

## Abuse among school going adolescents in three major cities of Pakistan: Is it associated with school performances and mood disorders?

Saleem Khawaja,<sup>1</sup> Adeel Akbar Khoja,<sup>2</sup> Komal Motwani<sup>3</sup>

### Abstract

**Objective:** To assess the proportion of various types of abuses and their association with school performances and psychological stress among adolescents from three major cities of Pakistan.

**Methods:** The cross-sectional school survey was conducted from March to September 2009, comprising adolescent students at six schools in Karachi, Lahore and Quetta. Data was collected using a self-administered and pre-tested questionnaire by trained medical students. SPSS 16 was used for statistical analysis.

**Results:** Of the 414 subjects in the study, there were 223(54%) boys and 191(46%) girls with an overall mean age of  $14.36 \pm 1.08$  years. In all, 140(33.7%) participants were physically abused and 236(57%) participants were verbally abused in the preceding 12 months. Besides, 245(59.2%) were involved in physical fight and 195(47.1%) had suffered injury during the preceding year. There were 171(41.4%) subjects having suffered bullying during the same period. Verbal abuse ( $p=0.05$ ), physical fight ( $p=0.05$ ) and bullying ( $p<0.001$ ) were significantly associated with poor school performances among adolescents. Physical abuse ( $p=0.05$ ), verbal abuse ( $p=0.003$ ), injury ( $p=0.02$ ) and bullying ( $p<0.001$ ) were significantly associated with psychological stress.

**Conclusion:** Various types of abuse were quite prevalent in adolescents that were significantly associated with poor school performance and poor mental health.

**Keywords:** Abuse, Adolescents, Pakistan. (JPMA 65: 142; 2015)

### Introduction

Abuse among adolescents is a major public health problem. World Health Organisation (WHO) defines violence as "the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation".<sup>1</sup> That adolescents are witness to or victims of violence, is not a novel finding. A growing number of reports describe such exposure. In the United States, for example, violence against adolescents is a major cause of morbidity and mortality among this age group.<sup>2</sup> Violence occurring on school property is also a major cause of concern, resulting in injury to students.<sup>3</sup> A study reported that children and adolescents living with domestic violence are at increased risk of experiencing emotional, physical and sexual abuse, of developing emotional and behavioural problems, and of increased exposure to the presence of other adversities in their lives.<sup>4</sup>

In the United States, interpersonal violence against

adolescents has been a leading cause of death and emergency hospital attendance among this age group.<sup>5</sup> Another study reported that in Kingston, Jamaica, violence-related injuries among adolescents were responsible for 11.5% of all recorded hospital visits in the public health system.<sup>6</sup>

Bullying is a major source of victimisation among youth.<sup>7</sup> Although there has been growing interest in the topic in the last 20 years,<sup>7</sup> but the studies have mainly come from Europe and the United States. There are also some reports from India and South Korea which reveal bullying as a significant predictor of suicidal ideation among Asians.<sup>8,9</sup>

Although exposure to violence is beginning to be documented in school-going adolescents, but little data is available regarding the association of such exposure with mood disorders and academic performance. In a study, exposure to three different types of violence (exposure to aggression among peers at school, physical punishment at school, and exposure to community violence) was independently associated with poor school achievement among adolescents.<sup>10</sup> Others reported that higher exposure to violence in children correlated with poorer performance in school, symptoms of anxiety and depression, and lower self-esteem.<sup>11</sup> An Indian study reported that poor academic performance and significant psychosocial maladjustments occur in adolescents

.....  
<sup>1</sup>Sindh Government Lyari General Hospital, <sup>2</sup>Student of MSc. Epidemiology and Biostatistics, Aga Khan University, <sup>3</sup>MBBS Graduate of class 2012, Dow University of Health Sciences, Karachi, Pakistan.

**Correspondence:** Adeel Akbar Khoja. Email: adeel.e501253@student.aku.edu

exposed to violence.<sup>12</sup> However, there is dearth of information about this important topic from Pakistan. The current study, therefore, was planned to assess the proportion of various types of abuses and to identify whether it is associated with school performances and psychological stress among adolescents from three major cities of Pakistan.

