



## Bullying and mental health problems in adolescent students

Mohammed Belal Uddin<sup>1\*</sup>, Meerjady Sabrina Flora<sup>2</sup>

<sup>1</sup>Upazila Health Complex, Mirsarai, Chittagong, Bangladesh

<sup>2</sup>Department of Epidemiology, National Institute of Preventive and Social Medicine (NIPSOM), Dhaka, Bangladesh

### ARTICLE INFO

#### Article history

Received: 01 April 2021

Accepted: 27 April 2021

#### Keywords

Bullying, Mental health, Student, Adolescent, Bangladesh

#### \*Corresponding Author

Mohammed Belal Uddin  
✉ belaluddin43@yahoo.com

### ABSTRACT

A cross sectional study was conducted during the period of January to June 2012 to determine the extent of bullying in adolescent students and its association with their mental health and psychosomatic complaints. A total of 213 male adolescent students were purposively selected from Khaiya Chara High School of Mirsharai Upazila in Chittagong district. Data were collected through self-administered questionnaire. The adolescents were in class VI through X. Highest proportion (30.0%) students were in class VI. The adolescents were almost equally distributed in every age group. The mean  $\pm$  SD and median age of the respondents were  $13.69 \pm 1.55$  and 13.43 years, respectively. About 23% adolescents were bullied and 25% of the study samples were bully. Highest proportion of victims were the students of class VI (30.2%),  $\leq 12$  years (32.1%). One-fourth adolescents were bullied and told somebody about their bullying problem. It was found that 8% bullied student did not seek help at all. The proportions of bullied students were equally distributed with depression score. Although the depression score was high in bully-victim group (70.8%) than (38.5%) bully, (50%) victim and (42.9%) neutral group but it was statistically insignificant. Higher proportion (54.2%) victims had high psychosomatic symptoms score and others (45.8%) were within normal limit. Higher proportion (56.2%) bully-victim also high psychosomatic symptom score and others (44.0%) were within normal score. Bully was equally distributed with psychosomatic symptom score. On the other hand, neutral students were higher proportion within normal psychosomatic symptom score. The difference of psychosomatic symptom score between all groups involved in bullying was obvious but, it was proved statistically insignificant. The study identified bullying is a momentous problem for both bullies and victims' mental and psychosomatic health. Study findings indicate that bullying in adolescents should no longer exist. Awareness build-up in primary to secondary education system is important to reduce the bullying and its precursor factors.

### INTRODUCTION

Bullying is generally thought of as when one person is regularly cruel to another person. This can occur when one child hurts another child on purpose with actions or words. However, bullying is described as aggressive behavior normally characterized by repetition and imbalance of power.

The primary and high school life is the vulnerable age for bullying behavior. A study shows that students report serious bullying problems in both primary and junior middle schools. The ratio of victims-to-bullies decrease with age, but the number of bullies remained relatively stable across the junior middle school years (Wenxin, 2002).

Bullying is a seriously problematic behavior that may affect the victim mentally and physically. It is shown as significant problem associated with mental health difficulties among the high school students (Glover et al., 2000). Bullying behaviors have some diversity. Now a days bullies not only carry out bullying traditionally but also electronically in technologically advanced countries.

There is a tendency for bullying to decrease with increasing age and take more indirect form (Solberg and Olweus, 2003). Internet user bullies and victims are involved with the form of electronic bullying. However, individuals who have been bullied physically, verbally, relationally, or electronically typically suffer from

mental health problems as a result. It is revealed that males are more at risk for being bullied (Undheim and Mari, 2010).

The students are involved with bullying may play different role. A study discloses that children with more siblings are more likely to bully others (Elsea et al., 2000). Risk factors for having been bullied are loneliness, being worried, being sad or having feelings of hopelessness, smoking cigarettes, drinking alcohol and being truant. Meanwhile protective factors were having close friends, receiving parental supervision and ever been drunk (Wang et al., 2009). Some studies find out gender based diversity in bullying behavior. Studies reveal that boys are more involved in physical or verbal bullying, while girls are more involved in verbal and relational Bullying (Peter et al., 2000; Chen et al., 2002). Another study reveals that female students and lower grade students presented more sympathy and support to the bullied than male students and higher grade students did, that the students with experience of being bullied presented more sympathy and support to the bullied and that most students showed sympathy to the bullied more than actually giving help (Zhang et al., 2002).

Bullying not only interfere the learning environment but also affect the health of the students. Victim of bullying may develop psychosomatic symptoms (Lien et al., 2009). Victims of bullying had significantly higher chances of developing new psychosomatic and psychosocial problems compared with children who are not bullied. In contrast, some psychosocial, but not physical, health symptoms preceded bullying victimization. Children with depressive symptoms have a significantly higher chance of being newly victimized (Marce et al., 2003). Children involved in bullying as bullies, bully-victims, and victims were compared with other children. Children involved in bully/victim problems were more prone to have psychiatric disorders than noninvolved children (Kumpulainen et al., 2000). The study finds out that the bullied students were most apt to tell their friend, but not their parents and teachers and a third of the students that observed some type of bullying reported that they didn't care and didn't report the incidents (Chen et al., 2000). Girls had

significantly higher mean scores than boys on both depressive symptoms and suicidal thoughts (Taylor, 2002). Childhood bullying may affect adult life.

