

Prevalence and correlates of injuries among school attending adolescents in Pakistan

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Madam, injuries impose a major morbidity and mortality burden globally with over two-third of injuries sustained in low and middle-income countries; smoking, low socio-economic status, age, sex, and psychological distress have been identified as risk factors.¹⁻⁴ To

two-stage cluster sample-based nationally representative Global School-Based Health Survey (GSHS) for Pakistan, conducted in 2009 by the Ministry of Health in collaboration with the World Health Organization and Centers of Disease Control and

Table: Survey respondent's demographic, and psychosocial description; and associations with sustaining injuries in bivariate and multivariate analyses.

Factor	Total n* (%)**	Crude ORS (95% CI***)	Adjusted ORS (95% CI***)
Age (in year)	966 (22.7)	1	N/A
<14	2148 (38.9)	1.21 (0.91, 1.62)	
14	1899 (35.3)	1.28 (0.97, 1.70)	
15	172 (3.1)	1.34 (0.78, 2.32)	
>=16			
Sex			
Male	3897 (61.2)	1.95 (1.39, 2.74)	1.82 (1.31, 2.55)
Female	1287 (38.8)	1	1
During the past 30 days, how often did you go hungry because there was not enough food in your home?			
Never/Rarely	4122 (80.9)	1	1
Rarely/Sometimes/Most of the time/Always	1012 (19.1)	1.88 (1.48, 2.39)	1.73 (1.41, 2.12)
During the past 30 days, did you smoke cigarettes or used other tobacco products, such as hukks, bidi, niswar, shisha, or mainpuri?			
0 Days	4579 (89.9)	1	1
1 or more days	612 (10.1)	2.20 (1.80, 2.73)	1.65 (1.42, 1.93)
Psychological distress score§§			
0	3838 (73.6)	1	1
1	967 (19.2)	1.22 (1.08, 1.37)	1.20 (1.06, 1.37)
2 or higher	387 (7.2)	1.94 (1.51, 2.50)	1.70 (1.33, 2.17)

Totals vary across different factors owing to missing information by factor.

* Unweighted frequencies. ** Weighted percents. *** Confidence Intervals. § Odds Ratio for the association between one or more injuries sustained in the past 12 months, and the factor. [Overall prevalence of just one injury in the past one year was 21.0% (95% CI: 17.9%, 24.1%); males had a prevalence of 23.7% (95% CI: 20.8%, 26.5%), while prevalence in females was 16.6% (95% CI: 12.5%, 21.1%). Overall prevalence of two or more injuries in the past 12 months was 15.4% (95% CI: 12.1%, 18.6%); males had a prevalence of 18.5% (15.6%, 21.3%), while prevalence in females was 10.4% (95% CI: 5.8%, 15.0%). N/A - Factor not included in the final logistic regression model.

§§ - Psychological index was created to determine psychological distress comprising of four questions⁴. For questions: during the past 12 months how often one felt lonely, or having been worried about something that one could not sleep at night; responses of 'most of the time' and 'always' were coded as 1 while responses of 'never', 'rarely', and 'sometimes' were coded as 0. Having no close friends was coded as 1 while having one or more close friends was coded as 0. Finally, for having ever seriously considered attempting suicide in the past 12 months was coded as 1 for affirmative answer and 0 for negative answer. Maximum possible score was 4 i.e. one for each question, while minimum possible score was zero.

describe these factor associations with self-reported injuries and its prevalence in the past 12 months among Pakistani students of class 8-10, I used data from the

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Prevention, United States.⁵ GSHS defined injury as requiring treatment by a doctor/nurse or necessitating missing at least one full day of usual activities for example, school, sports or a job. Design-based analysis using STATA-12 was done using bivariate analysis and multivariate logistic regression. Factors found statistically significant at p<0.1 level on simple logistic

regression were used for multiple logistic regression.

The overall prevalence of one or more injuries in the past 12 months was 36.5% [95% confidence interval (CI): 30.6%, 42.2%] (n = 5147). In male students the prevalence was 42.2% (95% CI: 37.8%, 46.5%), while among females the prevalence was 27.2% (95% CI: 19.5%, 34.9%).

Table-1 provides the respondent's demographic and psychosocial factors description, as well as association with injuries in bivariate and multivariate analyses. Age was not found to be statistically significant in the simple logistic regression model, and hence was dropped from the final multivariate logistic regression model. Final model included statistically significant factors of sex, tobacco use, psychological distress, and being hungry owing to not enough food in one's home. Results of the goodness-of-fit-test concluded that this model was a good fit for the survey data.

Additionally, odds ratios (OR) were calculated for sustaining one or more injuries in the past 12 months, and having been physically attacked one or more times in the past one year [OR=2.78 (95% CI: 2.27, 3.41)]. Others included being involved in one or more physical fight in

the past one year [OR=2.70 (95% CI: 2.16, 3.37)] and being bullied one or more times in the past 30 days [OR=2.83 (95% CI: 2.41, 3.32)].

Results indicate the need for identifying those students who use tobacco, come from poor socio-economic strata, and reporting psychological distress and directing injury prevention health education campaigns in schools towards them, specifically boys; while discouraging physical violence and bullying.

References

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