## Subjects and Methods

The cross-sectional, analytical school survey was conducted from March to September 2009, comprising adolescent students at six schools in Karachi, Lahore and Quetta.

Since it was a pilot study, the sample size was calculated using the WHO calculator.<sup>13</sup> The prevalence of the risk factor was unknown, and it was taken as 50 percent to achieve the maximum sample size. The calculated sample size was 384, but 10% inflation was added to account for the non-respondents. The final sample size calculated was 426.

Seven high schools of the three major cities were approached using convenience sampling to participate in the baseline lifestyle survey. However, permission to interview the adolescents was not given by one school and it was subsequently excluded. The study was conducted with adolescents in grade 9 and 10 in the remaining six schools. All students in the selected classes from whom consent was obtained and who were present at their schools during the survey were included.

Prior to the survey, the rationale of the study was explained to the adolescents and they could choose not to participate. The questionnaires were administered by a team of 3 medical students who helped the subjects in filling them out. The questionnaire was distributed, to two or three sections in each school, with each section containing 30-40 students on an average. For confidentiality, the questionnaires were anonymously self-completed by the students.

The pre-tested, pre-coded, structured self-administered questionnaire explored the subjects' experiences of violence in terms of exposure to verbal abuse, physical abuse, involvement in physical fight, injuries and being bullied. The questionnaire was devised in line with a variety of sources, including Adolescent Stress Questionnaire,<sup>14</sup> WHO Global School Based Health Survey (GSHS)<sup>15</sup> etc. A draft of the questionnaire was produced and the questions were piloted among 10-15 adolescents attending private secondary schools that were not included in the study sample. Ambiguous questions or questions which were misinterpreted were re-phrased

and the piloting continued until the research team was satisfied that the questions were clearly understandable by the students and were culturally appropriate.

The study protocol was approved by the Research Committee of the Dow University of Health Sciences, Karachi. Before conducting interviews, all study participants and school administrations were assured of the confidentiality and anonymity, and efforts were made to ensure the privacy of the information.

We used the following questions for the outcome of interest and some of the explanatory variables: "During the past 12 months, how many times were you in a physical fight?", "During the past 12 months, how many times were you seriously injured?", with the possible responses being '0 times', '1-2 times', and 'more than 2 times'. As we were interested in any history of physical fight and injury, the variables were recoded to a binary version with responses of zero for 0 times and one for any number of times. Further questions asked included: "During the past 12 months, have you ever been verbally abused by?", "During the past 12 months, have you ever been physically abused by?", "During the past 12 months, have you ever been bullied/frightened by?" with responses being 'no one', 'parents', 'family members', 'teachers', 'colleagues/peers', 'any other'. As we were interested in any history of having been verbally abused, physically abused, bullied, we recoded the variable to a binary variable with responses of 0 for no one and 1 for all other categories. For assessing psychological stress we used question: "What stress do you have?" with responses - nothing specific, home stress, peer stress, teachers/school stress and any other hidden stress. As we were interested in any history of stress, we recoded variables to a binary version with response of 0 for 'nothing specific' and 1 for all other categories. Lastly, we assessed school performance by asking, "Have you got on well at school?" with responses - 'never', 'sometimes', 'mostly', and 'always'. As we were interested in assessing quality of performance in terms of poor and good, we recoded variables 0 for 'never' and 'sometimes' and 1 for 'mostly' and 'always'. The students were given ample time to complete the questionnaire.

All the data was managed by medical students who were trained prior to the task.

The results were analysed using SPSS 16. Frequencies and percentages were calculated to evaluate the different types of violence among adolescents. The Chi-square test was used to examine the relationship between adolescent's self-report of violence, poor school performance and psychological stress. P-value less than

0.05 was considered statistically significant.

## Results

Of the 414 subjects in the study, there were 223(54%) boys and 191(46%) girls with an overall mean age of  $14.36 \pm 1.08$  years. Those having poor school performance were 231(55.8%), and 295(71.2%) had psychological stress. In all, 140(33.7%) participants were physically abused and 236(57%) participants were verbally abused in the preceding 12 months. Besides, 245(59.2%) were involved in physical fight and 195(47.1%) had suffered injury during the preceding year. There were 171(41.4%) subjects having suffered bullying during the same period.

