Gender comparisons and prevalence of child abuse and post-traumatic stress disorder symptoms in adolescents

Farzana Ashraf,1 Faiza Niazi,2 Afsheen Masood,3 Sadia Malik4

Abstract
Objective: To identify the gender differences, prevalence and cross-association of abuse and post-traumatic stress disorder symptoms in school-going adolescents.

Methods: The cross-sectional study was conducted in four government schools of Lahore, Pakistan, from February to June 2016, and comprised students aged 11-18 years who were selected through simple random sampling technique. The Child Abuse Scale: Adolescent Version and Hopkins Symptoms Checklist were used to measure the gender differences, prevalence and cross-association of abuse and post-traumatic stress disorder symptoms. SPSS 22 was used to analyse data.

Results: There were 478 participants with a mean age of 15.18±1.45 years. Of the total, 247(52%) subjects were males and 231(48%) were females. The overall, 130(27%) male respondents reported significantly high abuse than 101(21%) female adolescents (p=0.032). However, 113(23%) females scored significantly high on physical and emotional sub-scales of abuse than 98(21%) males (p=0.031). No significant gender differences in the prevalence of sexual abuse were observed (p=0.431). On post-traumatic stress disorder symptoms, 140(29%) females demonstrated high scores than 102(21%) males (p=0.008). Association of child abuse with post-traumatic stress disorder symptoms was also significant (p=0.008) as 133(28%) subjects reporting high abuse also exhibited high symptoms of post-traumatic stress disorder.

Conclusion: Significant association of abuse with post-traumatic stress disorder symptoms emphasise the need for early identification and timely management of abuse and post-traumatic stress disorder symptoms in adolescents.

Keywords: Child abuse, PTSD symptoms, Adolescents. (JPMA 69: 320; 2019)
studies did not reveal any significant gender differences in prevalence of PTSD symptoms among adults exposed to any sexual abuse/trauma. Whereas, from samples of children and adolescents, girls were approximately twice as likely to demonstrate the symptoms of PTSD compared to boys. However, the gender differences in the prevalence of other forms of abuse particularly in association with PTSD symptoms have remained unexplored. Also, previously no empirical studies examining prevalence and association of abuse and PTSD symptoms in the local context have been documented. The current study was planned to investigate the gender differences, prevalence and association of child abuse and PTSD symptoms in adolescents.

**Subjects and Methods**

The cross-sectional study was conducted at four government schools of Lahore, Pakistan, from February to June 2016, and comprised students aged 11-18 years studying in grades 6-10. The selection of schools was made through probability cluster sampling technique. Administratively, Lahore is divided into nine regions and one of these region comprises Township, Model Town and Faisal Town. The Govt. Model Town High School for boys, the Govt. Model Town Higher secondary School for boys, the Govt. Model Town High School for girls, and the Govt. Model Town Elementary School for girls were the four schools that were selected from the area of Model Town. Approval for the study was obtained from the Education District Board Officer (EDO), Lahore. The sample size was determined by using the OpenEpi software assuming a well proportionate sample distributed across both genders with 5% error margin and 95% confidence interval (CI). In order to be sure about normal distribution of sample and generalisability of findings, the students identified with any major psychological problems, mental deficits, neurological deteriorations, physical disabilities or those referred for counselling or psychiatric services were excluded.

Two self-report instruments were used. The first was the Child Abuse Scale: Adolescent Version, assessing three dimensions; physical and emotional abuse, physical and emotional neglect, and sexual abuse, with responses measured on 7-point scale ranging from strongly disagree=1 to strongly agree=7. The second instrument used was the Hopkins Symptoms Checklist assessing two dimensions; depression, and anxiety symptoms, with response options from 0=not at all to 3=to a greater extent. The respondents were recruited through simple random sampling technique. SPSS 22 was used for data analysis. To identify the prevalence of child abuse in male and female adolescents, crosstab analysis was run. Low and high prevalence were calculated by identifying the median value for the relevant samples. This method has been previously followed by several studies. Crosstab analysis and Chi-square test of association were calculated at minimum of p<0.05 significance level.

