WAR ON TERROR – THE YOUNG SUFFERERS

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ABSTRACT

Objective: To estimate the frequency of PTSD in high school children of Bannu cantonment.

Design: Cross sectional study.

Place and Duration of Study: This study was carried out at Bannu cantonment in Sep 2009.

Patients and Methods: Every third student from class 6 to 10, with a definite history of exposure to psychological trauma, was selected from the only two high schools situated within Bannu cantonment. All students were interviewed in their schools after obtaining informed written consent. They were required to answer the 20 questions in Childhood post traumatic stress reaction index questionnaire (CPTSRI). It was administered in Urdu, with answers rated on a scale from 0 to 4. The scores were totaled to determine the severity of PTSD: 0-12: no PTSD, 13-24: mild PTSD, 25-39: moderate PTSD, 40-59: severe PTSD, 60 and above: very severe PTSD. Data was analyzed with PASW Statistics 18. For this purpose, students were divided into two groups: Group 1 containing students aged 11 to 13 years, and Group 2 comprising of students aged 14 to 16 years. Results were also compared between the two genders.

Results: There were 101 students, including 70 boys and 31 girls, with a mean age of 13.16 ± 1.39 years. PTSD was present in 62 (61.39%) of them including 41 males and 21 females (*p*: 0.388). Forty (60.61%) students from group 1 and 22 (62.86%) students from group 2 had evidence of PTSD (*p*: 0.827). Mean (CPTSRI) score was 22.73 ± 13.42, being 21.43 ± 13.03 for boys and 25.68 ± 14.04 for girls was (*p*: 0.143).

Conclusion: PTSD is very common in both male and female students from Bannu. This necessitates the implementation of screening programmes and appropriate treatment.

INTRODUCTION

Recent times have witnessed rapidly changing dynamics of modern warfare. Wars are increasingly involving anti-state elements such as rebel or terrorists who are less likely to abide by humanitarian laws for the protection of civilians[1]. Consequently, the healthy development of children is being compromised. UNICEF reports that conflicts in the last decade have killed an estimated 2 million children and have left another 6 million disabled, 20 million homeless, and over 1 million separated from their parents[2]. Pakistan faces the gruesome act of terrorism probably more than any other country in the world. Places of worship, markets, universities, banks and schools have been targeted alike. Men are women, children, adolescents and old have been traumatized by these violent attacks across the country.

It is well known that such traumatic events cause much more injuries than deaths, and that it is accompanied by social and psychological impacts. Such exposure has been associated with several mental health problems, including depression, post-traumatic stress disorder (PTSD), pathological grief, anxiety disorders, dissociative reaction, suicide and substance misuse[3]. Epidemiological surveys in the general population of the United States have shown that 15% to 24% of those exposed to violence will develop PTSD[4]. In the US, the lifetime DSM (Diagnostic and Statistial Manual of Mental Diseases)- IV prevalence of PTSD was found to be around 6.8%,[5] while in low income countries where people have experienced war, conflict or mass violence the rates were found to be much higher including 15.8% in Ethiopia, 17.8% in Gaza Strip, 28.4% in Cambodia, and 37.4% in Algeria[6].

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In the last two decades, there has been substantial research in the phenomenology and prevalence of PTSD in at risk groups of children from different ethnic groups and cultures. Epidemiological studies differ in their methodology and instruments used (screening, interviewing, two-stage procedure) and their sample size. The majority of studies refer to young people exposed to natural catastrophic events, such as floods, hurricane disasters and earthquakes, with rates varying from 37% to 91%[7]. Other researchers investigated children who had been exposed to community violence[8,9].

Despite the growing interest in impact of war and terrorism on psychosocial wellbeing of children very few studies have been conducted in countries most affected by such conflicts, including Pakistan. This study was planned to measure the fallout of such events in school children of one of the most affected cities.

PATIENTS AND METHODS

This one-phase cohort based cross-sectional study was conducted at Bannu in Sep 2009. Students were selected from two high schools situated within Bannu cantonment. They were initially screened for exposure to psychological trauma by asking the question: have you experienced a traumatic event in past one year of your life? We defined traumatic event as any exceptional feeling of helplessness and distress that a person experiences, witnesses or hears about, and which jeopardizes the physical and/or psychological integrity of the individual or those close to him/her. Students without such history were excluded from the study. In order to draw representative samples of the remaining students from class 6 to 10, every third student on the nominal roll of concerned classes was marked and interviewed in their school. In case a student refused to give information, next student on

Table-1: Answers to different questions given by the students.