Bullying is a globally recognized school health problem. In Bangladesh, bullying remains an understudied subject and school intervention programs to deal with the problem are non-existent. This is despite reports of extreme cases of violence in Bangladeshi schools extensively reported in the media (Ahmed and Brathwaite, 2006). Only a study cited 11% prevalence of bullying in Bangladesh (Ahmed and Brathwaite, 2006). Aim of this study was to provide information regarding prevalence of bullying and its association with mental and psychosomatic health.

## METHODS AND MATERIALS

### Study design and area

A cross sectional study was conducted from January to June 2012 to assess the extent of bullying and its association with their mental health and psychosomatic complaints. The study was undertaken in adolescent students (around five hundred students from grade VI to X) of Khaiya Chara High School in Mirsharai upazila in Chittagong. It is a rural non-government combined high school of Mirsharai upazila in Chittagong. Typical socio-demographic characteristics of the students and availability of large number of male adolescent students were the main reasons for selecting the particular school as the study place. A total of 213 students were included in the study after determining the sample size with standard formula.

### Research approach

Before beginning of the study, an authorization letter for data collection was taken from the honorable director of NIPSOM. A formal permission was taken from the Head teacher of the school. All students were oriented on topic and study objectives. The total procedures were discussed with them. They were assured that their given data would be kept strictly confidential.

Data were collected anonymously. Verbal consent was obtained.

### Data collection and processing

A structured questionnaire was developed using selected variables according to the specific objectives. A pre-testing was done before final editions were made.

Data were collected through self administered questionnaire. Before beginning data collection session all students were sitting in school auditorium and distributed questionnaire booklet. Following orientation given through power point presentation and instructions step by step to answer the questions. Data were collected anonymously so that the students did not hesitate to disclose the truth.

All questionnaires were thoroughly checked. The data were entered into computer with the help of the software Statistical Package for Social Science (SPSS) version 16. After frequency run, data were cleaned and edited. Data were checked for normal distribution. The data were recoded and score were computed where required. To measure bullying prevalence at first a cut-off point was decided. A number of studies indicate to measure prevalence of bullying most reasonable lower bound cutoff point was 2 or (2 or 3 times bullying a month for both victim and bully). To assess the mental health status a cut-off point was determined for HSCL measurement scale. Studies support that optimal cut-off point 16/10 out of 40/10 with no gender differences. Psychosomatic health measurement scale comprised minimum score 1 and maximum 5. The cut-off point was decided  $\geq 2$ .

### Data analysis

Proportions of qualitative variables and mean, SD for quantitative variable were determined. To find out statistical association and comparisons between different groups,  $X^2$  tests were done. The odds ratio (OR) with 95% confidence interval (CI) for risk factors was calculated. P value  $p < 0.05$  was considered to be statistically significant.

## RESULTS AND DISCUSSION

### Socio demographic profile

The study included 213 male students from class VI to X. Class VI students constituted the highest proportion (29.6%), class VII 16%, VIII 21%, class IX 18% and class X included 15% students (Table 1).

**Table 1:** Socio-demographic characteristics

Characteristics		(%)
Class	class VI	29.6
	VII	16
	VIII	21
	IX	18
	X	15
Age in years	$\leq 12$	26.1
	13	25.6
	14	21.8
	$\geq 15$	26.5
Religion	Muslim	84
	Hindus	16
Parental status	Both parents	79.8
	Single parents	16
	Step parent/No parent	4.2
Number of siblings	$\leq 2$	31.1
	3-4	52.4
	5-6	9.9
	$> 6$	6.6
Parental educational status F(Father), M (Mother)	did not go to school	F(14.6), M (15)
	Primary	F(32.9), M (33.3)
	SSC/ Equivalent	F (24.4), M (31)
	HSC/ Equivalent	F (17.8), M (11.7)
	Graduate/postgraduate	F (10.3), M (8.9)
Parents' occupation (Father)	Overseas employees	38.7
	Overseas employees	20.3
	Govt./non-govt. services	12.3
	Business	22.6
	Others	6.1
Mother	Housewife	86.9
	Working mother	13.1

In this study male adolescent students aged <12 to >15 years were selected. The mean  $\pm$ SD and median age of the respondents were  $13.69 \pm 1.55$  and 13.43 years, respectively. The age group of  $\geq 15$  years (26.5%) and  $\leq 12$  years (26.1%) constituted the highest proportion of respondents. They were the students of grade VI through X. Majority (84.0%) respondents were Muslims and rest of them were Hindus. Since the sample was purposively selected. All respondents were rural residents. About 79.80% adolescent used to live with both biological parents and rest (16.0%) of them with single parent and step parents or without parent (4.2%), respectively. About half (52.4%) of adolescent respondents had 3-4 siblings. Parental educational status is one of important factors associated with off springs' behavior. About 15% of adolescents' parents did not go to school. One-third fathers and mothers attained primary education and highest education level was graduation and post-graduation among about 10% parents of respondents. In this study, parental occupational status was an important indicator for children. About 40.0% fathers of respondents were farmer, skilled or unskilled worker. About one-fourth respondents' fathers had own business and same proportion was overseas employee. Only 11.7% students' fathers were engaged in government or non-government employment. On the other hand, about 87.0% respondents' mothers were housewives and rest proportion was working mothers (Table 1).

To assess the socio-economic status respondents were asked if their family had motor cycle, sofa set, television, bi-cycle and chair-table in their reading room. About one-third (30.7%) respondents' family had maximum three household assets. Almost equal proportions of respondents' family had two and three assets, respectively. All assets were possessed only 4.2% students' family (Table 2). Another socio-economic indicator was housing status of the respondents. It was identified that about fourth-fifth (81.2%) respondents' house roof made of tin and except 1.9% straw made roof all were made of brick that means building. About 80.0% of these houses had electricity connection (Table 3).