**Results**

Of the 500 questionnaires equally distributed across the genders, 487(97.4%) were returned, and, of them, 9(1.8%) were excluded due to random responses, outliers and missing responses. The final sample size stood at 478(95.6%) adolescents of whom 247(52%) were males and 231(48%) were females. The overall mean age was 15.18±1.45 years (range: 11-18 years). In terms of education level, 89(18.7%) were from grade 6, 96(20%) grade 7, 84(17.5%) grade 8, 107(22.3%) grade 9 and 102(21.5%) were from grade 10.

Overall, 130(27%) males reported high percentages on child abuse then 101(21%) females (p=0.032). However, 113(23%) females scored significantly high on physical and emotional sub-scales of abuse than 98(21%) males (p=0.031). A total of 136(29%) males exhibited physical and emotional neglect compared to 92(19%) females (p=0.008). No significant gender differences in the prevalence of sexual abuse were observed (p=0.431) (Table-1).

### Table-1: Demographics.

<table>
<thead>
<tr>
<th>Measures</th>
<th>Male Adolescents (N=247)</th>
<th>Female Adolescents (N=231)</th>
<th>χ</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low f (%)</td>
<td>High f (%)</td>
<td>Low f (%)</td>
<td>High f (%)</td>
</tr>
<tr>
<td>Child Abuse</td>
<td>116 (25%)</td>
<td>131 (27%)</td>
<td>130 (27%)</td>
<td>101 (21%)</td>
</tr>
<tr>
<td>Physical &amp; Emotional Abuse</td>
<td>149 (31%)</td>
<td>98 (21%)</td>
<td>118 (25%)</td>
<td>113 (23%)</td>
</tr>
<tr>
<td>Physical &amp; Emotional Neglect</td>
<td>111(23%)</td>
<td>136 (29%)</td>
<td>139 (29%)</td>
<td>92 (19%)</td>
</tr>
<tr>
<td>Sexual Abuse</td>
<td>132 (28%)</td>
<td>115 (24%)</td>
<td>120 (25%)</td>
<td>111(23%)</td>
</tr>
<tr>
<td>PTSD Symptoms</td>
<td>145 (30%)</td>
<td>102 (21%)</td>
<td>91 (19%)</td>
<td>140 (29%)</td>
</tr>
<tr>
<td>Anxiety</td>
<td>165 (35%)</td>
<td>80 (17%)</td>
<td>108 (23%)</td>
<td>125 (26%)</td>
</tr>
<tr>
<td>Depression</td>
<td>156 (33%)</td>
<td>91 (19%)</td>
<td>119 (25%)</td>
<td>112 (23%)</td>
</tr>
</tbody>
</table>

PTSD: Post-traumatic Stress Disorder.
On PTSD symptoms, 140(29%) females demonstrated high scores than 102(21%) males (p=0.008). Association of child abuse with PTSD was also significant (p=0.008) as 133(28%) subjects reporting high abuse also exhibited high symptoms of post-traumatic stress disorder. Particularly in case of physical and emotional abuse, association was significantly high as 174(31%) adolescents reporting PTSD symptoms also experienced abuse in childhood (p=0.0001). Although physical and emotional neglect was not significantly associated with overall PTSD symptoms (p=0.238), the association was significant with anxiety symptoms as 103(23%) adolescents reporting physical and emotional neglect also exhibited anxiety symptoms (p=0.040).

Physical and emotional neglect was significantly associated with anxiety symptoms (p<0.01) while no association of abuse was seen with depressive symptoms.

No significant association of sexual abuse with PTSD symptoms was seen (p=0.058) but it was significant when analysed with anxiety and depressive symptoms independently (p=0.0001 each) (Table-2).