S/no	Question	Score/ Grading	
		0-2	3-4
1.	Identified as traumatic	90 (89.11%)	11 (10.89%)
2.	Regular fear	89 (88.12%)	12 (11.88%)
3.	Repetitive images	88 (87.13%)	13 (12.87%)
4.	Repetitive thoughts	92 (91.09%)	9 (8.91%)
5.	Night mares	98 (97.03%)	3 (2.97%)
6.	Fear of recurrence	81 (80.20%)	20 (19.80%)
7.	Anhedonia	85 (84.16%)	16 (15.84%)
8.	Emotional detachment	88 (87.13%)	13 (12.87%)
9.	Emotional avoidance	93 (92.08%)	8 (7.92%)
10.	Emotional numbing	89 (88.12%)	12 (11.88%)
11.	Easily startled	90(89.11%)	11(10.89%)
12.	Sleep disturbance	87 (86.14%)	14 (13.86%)
13.	Memory difficulties	86 (85.15%)	15 (14.85%)
14.	Concentration difficulties	83 (82.18%)	18 (17.82%)
15.	Social avoidance	64 (63.37%)	37 (36.63%)
16.	Upset by reminders	80 (79.21%)	21 (20.79%)
17.	Somatic complaints	83 (82.18%)	18 (17.82%)
18.	Behavior outburst	93 (92.08%)	8 (7.92%)
19.	Guilt	72 (71.29%)	29 (28.71%)
20.	Sense of foreshadowing	86 (85.15%)	15 (14.85%)

(The figures represent the number of students giving the particular grading)

nominal roll was selected. Students were called in groups of five. Each group was explained the purpose of the study and informed written consent was taken. The interview included a fully structured questionnaire and scale, the childhood post traumatic stress reaction index (CPTSRI) which is specifically designed to measure PTSD symptoms in children and adolescents following exposure to a broad range of traumatic events and has been widely applied in epidemiological surveys[8]. The questionnaire contained 20 questions translated into urdu, with answers rated on a scale from 0 to 4. The students were required to answer all of them. All the queries raised by students were settled by one of the authors of study present there. The scores were totaled to determine the severity of PTSD: 0-12: no PTSD, 13-24: mild PTSD, 25-39: moderate PTSD, 40-59: severe PTSD, 60 and above: very severe PTSD.

Data was analyzed with PASW Statistics 18. For this purpose, students were divided into two groups: group 1 consisted students aged 11 to 13 years, and group 2 comprised of students aged 14 to 16 years. Results were also compared between the two genders. All data was described as mean ±SD. Student's t test was used to measure the significance of differences between means, with a cut off level of 95%. Chi square test was used for comparing nominal data/frequencies. We did not compare the results between the two schools as all of them were present in the same locality and there was no difference between the students as regards their epidemiology and social background.

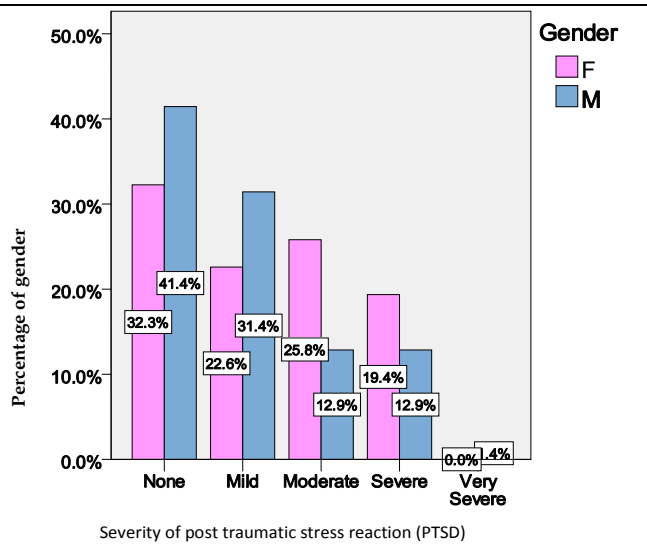

Figure-1: Frequency of post traumatic stress reaction (PTSD) in the two genders.

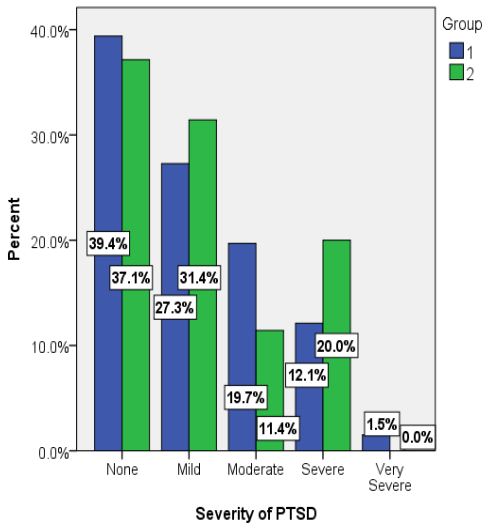

Figure-2: Frequency of post traumatic stress reaction (PTSD) in the two age groups.