Association between exposure to various types of violence and measures of poor school performance and psychological stress were worked out (Table).

home and school/college during the preceding 3 months.<sup>19</sup> Further, physical abuse at home was independently associated with psychological stress among adolescents culminating in suicidal behaviour.<sup>19</sup> We found almost similar level of physical abuse among adolescents compared to a study from India.<sup>19</sup>

Verbal abuse among adolescents was found to be 57% in our study. In Goa, India, frequent physical or verbal abuse among adolescents by parents or other family members was reported to be 15.4%.<sup>20</sup> In addition, 13.8% of adolescents reported frequent abuse from teachers and 4.2% from peers.<sup>20</sup> Another study from Kerala, India, reported that 62% of the mothers used severe verbal abuse and 50% of mothers used severe physical abuse on children as a part of their disciplinary practices.<sup>21</sup> Our results are comparable with

**Table:** Tabulation of various types of violence among study participants in percentages.

Types of Violence	School Performance		P value	Psychological Stress Disorder		P value
	Poor n(%)	Good n(%)		Yes n(%)	No n(%)	
Physical Abuse	97 (42.2)	73 (40.1)	0.27	115 (39.1)	24 (20.3)	0.05
Verbal Abuse	156 (67.8)	79 (43.4)	0.05	192 (65.3)	43 (36.4)	0.003
Physical Fight	155 (66.8)	90 (49.5)	0.05	187 (63.2)	72 (60.7)	0.18
Serious Injury	105 (45.3)	90 (49.5)	0.396	138 (46.6)	57 (48.3)	0.02
Bullying Victimization	111 (48.5)	59 (32.4)	<0.001	132 (45.1)	38 (32.2)	<0.001

Verbal abuse ( $p=0.05$ ), physical fight ( $p=0.05$ ) and bullying ( $p<0.001$ ) were significantly associated with poor school performances among adolescents. Physical abuse ( $p=0.05$ ), verbal abuse ( $p=0.003$ ), injury ( $p=0.02$ ) and bullying ( $p<0.001$ ) were significantly associated with psychological stress.

## Discussion

Violence is a major threat to the welfare and prosperity of any society. It is astounding how violence-related events are increasing among adolescents globally.<sup>1,2,5,16,17</sup> Experiences of various types of violence were common among adolescents attending secondary high schools of Karachi, Lahore and Quetta. Adolescents reported experiencing high levels of violence like physical abuse, verbal abuse, physical fight, serious injury and being bullied. The findings are consistent with earlier literature from Pakistan<sup>16</sup> and elsewhere.<sup>10,18</sup>

We found that 33.7% of school-going adolescents had been physically abused in preceding past 12 months. A review study from Pakistan has reported that 10-60% of children reported physical abuse at workplace.<sup>16</sup> In India, about 9.4% of youth (16-24 years) faced physical abuse at

literature.<sup>20,21</sup> Pakistan presents a specific set of evolving conservative and traditional social structures, which are reflected in this study and other literature from Pakistan.<sup>16,22</sup> It is important that this problem is not just acknowledged, but also explored in terms of its magnitude and impact, and prevention programmes should be executed.

Our study found that the prevalence of being engaged in a physical fight among school-going adolescents was 59.2%. In Namibia, 50.6% of schools-going adolescents were involved in physical fight.<sup>23</sup> In a study from Chandigarh, India, 60% of High School students were engaged in physical fight.<sup>12</sup> Our estimates are also parallel to those reported in several countries in Europe, where prevalence was 53.3% in Wales and 58.2% in Austria.<sup>24</sup>

The results of the current study also indicated that during the preceding 12 months, nearly half (47.1%) of the school-going adolescents were seriously injured. In southern Turkey, 2.9% adolescents were injured by a weapon during fight.<sup>25</sup> In Malaysia, the prevalence of injury in a fight among adolescents aged 12 to 19 years was 6.6%.<sup>26</sup> Our estimate is about 15 times the prevalence

reported for Turkish adolescents<sup>25</sup> and about 7 times that of the Malaysian adolescents.<sup>26</sup> This extremely high prevalence is probably because we asked being seriously injured by any cause (intentional/unintentional or both), while the two other studies asked being injured specifically during physical fight.