**Table 2:** Distribution of the respondents by assets in the household (N=213)

Assets*	Frequency	(%)
Motor cycle	21	10.1
Sofa set	107	51.4
Television	134	64.4
Bi-cycle	70	33.7
Chair-table	203	97.6
No. of assets		
None	4	1.9
One	41	19.3
Two	59	27.8
Three	65	30.7
Four	34	16.0
Five	9	4.2

\*Multiple response exist

**Table 3:** Housing status of the respondents

Housing status		Frequency	(%)
Roof	Straw	4	1.9
	Tin	173	81.2
	Concrete	36	16.9
Floor	Mud	144	67.6
	Brick	69	32.4
Walls	Mud	28	13.1
	Bamboo	111	52.1
	Tin	24	11.3
	Brick	50	23.5
Electricity	Yes	167	78.8
	No	145	21.2

### Extent of bullying

This section describes the extent of bullying and its association in socio-demographic characteristics. Extent of bullying was measured by Olweus Bullying Questionnaire (Olweus, D 1996). Before going to bullying related questions, the first two questions were regarding interest to school and reported to have good friend in the class. More than 95% students showed interest to class. Except 2.3% students all had minimum 1 to more than 6 friends at school (Table 4). Bullying was recorded in OBQ with 5 point scale. Current study revealed that about half (52.1%) of the respondents were bullied 1 to 2 times in past couple of months (Table 5). As per definition of bullying it was not actual prevalence of bullying.

In this study the lower bound cut-off point was decided according to the study of Solberg and Olweus (2003). The lower bound cut-off point was bullying 2 to 3 times in a month. Current study revealed that about 19.3% adolescent were bullied at school from direct bullying question (Table 5).

Further, students were asked their bullying experiences specifically by eight defined forms of bullying. From composite score of bullying it was found that 23.0% students were bullied with various forms (Table 6). Highest 8.5% victims reported to be bullied several times in a week by “calling mean names, make fun or teasing in a hurtful way.” This study was conducted assuming 11.0% prevalence of bullying in Bangladesh (Ahmed and Brathwaite, 2006). A study on 28 countries done by Pernille et al. observed lowest (6.3%) prevalence in Sweden and highest (41.4%) in Lithuania for boys (Due et al., 2005).

**Table 4:** Respondents’ interest to school and good friends (N=213)

School attributes	Frequency	(%)
<b>Interest to school</b>		
Dislike school very much	3	1.4
Dislike school	3	1.4
Neither like nor dislike	8	3.8
Like school	32	15
Like school very much	167	78.4
<b>Number of good friends</b>		
None	5	2.3
Have good friend	41	19.2
Have 2/3 good friends	75	35.2
Have 4/5 good friends	45	21.1
Have 6 or more good friends	47	22.1

**Table 5:** History of bullying at school in past couple of months

Frequency of bullying	Frequency	(%)
Not bullied at school in the past couple of months	111	52.1
Bullied 1 or 2 times in the past couple of months	61	28.6
Bullied 2 or 3 times in a month	13	6.1
Bullied about 1 time in a week	19	8.9
Bullied several times in a week	9	4.2

**Table 6:** Forms of bullying by which respondents were bullied in past couple of months

Forms of bullying	Not bullied N (%)	1/2times in past 2 months N (%)	2/3 times in a month N (%)	About once a week N (%)	Several times in a week N (%)
Called by mean names, made fun or teased in a hurtful way	106(49.8)	40(18.8)	31(14.6)	18(8.5)	18(8.5)
Left out of things on purpose, excluded from the group of friends or completely ignored	155(72.8)	27(12.7)	7(3.3)	14(6.6)	10(4.7)
Hit, kicked, pushed, shoved around or locked indoors	136(63.8)	41(19.2)	17(8.1)	9(4.2)	10(4.7)
Other students told lies or spread false rumor and tried to make others dislike	133(62.4)	37(17.4)	11(5.2)	18(8.5)	14(6.6)
Money or other things taken away and damaged them	148(69.5)	36(16.9)	6(2.8)	14(6.6)	9(4.2)
Threatened or forced to do things victim did not want to do	162(76.1)	19(8.9)	13(6.1)	10(4.7)	9(4.2)
Comments about race or color of victim	166(77.9)	23(10.8)	6(2.8)	10(4.7)	8(3.8)
Bullied in another way	143(67.1)	31(14.6)	11(5.2)	19(8.9)	9(4.2)

### Socio-demographic characteristics and bullying

About 34.0% bullied students had  $\leq 2$  siblings (Table 7). The influence of victims' number of siblings was statistically significant ( $\chi^2=11.34$ ,  $p<0.05$ ). Inversely a study done by Eslea et al. (2000) found that children with more siblings were likely to bully others. Highest (32.2%) victims were  $\leq 12$  years old and lowest (11.1%) victims were  $> 15$  years old. There was observed gradual decrease of victimization with increase in age. Though, the influence of age on bullying was statistically insignificant. A study disclosed that bullying behavior increased with age while the incidents of being bullied decreased with age<sup>8</sup>. Though, the association between class of students and bullying victimization was statistically not significant but, highest (30.2%) bullied students were in class VI and lowest (12.5%) were in class X. The incidents of being bullied were gradually

decreased with promotion in class. Current study found no association between parental status and bullying victimization. Inversely highest proportion (24.7%) of victims lived with both biological parents. Association was tested between parental occupation and bullying victimization and found no influence. But highest proportion (32.65%) victims' fathers were working in abroad and victims' proportion (25.0%) was higher whose mothers were working than the (22.7%) adolescents of housewife mothers. Bullying victimization in comparison to their parental education was almost equal in proportion (27.1%, 25.0% and 26.3%) whose fathers' education was primary to HSC or equivalent. On the other hand, the proportions of victims were almost equal in the students of the mothers who were lowest through graduation. Lowest proportion (10.55%) victims were found whose mothers were graduates and above (Table 7).

