75%) of children belonged to lower class, followed by middle class (25%) respectively. It was also noted that most of the cases were students (80%) and belonging to joint families (33%) [5-7].

RISK FACTORS FOR PTSD IN CHILDREN

The various risk factors associated with PTSD include lower education, lower intelligence, absence of social support, male sex, lower socioeconomic status, family history of psychiatric illness, multiple traumatic events and presence of neurotic or extroverted personality [5-7]. In Kashmir (India), the major risk factors include violent traumatic events, due to continuous turmoil over the last two decades. Every child had endorsed one traumatic event. Majority (49%) witnessing killing of a close relative, followed by witnessing arrest, torture of a close relative, caught up in cross firing, beaten up, and hearing about killing of a close relative. Many natural disasters like earth quakes and snowstorms also occurred during the last two decades, which also has led to the development of PTSD in children [5]. There is also lower literacy rate in Kashmir (54.4%) compared to other parts of India (65%). Lower literacy rate is in itself a risk factor for PTSD in children [5,8].

PSYCHIATRIC COMORBIDITY IN PTSD IN CHILDREN

PTSD occurs with other psychiatric disorders like depression, anxiety disorder, suicide and somatisation [5,6,9]. In Kashmir (India), depression and anxiety disorder are major co-morbid psychiatric disorders associated with PTSD [1-3]. However, in the paediatric population, various somatic complaints were found associated with PTSD. The somatic complaints were headache (89%), stomach ache (58%) and musculoskeletal pain (82%) [5,6,9].

Clinical features of PTSD in children

In PTSD, traumatic events disclose the patient to actual or threatened death or serious injury. There are three dimensions of PTSD and all should be present for duration of more than one month. These dimensions are: (1) re-experiencing the event with distressing recollections in form of dreams, flashbacks and with psychologic and physical distress; (2) persistent avoidance of stimuli associated with trauma that might recall memories or events of the trauma; (3) increased arousal in form of hyper vigilance, exaggerated startle response, difficulty in falling sleep, irritability and outbursts of anger [10,11].

In a study conducted by Margoob et al., in Department of Psychiatry, Government Medical College, Srinagar, Kashmir, India, 56 children diagnosed with PTSD were studied. Majority (75%) of patients in his study had witnessed number of traumatic event. Majority (85.71%) of patients in the study had a re- experiencing of traumatic event in the form of disturbing dreams/nightmares (57.41%) and distressing recollections [5,11,12]. Most (85.71%) of the cases in the study had avoidance in the form of avoidance of people, places and activities followed by avoidance of thoughts. Majority (85.17%) of the cases in his study had sleep problems/insomnia, followed by hyper vigilance (67.85%). 92.85% of the cases in his study had an acute onset of symptoms and 7.15% had delayed onset of symptoms. Majority of the cases (71.43%) were running a chronic course [5,13,14]. 64% of children had more than two presenting complaints. The somatic complaints included headache, stomach-ache, breathlessness, palpitations, loss of appetite, insomnia. Loss of consciousness was present in 50% of children, followed by irritiabilty, decreased school performance (18%), loss of interest (4%) and stammering (3%). The presentation in the PTSD symptoms in children was explained by cultural variation in the presentation of anxiety or trauma related disorders [5].

PTSD IN CHILDREN LIVING IN ORPHANAGES

PTSD is common in children living in orphanages of Kashmir (India). Many children's in the orphanages reported killing of their parents or their near ones. They had witnessed death of their relatives and had exposure to traumatic events. A total of 75 children were screened in a study done by Margoob et al., (2006). It was found in the study that 32 patients had psychiatric morbidity. Further 13 children out of 32 (40.62%) had diagnosis of PTSD. However, there are no studies done in Kashmir, which assess prevalence of PTSD in various orphanages. Although huge number of traumatized children is present in orphanages, their clinical symptomatology, treatment and neurophysiologic assessment remains under studied. Further studies are needed to find out the prevalence of PTSD in these orphanages as well as provide them adequate psychiatric intervention [14-16].

OTHER STUDIES DONE ON PTSD IN CHILDREN OF KASHMIR (INDIA)

PTSD in children of Kashmir has also been found in association with substance use disorders. Substance use disorder is very common in this part of the world, especially involving adolescents. Studies have shown that substance abuse disorder in children was 2-3 for males and 2.5 -4.5 for females associated with PTSD in Kashmir. Majority of PTSD patients were unaware of PTSD symptoms and used to do self-medication themselves for treatment of their symptoms, resulting in addiction subsequently. Multiple drugs like benzodiazepines, opioids and cannabis were being used by the patients mostly having PTSD in Kashmir. Out of all the drugs, alcohol was least (4.8%), in contrast to the studies from rest of the world. The reason for it could be that alcohol is not a socially approved beverage, as Kashmir is a muslin majority country [17].

Genetic studies have also been done on PTSD in children of Kashmir. PTSD patients of Kashmir were seen with lower frequencies of 5HTTL promoter genotypes containing the short variant (LS and SS) (68.88%) in controls, compared to cases of PTSD (77.61%), according to a study by Murtza et al., in 2006. The study also showed that in PTSD patients, there was higher prevalence of short allele, compared to long allele. These short alleles possess reduced transport capacity and had reduced uptake of 5HT than the controls. Thus, showing risk of PTSD in patients of Kashmiri population possessing short alleles [18].

Studies showing efficacy of ECT on PTSD has also been carried out in Kashmir. Margoob et al., (2010) studied 20 antidepressant refractory PTSD patients. A total of six bilateral ECT treatments were administered twice- weekly. In a study done on PTSD patients with ECT (Electroconvulsive therapy), it was seen that there was significant improvement in symptoms of PTSD, compared to controls. The improvement was measured by CAPS (Clinician Administered Post-traumatic Stress Disorder Scale). CAPS score decreased by a mean of 34.4% in PTSD patient's. Further the improvement was seen in CAPS of PTSD patients on the third EC [19].

INTERVENTIONS TO BE DONE TO PREVENT AND TREAT PTSD IN CHILDREN

Although evidence is very limited regarding best practices to treat trauma-exposed children. The various interventions to prevent and treat PTSD in children are Psychological debriefing, Brief cognitive behavioral therapy, Trauma –focused cognitive behavioural (TF-CB) therapy, EMDR (eye movement desensitization and reprocessing). The various drugs used to treat paediatric PTSD include benzodiazepines (alprazolam), mono amine oxidase inhibitors (phenelzine) and selective serotonin reputable inhibitors (SSRI'S) like setraline, fluoxetine, paroxetine and citalopram. Setraline has been FDA approved drug for treatment of PTSD [19-22].

CONCLUSION

PTSD is a highly prevalent disorder in all populations, especially children of Kashmir (India), due to it being a conflict zone. PTSD in children of Kashmir (India) has increased over the last two decades and is associated with increased risk factors and psychiatric comorbidity.

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