The results of our study also pointed out that during the preceding 12 months, more than two-fifth (41.4%) adolescents experienced bullying. We inquired only about being bullied, and failed to ask about participation in bullying. In Istanbul, 40% of High School students experienced or participated in bullying.<sup>27</sup> In the USA, among students of 6th through 10th grade, 13% students were bullying others, 6.3% of them were both bullying others and being bullied, and 10.6% of them were being bullied.<sup>28</sup> Differences among these results may be attributed to age, cultural and methodological differences and linguistic issues concerning translation of "bullying" among countries. The differences between school systems and school environments may also account for the differences. In line with previous studies, the results of our study showed that involvement in bullying had serious implications on school performance and psychological stress.<sup>10,11,27,28</sup> Our results also found that large majority of those who were being bullied reported having some kind of psychological disturbance as inquired by question "What stress do you have?". However, despite the presence of a clear relationship between involvement in bullying and psychological problems, it cannot be stated that bullying behaviours were causes of disturbances or vice versa because of the cross-sectional nature of our study. To clarify this, further longitudinal studies are needed. There is a strong need for bullying prevention programmes in schools in Pakistan.

Poor school performance, as asked by how often the respondent got on well at school, was significantly associated with violence-related behaviours i.e. verbal abuse, physical fight and bullying. Respondents who stated that they never or sometimes got on well at school were more likely to report that they had been involved in at least one form of violence-related behaviour over the preceding year compared to those who responded that they mostly or always got on well at school. However, 'got on well at school' is often a child's way of dealing with school-related failures and may be an indicator of low school bonding.<sup>26</sup> A study suggested that disruptive behaviour such as physical fighting would exert detrimental effect on adolescents by impairing academic, social and family function, and would serve as a marker for other psychiatric problems.<sup>29</sup> Developing ways of recognising and responding to students with poor school

performance may help to reduce violence.

In this study, psychological stress was also associated with an increased risk of violence-related behaviours like physical abuse, verbal abuse, injury and bullying, which was also reported earlier.<sup>26</sup> In a study among Finnish adolescents, there was an increased prevalence of depression and severe suicidal ideation among the victims or perpetrators of bullying, the most common type of school violence.<sup>30</sup> This showed that the need for psychiatric intervention should be considered not only for victims of violence, but also for perpetrators of violence.

To our knowledge, this study is the first of its kind from Pakistan stressing the existence of adolescent violence exposure and its impact on mental health and school performance. The results support and extend the findings of previous authors demonstrating a relationship between violence exposure and symptoms of psychological distress and poor school performance.<sup>11,12,26</sup>

A substantial proportion of Pakistani adolescents are exposed (as witness, victims and/or perpetrators) to various types of violence in secondary schools in urban areas and there is an urgent need to implement validated violence prevention programmes on a school-wide basis. Strategies that have been shown to be effective in reducing the levels of various types of violence in the US include interventions to the whole school climate,<sup>17</sup> class room management interventions,<sup>31</sup> and multi-modal interventions involving parent training, child training and teacher training.<sup>32</sup>

Finally, schools situated in Karachi, Lahore and Quetta need to implement programmes to assist adolescents who are exposed to high levels of violence. Supportive interpersonal relationships have been shown to protect adolescents from the deleterious effects of exposure to various types of violence<sup>33</sup> and students who have positive bonds with school have been reported to have better adjustment. Policy-makers and school personnel should plan strategies including school counselling programmes, provision of additional extra-curricular activities, and training teachers in how to build positive relationships with adolescents.

In terms of the study's limitations, the data on violence-related behaviour was self-reported in nature, and thus there may be underreporting and recall bias. Besides, the data was school-based, and therefore cannot be generalised for all Pakistani adolescents. Also, our sample was selected from urban areas and may not be representative of rural areas. Finally, the study was cross-



sectional. Since the questionnaire was administered at a single moment in time, it is difficult to make statements about cause-and-effect relationships between characteristics and behaviours.