**Table 7:** Socio-demographic characteristics and bullying

Characteristics	Not Bullied N (%)	Bullied N (%)	Total (%)	Test statistic
<b>Number of siblings</b>				
$\leq 2$	43(66.2)	22(33.8)	65(31.1)	$\chi^2= 11.34$ P=0.01
3-4	92(82.9)	19(17.1)	111(53.1)	
5-6	14(66.7)	7(33.3)	21(10.1)	
$>6$	12(100.0)	0(00.0)	12(5.7)	
<b>Age in years</b>				
$\leq 12$	38(67.9)	18(32.1)	56(26.5)	$\chi^2= 3.86$ P=0.27
13	79(79.0)	21(21.0)	100(47.4)	
14	37(80.4)	9(19.6)	46(21.8)	
$\geq 15$	8(88.9)	1(11.1)	9(4.3)	
<b>Class of respondents</b>				
VI	44(69.8)	19(30.2)	63(29.6)	$\chi^2= 6.93$ P=0.13
VII	24(70.6)	10(29.4)	34(16.0)	
VIII	34(75.6)	11(24.4)	45(21.1)	
IX	34(87.2)	5(12.8)	39(18.3)	
X	28(87.5)	4(12.5)	32(15.0)	
<b>Parental status</b>				
Both parents	128(75.3)	42(24.7)	170(79.8)	$\chi^2= 1.54$ P=0.46
Single parent	28(82.4)	6(17.6)	34(16.0)	
Step or no parent	8(88.9)	1(11.1)	9(4.2)	
<b>Fathers' education</b>				
Illiterate	28(90.3)	3(9.7)	31(14.6)	$\chi^2= 4.42$ P=0.35
Primary	51(72.9)	19(27.1)	70(32.9)	
Secondary/equivalent	39(75.0)	13(25.0)	52(24.4)	
HSC/equivalent	28(73.7)	10(26.3)	38(17.8)	
Graduate/post graduates	18(81.8)	4(18.2)	22(10.3)	
<b>Mothers' education</b>				

Illiterate	24(75.0)	8(25.0)	32(15.0)	$\chi^2= 2.14$ P=0.70
Primary	53(74.6)	18(25.4)	71(33.3)	
Secondary/equivalent	50(75.8)	16(24.2)	66(31.0)	
HSC/equivalent	20(80.0)	5(20.0)	25(11.8)	
Graduate/post graduates	17(89.5)	2(10.5)	19(8.9)	
<b>Fathers' occupation</b>				
Farmer/workers	61(74.4)	21(25.6)	82(38.7)	$\chi^2= 6.24$ P=0.18
Overseas employees	29(67.4)	14(32.6)	43(20.3)	
Govt. or non-govt. service	22(64.6)	4(15.4)	26(12.3)	
Business	40(83.3)	8(16.7)	48(22.6)	
Others	12(92.3)	1(07.7)	13(6.1)	
<b>Mothers' occupation</b>				
Housewives	143(77.3)	42(22.7)	185(86.8)	$\chi^2= 0.07$
Working mothers	21(75.0)	7(25.0)	28(13.2)	P=0.78

### Pattern of bullying towards victims

Bullies were identified by their class. Highest (66.1%) bullies were in same and 15% were in higher class of the victims. Study evidence supported that most victimized students were in same class and 30.0% victims reported that the bullies were older (Samson, 2009). In regards to sex of the bullies, about 37.0% victims were bullied mainly by 1 boy and subsequently 21.6% were bullied by several boys. While bullies were distributed by number, about half (50.4%) of the victims were bullied mainly by one student and 33.3% were bullied by a group of 2/3 students. Majority (65.5%) of victims was bullied for 1 or 2 weeks and bullying was lasted about 1 month for 15.1% victims. The most common places of bullying was the class room in absence of teacher then the playground during the break time where 36.2% and 19.7% students were victimized, respectively (Table 8).

**Table 8:** Patterns of bullying in adolescent students at school

Patterns	Frequency	(%)
<b>Class of the bullies</b>		
Same class of victim	84	66.1
A different class but the same grade of victim	8	6.3
Higher class	19	15.0
A lower class	6	4.7
Both lower and higher class	10	7.9
<b>Sex of the bullies</b>		

Mainly by one girl	26	18.7
By several girls	10	7.2
Mainly by one boy	51	36.7
By several boys	30	22.6
By both boys and girls	22	15.8
<b>Number of bullies</b>		
One student	65	50.4
Group of 2/3 students	43	33.3
Group of 4-9 students	14	10.9
Group of 10 or more students	4	3.1
By several different students or groups of students	3	2.3
<b>Duration of being bullied</b>		
1 or 2 week(s)	78	65.5
About a month	18	15.1
About 6 months	9	7.6
About a year	8	6.7
Several years	6	5.1
<b>Places of being bullied</b>		
Playground during break time	42	19.7
Stairwells	16	7.5
Class room in presence of teacher	23	10.8
Class room in absence of teacher	77	36.2
The toilet	2	0.9
Way to and from the school	22	10.3
Bus stop	2	0.9
Somewhere at school	14	6.6