RESULTS

We enrolled 101 children, mostly male students. Group 1 comprised of 52 (78.79%) boys and 14 (21.21%) girls (total: 66) whereas there were 18 (51.43%) boys and 17 (48.57%) girls (total: 35) in group 2. PTSD of varying severity was seen in 62 (61.39%) of them, including 41 males and 21 female students. Amongst the male students, 58.57% had PTSD whereas 67.74% of females were affected (*p*: 0.388). The mean score of CPTSDRI was 22.73 ± 13.42, being 21.43 ± 13.03 for boys and 25.68 ± 14.04 for girls was (*p*: 0.143). With regards to the two age groups, 40 (60.61%) students from group 1 and 22 (62.86%) students from group 2 had evidence of PTSD (*p*: 0.827). Average CPTSD-RI score for Group 1 was 22.36 ± 13.39 while that for group 2 was 23.43 ± 13.65 (0.706). Figure-1 and 2 depict the frequencies of

varying shades of PTSD in different genders and age groups. The questionnaire contained 20 questions, each of which had a graded answer between 0 and 4. For interest of the readers, the students' responses to these different questions have been summarized in table-1.

DISCUSSION

War violates every right of a child-the right to life, the right to be with family and community, the right to health and the right to be nurtured and protected. Many of today's conflicts last the length of a ''childhood'', meaning that children will experience multiple and cumulative assault. Our study population is no different as people have been living in terrorism affected area for many years. By definition, PTSD can emerge following exposure to a traumatic event. Exposure takes many forms including direct victimization or indirect exposure through witnessing traumatic events such as accidents, domestic violence, murder, terrorism and war[10]. The defining characteristic of a traumatic event is its capacity to provoke fear, helplessness or horror in response to the threat of injury or death. Events that give rise to PTSD typically involve interpersonal violence (e.g. rape, assault and torture), exposure to life-threatening accidents (e.g. motor vehicle accidents) or disasters (e.g. fires and earthquake)[11].

Our study population had significantly high rates of post traumatic stress reactions than those quoted by other researchers. A study of adolescent victims of a severe earthquake in Taiwan showed the incidence of PTSD symptoms was 7.0% in girls and 5.2% in boys[12]. A study of 121 Palestinian children living in an area of bombardment showed that 54% suffered severe, 34% moderate and 11% mild and doubtful levels of PTSD, with girls being more vulnerable[13]. An explanation for relatively higher frequency of PTSD observed in our study could be due to the fact that children continue to be in an insecure state with increased anxiety levels. Almost all of the children in the locality witnessed traumatic events in the form of bomb blasts, suicidal attacks, small arm fires and violence. These events which started 4-5 years earlier continue to date. Indirect effects of these events are caused by interruption in the studies due to curfews and other restrictions.

In our study the difference between two age groups was not statistically significant, possibly because of the minimal age difference. A group involving children less than 10 years of age might have been more significant.

Although female gender is a well-known risk factor for PTSD, the difference was not statistically significant in our study. Rather, milder form of PTSD was more common in boys than girls. Karunakara UK et al demonstrated that the frequency of PTSD was significantly higher in girls amongst a refugee population of Sudan in contrast to the settled population where males were affected more than females[14]. Although we did not ask about the total number of traumatic events to which the child was exposed, but it is likely that males were exposed to significantly more traumatic events than females. Additionally, the social network in Bannu area is such that women remain ill-informed about most of the indirect traumatic events.

We used CPTSRI to detect PTSD in children which can be administered through self-report and has also been translated into different languages[15]. Inter-rater reliability for this instrument when administered by a clinician has been reported to be high, with a Cronbac's alpha of 0.87 for inter-item agreement[8]. Although a number of studies have used the CPTSRI and the classification of its total scores into mild, moderate, severe and very severe, the clinical implications of scoring system remain unclear. Goenjan et al found that the severe categories correctly identified 78 percent of subjects who met DSM criteria for PTSD[16].

A limitation of this study is that the only mental health variable considered by this study is PTSD. In populations that suffer from war, a high level of depression, anxiety, psychosocial

dysfunction, and unexplained somatic symptoms can be expected in addition to PTSD, resulting in a considerable mental health burden[17]. Similarly other mediatory variables particularly related to impact of trauma on parents were not investigated. Care givers' ability to cope with traumatic event has been associated with outcome of PTSD in children[18]. Secondary adversities such as school and social network disruptions are also important. For example, Farhood et al found that Lebanese family members were confident that they could rely on social support to deal with problems of various natures during the war[19]. A high level of social support, family cohesiveness and family communication has been found to protect children by mediating the effects of trauma.

In any case, this study has important implications for the detection of traumatized and at risk children. A local forum of teachers, social workers and health professionals could develop screening procedures. This should be based on both symptomatic presentations of PTSD and other mental health problems, and existence of known vulnerability factors. Although the discussion of specific interventions for traumatized children is beyond the merit of this study, it should be emphasized that school should provide the basis for screening, detection and intervention in population which has experienced psychotrauma, in partnership with parents[20]. Training of teachers could improve the recognition and management of child mental health problems.

CONCLUSION

PTSD is very common in the terror- struck children from Bannu and the prevalence is expected to increase further considering the continuing exposure. The alarming frequency demands strict implementation of screening programmes in schools. The teachers need to be trained appropriately in this regard so that they can identify cases at the earliest. Only then we can provide treatment and arrest the disease process at its initial stages.

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