Regardless of the limitations, the study does suggest a way forward. "First World Report on Violence & Health" portrays and makes recommendations for action at local, national and international levels. The report strongly makes the case for involving all aspects of society in the prevention efforts. There is a broad range of workable strategies for preventing youth violence, some of which have been shown to be particularly effective. No single strategy is likely to be sufficient to reduce youth violence. Instead, multiple concurrent approaches will be required and they will need to be relevant to the particular place where they are implemented.<sup>34</sup>

First, we need to develop close surveillance systems for routine monitoring of trends in violent behaviours and then design national programmes to prevent youth violence in Pakistan. In these programmes, healthcare professionals should be active in determining high-risk adolescents for violence and in training teachers, parents and adolescents about risky behaviours. Collaboration between families, schools and other healthcare professionals is critical for the successful execution of such programmes.

Second, recreational and cultural enrichment programmes are beneficial in that they provide exposures for these youngsters beyond the boundaries of their own community. These experiences may provide the motivation needed for them to improve their circumstances.

## Conclusion

Various types of abuse were quite prevalent in adolescents that were significantly associated with poor school performance and poor mental health. Further research is warranted to identify the causes of abuse among adolescents. Interventions at various levels are also recommended to prevent abuse among adolescents.

## References

- Krug EG, Mercy JA, Dahlberg LL, Zwi AB, editors. Violence-a global health problem. In: World report on violence and health. Geneva: World Health Organization;2002;pp 3-19.
- Eaton DK, Kann L, Kinchen S, Shanklin S, Ross J, Hawkins J, et al. Centers for Disease Control and Prevention (CDC): Youth risk behavior surveillance--United States, 2007. *MMWR Surveill Summ* 2008;57:1-131.
- Clubb PA, Browne DC, Humphrey AD, Schoenbach V, Meyer B, Jackson M; RSVPP Steering Committee. Violent behaviors in early adolescent minority youth: results from a "middle school youth risk behavior survey". *Matern Child Health J*. 2001;5:225-35.
- Holt S, Buckley H, Whelan S. The impact of exposure to domestic violence on children and young people: A review of the literature. *Child Abuse Negl* 2008;32: 797-810.
- Cheng TL, Johnson S, Wright JL, Pearson-Fields AS, Brenner R, Schwarz D, et al. Assault-injured adolescents presenting to the emergency department: causes and circumstances. *Acad Emerg Med* 2006;13:610-6.
- Zohoori N, Ward E, Gordon G, Wilks R, Ashley D, Forrester T. Non-fatal violence-related injuries in Kingston, Jamaica: a preventable drain on resources. *Inj Control Saf Promot*. 2002;9:255-62.
- Hanish LD, Guerra NG. The roles of ethnicity and school context in predicting children's victimization by peers. *Am J Community Psychol* 2000, 28:201-23.
- Kshirsagar VY, Agarwal R, Bavdekar SB. Bullying in schools: prevalence and short-term impact. *Indian Pediatr* 2007, 44:25-8.
- Park HS, Schepp KG, Jang EH, Koo HY. Predictors of suicidal ideation among high school students by gender in South Korea. *J Sch Health* 2006, 76:181-8.
- Baker-Henningham H, Meeks-Gardner J, Chang S, Walker S. Experiences of violence and deficits in academic achievement among urban primary school children in Jamaica. *Child Abuse Negl* 2009;33:296-306.
- Hurt H, Malmud E, Brodsky NL, Giannetta J. Exposure to violence: Psychological and academic correlates in child witnesses. *Arch Pediatr Adolesc Med* 2001; 155: 1351-6.
- Munni R, Malhi P. Adolescent violence exposure, gender issues and impact. *Indian Pediatr*. 2006;43:607-12.
- World Health Organization. Sample Size Calculator. [Online] [Cited 2014 June 7]; Available from: URL: <http://www.who.int/chp/steps/resources/sampling/en/>.
- Byrne DG, Davenport SC, Mazanov J. Profiles of adolescent stress: The development of the adolescent stress questionnaire (ASQ). *J Adolescence* 2007;30:393-416.
- Al Baho A, Badr HE. GLOBAL SCHOOL-BASED HEALTH SURVEY. Kuwait; 2011.
- Hyder AA, Malik FA. Violence against children: a challenge for public health in Pakistan. *J Health Popul Nutr* 2007; 25:168-78.
- Flannery DJ, Vazsonyi AT, Liao AK, Guo S, Powell KE, Atha H, et al. Initial behavior outcomes for the peace builders universal school-based violence prevention program. *Dev Psychol*. 2003 ; 39:292-308.
- Smith-Khuri E, Iachan R, Scheidt PC, Overpeck MD, Gabhainn SN, Pickett W, et al. A cross-national study of violence-related behaviors in adolescents. *Arch Pediatr Adolesc Med* 2004;158:539-44.
- Pillai A, Andrews T, Patel V. Violence, psychological distress and the risk of suicidal behaviour in young people in India. *Int J Epidemiol*. 2009;38:459-69.
- Pillai A, Patel V, Cardozo P, Goodman R, Weiss HA, Andrew G. Non-traditional lifestyles and prevalence of mental disorders in adolescents in Goa, India. *Br J Psychiatry*. 2008;192:45-51.
- Nair MK, Rajmohan K, Remadevi S, Nair SM, Ghosh CS, Leena ML. Child disciplining practices in Kerala. *Indian Pediatr* 2009;46 Suppl: s83-5.
- Tabassum F, Baig LA. Child labours a reality: results from a study of a squatter settlement of Karachi. *J Pak Med Assoc*. 2002;52:507-10.
- Rudatsikira E, Siziya S, Kazembe LN, Muula AS. Prevalence and associated factors of physical fighting among school-going adolescents in Namibia. *Ann Gen Psychiatry* 2007;6:18.
- Pickett W, Craig W, Harel Y, Cunningham J, Simpson K, Molcho M, et al; HBSC Violence and Injuries Writing Group. Cross-national