### Help seeking behaviors

While the victims were asked directly, about two-third (62.7%) of them did not tell anybody either at school or at home and others told someone. Almost bullied students told their friends about incidents of being bullied. A study conducted by

Chen et al. (2002) found that most of the victims of bullying told their friends but not their parents or teachers. A scale with twelve questions was used to assess the level and help seeking behavior of bullied students. Highest proportion (24.9%) of respondents would tell friends about what they made feel the way they did followed by 17.4% victims who would talk with friends about what they would like to happen and 14.6% victims would talk with their friends about their feelings. Only 7.5% victims would tell their guardian how they felt and to figured out what they could do talking with their friends. To determine the help seeking behaviors of victims, the score was calculated and 1 to 12. Among the bullied students about 8% did not seek any help and others were low level help seeker (Table 9).

**Table 9:** Help seeking related behaviors

Told about bullying	Frequency	(%)
Not told anyone	89	62.7
Told somebody about it	53	37.3
Have told the following people		
Head teacher/class teacher/ Any adult at school	15	15.6
Private teacher/parents/guardian	4	4.2
Brother/sister	10	10.4
Friends	6	6.2
Somebody else	49	51.1
	12	12.5
Help seeking patterns		
Asked his guardian for help in figuring out what to do	26	12.2
Told his guardian how he felt about the problem	13	6.1
Told his guardian how they would like to solve the problem	21	9.9
Told his friends about what made he feel the way he did	53	24.9
Told his teacher/other staffs about what made he feel the way he did	18	8.5
Talked with friends about what he would like to happen	37	17.4
Talked with teachers/other staffs about what he would like to happen	8	3.8
Told his guardian how he felt	6	7.5
Figured out what he could do talking with one of his friends	16	7.7
Figured out what he could do by talking with one of his teachers/other school staffs	5	2.3

Talked with his friends about his feelings	31	14.6
Talked with his teachers/other school staff about his feelings	7	3.3

### Involvement in bullying

This section is provided to describe the involvement of adolescents in bullying and associations between socio-demographic characteristics and bullying behaviors. Here attempt was made to identify bullying from perpetrators perspective.

The respondents were asked if they bullied someone at school in past couple of months. More than one-third respondents confessed that they bullied others minimum 1/2 times in two months to maximum several times in a week in past couple of months. About 21% students had bullied other students in past couple of months (Table 10).

**Table 10:** Involvement in bullying at school in past couple of months

Involvement in bullying	Frequency	(%)
Not bullied other students in the past couple of months	137	64.3
1 or 2 times in the past couple of months	32	15.0
1, 2 or 3 times in a month	10	4.7
1 time in a week	15	7.0
Several times in a week	19	8.9

### Ways of bullying

After asking direct question about bullying, respondents were asked regarding different ways of bullying specifically. Most frequent way of bullying was “calling mean name, making fun, teasing hurtful way” (14.1%). About three-fourth or above did not bully others by “telling lies, spreading false rumor, trying to make other dislike”, “threatening or force to do things what victim did not want to do”, “commenting about race or color of victim” in past couple of months and two-third did not bully others by “hit, kicks pushing shoving around or locking indoor” or “any other way about 1 time in a week. seven percent bullied others by “leaving out of things on purpose, excluding from the group of friends or



completely ignore” and about equal proportion did it by “threatening or force to do things victims did not want to do” several times in a week. About 4.0% students bullied others “telling lies, spreading false rumor and try to making others dislike them”, and taking money or other things and damage them” several times in a week. About 25.0% students took part in bullying as per the cut-

off of at least 2/3 times bullied in a month. It was notable that there was a discrepancy between the prevalence from direct question and questions by forms of bullying. Since the instrument was self-administered, some respondents were failed to understand the direct question about bullying. Further they understood by category wise bullying behaviors (Table 11).

**Table 11:** Ways of bullying by which respondents bullied others

Categories of bullying	Not bullied in past couple of months N (%)	1/2 times in past couple of months N (%)	2/3 times in a month N (%)	About 1time in a week N (%)	Several times in a week N (%)
Called mean names, made fun or teased in a hurtful way	123(57.7)	33(15.5)	14(6.6)	13(6.1)	30(14.1)
Left out of things on purpose, excluded from the group of friends or completely ignored	151(70.9)	20(9.4)	12(5.6)	15(7.0)	15(7.0)
Hit, kicked, pushed, shoved around or locked indoors	139(65.3)	26(12.2)	14(6.6)	22(10.3)	12(5.6)
Told lies or spread false rumor and tried to make others dislike	164(77.0)	21(9.9)	8(3.8)	11(5.2)	9(4.2)
Money or other things taken away or damaged them	177(83.1)	18(8.5)	2(0.9)	8(3.8)	8(3.8)
Threatened or forced to do things victim did not want to do	166(77.9)	20(9.4)	3(1.4)	8(3.8)	16(7.5)
Commented about race or color of victim	159(74.6)	18(8.5)	10(4.7)	13(6.1)	13(6.1)
Have bullied with another way	144(67.6)	24(11.3)	7(3.3)	25(11.7)	13(6.1)