**Discussion**

Unlike the Western world, no studies have been conducted locally so far examining PTSD symptoms specifically in relation to child abuse. However, some studies found significant links of child abuse with other factors such as behavioural and emotional problems.11

The present study noted significant gender differences with dominant prevalence of abuse in male adolescents which is in contrast with a study illustrating ratio of 13% child abuse for females and 6% for males.10 The current study also demonstrated high prevalence of physical and emotional neglect in the sample of male adolescents and low for female adolescents which also differs from previous studies.
findings of a larger population-based survey in Taiwan showing high ratio of neglect for female participants.12

In the context of prevalence of sexual abuse, no significant gender differences were seen while previous literature narrated mixed findings, some highlighting high prevalence for females,11 while others reporting dominant ratio for males.10 These discrepancies in findings could be due to the geographical, cultural and tradition factors involved in child maltreatment which also make it difficult to define child abuse and maltreatment across countries and cultures.13

Childhood experiences of abuse increases the likelihood of being exposed to PTSD symptoms in adolescence. Our study also found significant association of child abuse with PTSD symptoms generally and with anxiety symptoms specifically. These findings confirmed the previous results14 from multivariate analyses reporting that the presence of PTSD symptoms fully accounted for the repetitive episodes of child sexual and physical abuse. This significant association could be due to the fact that PTSD symptoms are likely to prevail more consistently when child abuse is from trusted individual or loved ones which is usually a parent figure. Particularly, anxiety symptoms (e.g., apprehensions and fear) may be overwhelming when abuse is from one of the parent or a sibling.15

Symptoms of PTSD were not found significantly associated with overall scores on abuse measure, yet while exploring it in association with its subscales (i.e., anxiety and depressive symptoms), strong associations were observed. This could be due to the fact that majority of the respondents either reported anxiety or depressive symptoms than manifesting both. This could also imply the low prevalence of comorbidity of anxiety and depressive symptoms in adolescents exposed to child sexual abuse.

In case of association between physical abuse and emotional neglect and depressive symptoms, no significant results were seen which are in contrast with the most of the previous findings emphasising upon the childhood abuse and neglect as the strongest risk factor of depressive symptoms.16 This could be attributed towards some other factors such as resilience and emotional support which might play its role in managing the effects of child abuse and resulting into minimising the depressive symptoms.17

As is generally the case, the current study had its limitations. In this cross-sectional survey-based research, self-report measures were used. To obtain more consistent and valid observations, longitudinal study with addition of qualitative interviews may be planned. Though significant associations between PTSD symptoms and abuse were observed and measures used has been widely used and validated in the local context, as child-rearing practices are exercised differently in collectivist and individualistic cultures, therefore some upbringing practices perceived abuse in the West could be interpreted as obligation in the cultural context of Pakistan. So, there is possibility that participants’ responses were over or under rated. The sample included respondents only from government schools where in general students from low or middle lower socio-economic status are enrolled. Taking representative sample of students from private schools may enhance the validity of results and generalisability of findings. Moreover, comorbidity of depressive and anxiety symptoms in relation to physical, sexual and emotional abuse could also be explored. In addition, among all personal characteristics, age has previously1,4,11 been reported in association with abuse and PTSD, therefore examining prevalence and comorbidity of abuse and PTSD across various age groups could provide wider perspective of study findings and its implications. Further, in the light of age-related results, more stringent and structured psychiatric management plans and school counselling services could be offered.

**Conclusion**

There were significant gender differences in the prevalence of abuse and PTSD symptoms. Overall abuse was more prevalent in males, but physical and emotional abuse was higher for females. In addition, association between abuse and PTSD symptoms was also significant. Exposure to child abuse increases the vulnerability of PTSD symptoms in adolescence, therefore, timely recognition of child abuse and management of PTSD symptoms is highly recommended.

**Disclaimer:** None.

**Conflict of Interest:** None.

**Source of Funding:** None.

**Reference**