- study of fighting and weapon carrying as determinants of adolescent injury. *Pediatrics* 2005 ;116:e855-63.
25. Ozcan S, Ergin A, Saatci E, Bozdemir N, Kurdak H, Akpınar E. The prevalence of risky behaviors related to violence in high school students in a southern city, Turkey. *Coll Antropol* 2008;32:1053-8.
  26. Lee LK, Chen PC, Lee KK, Kaur J. Violence-related behaviours among Malaysian adolescents: a cross sectional survey among secondary school students in Negeri Sembilan. *Ann Acad Med Singapore* 2007;36:169-74.
  27. Alikasifoglu M, Erginoz E, Ercan O, Uysal O, Albayrak-Kaymak D. Bullying behaviours and psychosocial health: results from a cross-sectional survey among high school students in Istanbul, Turkey. *Eur J Pediatr* 2007;166:1253-60.
  28. Craig WM, Pepler DJ. Identifying and targeting risk for involvement in bullying and victimization. *Can J Psychiatry* 2003; 48:577-82.
  29. King RA, Schwab-Stone M, Flisher AJ, Greenwald S, Kramer RA, Goodman SH, et al. Psychosocial and risk behavior correlates of youth suicide attempts and suicidal ideation. *J Am Acad Child Adolesc Psychiatry*. 2001;40:837-46.
  30. Klomek AB, Sourander A, Kumpulainen K, Piha J, Tamminen T, Moilanen I, et al. Childhood bullying as a risk for later depression and suicidal ideation among Finnish males. *J Affect Disord* 2008;109:47-55.
  31. Kellam SG, Brown CH, Poduska JM, Ialongo NS, Wang W, Toyinbo P, et al. Effects of a universal classroom behavior management program in first and second grades on young adult behavioral, psychiatric, and social outcomes. *Drug Alcohol Depend*. 2008 1;95 Suppl 1:S5-S28.
  32. Webster-Stratton C, Jamila Reid M, Stoolmiller M. Preventing conduct problems and improving school readiness: evaluation of the Incredible Years Teacher and Child Training Programs in high-risk schools. *J Child Psychol Psychiatry* 2008 ;49:471-88.
  33. Collishaw S, Pickles A, Messer J, Rutter M, Shearer C, Maughan B. Resilience to adult psychopathology following childhood maltreatment: evidence from a community sample. *Child Abuse Negl*. 2007 ;31:211-29.
  34. World Health Organization, World report on violence and health. [online] [cited 2010 Jun 4]; Available from: URL: [http://whqlibdoc.who.int/publications/2002/9241545615\\_eng.pdf](http://whqlibdoc.who.int/publications/2002/9241545615_eng.pdf)
-