### Socio-demographic characteristics and involvement in bullying

The students who were identified as bullies, highest proportion (26.1%) of them lived with 3-4 siblings and one-fourth had more than 6 siblings but, there was found no association between bullying behavior and number of siblings. A study found that children with more siblings were more likely to bully others (Elsea et al., 2000). In this study highest (37.5%) bullies were  $\leq 12$  years. Also highest (32.2%) victims were the same age groups that indicated the highest prevalence of bullying in lowest age groups in current study. A study found that bullying behavior increased with age while the incidents of being bullied decrease with age in middle school (Elsea, 2000). In regards to class of bullies, current study found highest (38.0%) bullies in class VI, though the nearer proportion (25.9%) was in class X. Previous study

found that 6th-8th graders were more often bullies than 4<sup>th</sup>-5<sup>th</sup> graders (Obrdalj, 2008). Though, statistically there was no association between incidents of bullying others and parental status, highest proportion (27.1%) of bullies lived with step parents or without any parent. Highest proportion of bullies was found in the students whose fathers were businessman and the proportion was higher (32.1%) of those bullies who had working mothers than housewives mothers (23.8%). Previous study found that unemployment of the father were significantly more likely among perpetrators while economic inactivity of the mother was more likely in pupils who were both victims and perpetrators (Magklara et al., 2012). There was no significance in distribution of bullies in regards to fathers' occupation. Highest proportion (31.6%) in bully students were found in child of HSC or equivalent fathers. In regards to mothers' education, highest

proportion (37.5%) bullies' existed in the child of illiterate mothers. The discrepancy was found

insignificant between parental education and bullying behaviors of child (Table 12).

**Table 12:** Socio-demographic characteristics and involvement in bullying

Characteristics	Non-bullies N (%)	Bullies N (%)	Total (%)	Test statistic
<b>Number of siblings</b>				
≤2	51(78.5)	14(21.5)	65(31.1)	$\chi^2= 0.47$ P=0.92
3-4	82(73.9)	29(26.1)	111(53.1)	
5-6	16(76.2)	5(23.8)	21(10.1)	
>6	9(75.0)	3(25.0)	12(5.7)	
<b>Age in years</b>				
≤12	35(62.5)	21(37.5)	56(26.5)	$\chi^2=10.96$ P=0.01
13	82(82.0)	18(18.0)	100(47.4)	
14	32(69.6)	14(30.4)	46(21.8)	
≥15	9(100.0)	0(0.0)	9(4.3)	
<b>Class</b>				
VI	39(61.9)	24(38.1)	63(29.6)	$\chi^2= 10.95$ P=0.02
VII	26(76.5)	8(23.5)	34(16.0)	
VIII	36(80.0)	9(20.0)	45(21.1)	
IX	35(89.7)	4(10.3)	39(18.3)	
X	24(75.0)	8(25.9)	32(15.0)	
<b>Parental status</b>				
Both parents	9(100.0)	0(0.0)	9(4.2)	$\chi^2= 3.74$ P=0.15
Single parent	27(79.4)	7(20.6)	34(16.0)	
Step or no parent	124(72.9)	46(27.1)	170(79.8)	
<b>Fathers' occupation</b>				
Farmer/workers	63(76.8)	19(23.2)	82(38.7)	$\chi^2= 2.37$ P=0.66
Overseas employees	35(81.4)	8(18.6)	43(20.3)	
Govt. or non-govt. service	20(76.9)	6(23.1)	26(12.3)	
Business	33(68.8)	15(31.2)	48(22.6)	
Others	9(69.2)	4(30.8)	13(6.1)	
<b>Mothers' occupation</b>				
Housewives	141(76.2)	44(23.8)	185(86.8)	$\chi^2= 0.90$ P=0.34
Working mothers	19(67.9)	9(32.1)	28(13.2)	
<b>Fathers' education</b>				
Illiterate	25(80.6)	6(19.4)	31(14.5)	$\chi^2=4.66$ P=0.32
Primary	51(72.9)	19(27.1)	70(33.0)	
Secondary/equivalent	38(73.1)	14(26.9)	52(24.4)	
HSC/equivalent	26(68.4)	12(31.6)	38(17.8)	
Graduate/post graduates	20(90.9)	2(9.1)	22(10.3)	
<b>Mothers' education</b>				
Illiterate	20(62.5)	12(37.5)	32(15.0)	$\chi^2= 6.02$ P=0.19
Primary	59(83.1)	12(16.9)	71(33.3)	
Secondary/equivalent	47(71.2)	19(28.8)	66(31.0)	
HSC/equivalent	20(80.0)	5(20.0)	25(11.7)	
Graduate/post graduates	14(73.7)	5(26.3)	19(8.9)	

### Attitude of adolescents towards bullying

While the respondents were asked what they do seeing a student is being bullied, major proportion (70.9%) of respondents felt sorry and wanted to

help the victims and additional 15.5% felt sorry. They also were asked what they do if a student dislikes them. One fourth reported they were not willing to bully them. More than 9% confessed sincerely to bullying the student who disliked them

and 8% answered uncertainly. In addition, respondents were asked what they when they come to know that a student of their same age is being bullied, 30% students were not notices about being bullied of their same aged students. About 13% self reported to be involved in bullying and additional one-fourth and one-fifth thought to help and helped students, respectively. Respondent were questioned whether they were afraid of being bullied. About half (48.8%) of the respondents never being afraid of bullying and one third respondent were afraid of being bullied seldom (Table 13).

**Table 13:** Attitude of the respondents towards bullying

Characteristics	Frequency	N(%)
<b>See a student of his age being bullied</b>		
Thinks that is probably what victim deserves	10	4.7
Does not feel much	19	8.9
Feels a sorry for victim	33	15.5
Feels sorry for victim & want to help him/her	151	70.9
<b>Join in bullying a student who dislike</b>		
Yes	20	9.4
Yes, maybe	17	8.0
Do not know	10	4.7
No. do not think so	37	17.4
No	70	32.9
Definitely no	59	27.7
<b>See or learn that student of his age bullied</b>		
Never been noticed that student of his age have been bullied	64	30.0
Take part in bullying	28	13.1
Do not know anything, but thinks bullying is okay	9	4.2
Just watch what goes on	7	3.3
Do not do anything, thinks ought to help the bullied student	55	25.8
Tries to help the bullied student in one way or another	48	22.5
<b>Afraid of bullying</b>		
Never	104	48.8
Seldom	71	33.3
Sometimes	28	13.1
Often	3	1.4
Very often	7	3.3

## Measures taken against bullying

This section shows the measures taken against the bullying. Respondents were asked how frequent the teachers or other adults try to stop bullying.

**Table 14:** Measures taken against bullying

Measures	Frequency	(%)
<b>Teachers and other adults to stop bullying</b>		
Almost never	37	17.4
Once in a while	15	7.0
Sometimes	42	19.7
Often	35	16.4
Almost always	83	39.9
<b>Other students to stop bullying</b>		
Almost never	44	20.8
Once in a while	23	10.8
Sometimes	43	20.3
Often	34	16.0
Almost always	68	32.1
<b>Adult of victim's home contacted the school</b>		
No, they have not contacted the school	55	55.6
Yes, they have contacted the school once	20	20.2
They have contacted the school several times	24	24.2
<b>Class teacher/head teacher talked with bullies</b>		
No, they have not talked about it	44	52.4
Yes, they have talked about it	25	29.8
Yes, they have talked about it several times	15	17.8
<b>Adult at home talked about bullying</b>		
No, they have not talked about it	53	51.0
Yes, they have talked about it	27	26.5
Yes, they have talked about it several times	22	22.5
<b>Comment on teachers approach in cut down of bullying</b>		
Little or nothing	60	28.2
Fairly little	15	7.0
Some what	56	26.3
A good deal	18	8.5
Much	64	30.0

Highest (39.0 %) respondents reported that the teachers and other adults at school almost always tried to stop bullying when a student was being

bullied. Additional 16.4% and 19.7%, respectively also tried often and sometimes. Accordingly the students asked about other students' role in prevention of bullying. Highest proportion (32.1%) respondents responded almost always and almost never tried by 20.8% respondents. They were asked about the role of adults of victims home. Highest (55.6%) respondents were bullied but no adult from home contacted school to stop bullying and rest of them contacted. About 24.0% adults from victims' home contacted school several time to stop bullying. They were asked whether they faced class teacher or head teacher for bullying others. It was revealed that 52.4% bullies did not face any teacher for bullying others.

About 18.0% confessed that they were enquired about their bullying behavior by the teachers and others several times. They were asked if they faced their guardians at home for bullying others. About half of the bullies confessed that their guardians did not talk to them about bullying others at school. Rest half were talked by guardians and 21.6% faced guardians several times at home. At last they were asked comment about teachers approach in cut down of bullying at school. About 35.0% respondents thought that teachers did nothing to cut down bullying at school. Around 60.0% commented that their teachers tried to cut down bullying in different scales (Table 14).

**Table 15:** Bullying and mental health status

Mental health	Bullying				Test statistic
	Neutral N (%)	Victim N (%)	Bully N (%)	Bully-victim N (%)	
<b>Depression</b>					
Normal	72(57.1)	11(50.0)	16(61.5)	7(29.2)	$\chi^2= 7.16$ P=0.67
High	54(42.9)	11(50.0)	10(38.5)	17(70.8)	
<b>Psychosomatic symptoms</b>					
Normal	71(52.2)	11(45.8)	14(50.0)	11(44.0)	$\chi^2= 0.78$ P=0.85
High	65(47.8)	13(54.2)	14(50.0)	14(56.0)	

### Mental health status and psycho-somatic symptoms

This section was intended to assess the mental health status and psychosomatic complaints of the respondents. To assess the mental health status of the respondents, two standardized mental health and psychosomatic complaints assessment tools were used. Hopkins Symptoms Check List (HSCL) was used to assess the depression level and Psychosomatic Symptoms Questionnaire (PSSQ) to measure the psychosomatic complaints.

To assess the depression level of the respondents, Hopkins Symptoms check List (HSCL) comprised 10 mental health related questions. It was administered with four point scale from 1-4. The depression level was decided on the basis of established cut-off point. The respondents who had HSCL score less than 1.6, they were considered mentally healthy and the respondents who had

score  $\geq 1.6$  were considered as depressive (Table 15).

While the respondents were classified by their role play in bullying, they were neutral, victim, bully and bully-victim. The study showed that the proportions victims were equally distributed with depression score. Among the bully-victim higher proportion (70.8%) had high depression score and others were in normal range. Children involved as bully/victim problems were more prone to have psychiatric disorders than non-involved children (Kumpulainen, 2000; Perren, 2010). Study also showed that higher proportion (57.1%) neutral and (61.5%) bully students were within normal depression score. Though the difference was remarkable, but it was statistically insignificant (Table 15).

To assess the psychosomatic complaints of the respondents, a standardized measurement tool was used with 5 point scale. It comprised 9

psychosomatic health related questions. The psychosomatic complaints level was measured by a decided cut-off point of PSSQ. Those who had the score  $< 2$ , they were considered healthy and who had  $\geq 2$  score, was classified as psychosomatic illness (Table 15).

Accordingly the psychosomatic complaints were measured in the respondents involved in bullying with different role. It was found that higher proportion (54.2%) victims had high PSS score and bully was equally distributed. The higher proportion (56.0%) bully-victim adolescents also had high psychosomatic complaints score and others (44.0%) were with normal score. On the other hand, the higher proportion (52.2%) neutral students had normal psychosomatic health. Previous study also found that increasing exposure to bullying was associated with a highly significant increase number of symptoms. The difference of psychosomatic health status between different groups involved in bullying was considerable but, statistically it was found insignificant (Table 15).

Since the present study was based on the purposive sample, this might not represent the whole population of adolescent students. But it provided some basis for estimation of bullying prevalence and in addition, association between mental health, psychosomatic complaints and bullying. Current study was successful in explore bullying and some association between socio-demographic factors, mental health and psychosomatic complaints that provided some scope for future study in this area.

## CONCLUSION

Bullying is an internationally recognized school health problem and very frequently associated with various psychosomatic and mental health problems other than physical problem. The study determined the extent of bullying in school adolescents and its association with mental health and psychosomatic illness. Bullying is associated with some complications in school adolescents that can be reduced and prevented through proper investigation and dissemination regarding extent and consequences bullying. Experiences of current study with relevant

findings may be helpful for further research and bullying prevention in school setting, the benefits of which are expected to appear not only in adolescence but also in later life.

## Recommendations

- This cross sectional study provides important information about extent of bullying in adolescents students and its association with their mental health. Following recommendations are made based on study findings:
- Study provides a lot of important information for further extensive and well designed study on bullying.
- Bullying is decreased with the increase in age. Study findings indicate that further study is needed in primary school level where bullying prevalence may be higher than high school.
- Many factors are associated with bullying. To find out the reasons of bullying, this field requires more selective and specific factors related study.
- Study also indicates that bullying is a substantial problem in school students. It should no longer exist. Awareness build-up in primary to secondary education system is important to reduce the bullying and its precursor factors.

## REFERENCES

- Ahmed E and Brathwaite V (2006). Forgiveness, Reconciliation, and Shame: Three Key Variables in reducing School Bullying. *Journal of Social Science*, 62(2): 347-370.
- Chen, Shiping and Yue, Guoan (2002). A Survey of Bully Behavior in the School campus. *Psychological Science (China)*, 25(3) 355-356.
- Due P, Holstein E, Bjorn, Lynch J, Diderichsen F, Gabhain NS et al. (2005). Bullying and Symptoms among School-aged Children: International comparative Cross sectional Study in 28 Countries. *European Journal of Public Health*, 15(2) 128-132.
- Elsa M and Smith PK (2000). Pupil and Parents Attitudes Towards Bullying in Primary Schools. *European Journal of Psychology of Education*, 15(2) 207-219.
- Glover D, Gough G and Johnson M (2000). Bullying in 25 Secondary School: Incidence, Impact and Intervention. *Educational Research*, 42(2) 141-156.
- Kumpulainen K, Raesaenen R and Eila P (2000). *Psychiatric Disorder and Mental Health Services*

- among Children Involved in Bullying. *Aggressive Behavior*, 27(2):102-110.
- Lien L, Green K, Vatn WA and Bjertness (2009). Mental and Somatic Health Complaints Associated with School Bullying Between 10<sup>th</sup> and 12<sup>th</sup> Grade Students: Results From Cross Sectional Studies in Oslo, Norway. *Clinical Practice and Epidemiology in Mental Health*, 5:6.
- Magklara K, Spkapiaki P, Gkatsa T, Bellos S, Araya R, Stylianidis S et al. (2012). Bullying Behavior in schools, Socio-economic Position and Psychiatric Morbidity: A Cross-Sectional Study in Late adolescents in Greece. *Child and adolescent Psychiatry and Mental Health*, 6:8.
- Marce F, Wal V, Cees A and Remy A (2003). Hirasig. Psychosocial Health Among Young Victims and Offenders of Direct and Indirect Bullying. *Pediatrics*, 111;1312.
- Perren S, Dooley J, Shaw T and Cross D (2010). Bullying in school and cyberspace: Associations with depressive symptoms in Swiss and Australian adolescents. *Child and Adolescents Psychiatry and Mental Health*, 4:28
- Peter K, Smith and Brain P (2000). Bullying in School: Lessons from Two decades of Research. *Aggressive Behavior*, 26(1-9).
- Samson R (2009). Bullying in School. Office of Community Oriented Policing Services. [www.cops.usdoj.gov](http://www.cops.usdoj.gov)
- Solberg EM and Olweus D (2003). Prevalence Estimation of School Bullying with the Olweus Bully/Victim Questionnaire. *Aggressive Behavior*, 29:239-268.
- Taylor, F and Routledge (2002). Bullying, depressive Symptoms and Suicidal Thoughts. *Educational Research*, 44(1) 55-67.
- Undheim MA and Mari AS (2010). Prevalence of Bullying and Aggressive Behavior and Their Relationship to Mental Health Problems among 12 to 15 Years Old Norwegian Adolescents. *European Child Adolescent Psychiatry*, 19:803-811.
- Wenxin Z (2002). Prevalence and Major Characteristics of bullying/Victimization among Primary and Junior Middle School Students [Chinese]. *Acta Psychologica Sinica*, 34(4) 387-394.
- Zhang W, Gong X, Wang L et al. (2002). A Study of Children Attitudes Towards Bullying. *Psychological Science*, 25(2):226-227.
- Zheng X (2000). A Research on Middle School Students' Bullying. *Psychological Science*; 23(10): 73-76.