THE RELATIONSHIP BETWEEN BULLYING AND PSYCHOSOCIAL PROBLEMS AMONG PRIMARY SCHOOL STUDENTS IN BANGKOK, THAILAND

Jariya Tarugsa, Niorn Boonpuen, Sasitorn Chantaratin, Napat Sittanomai, Sudarat Sirisakpanit and Vitharon Boon-yasidhi

Department of Pediatrics, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, Thailand

Abstract. Bullying is a public health problem which can impact both physical and psychosocial health of the children involved. The research on school bullying and its impact on Thai children's mental health is limited. This cross sectional study aimed to assess the prevalence of bullying and the association between bullying and psychosocial problems among primary school students in Bangkok, Thailand. We conducted a survey among 368 students, aged 9-14 years, in three public primary schools during August 2011, using one-step cluster sampling method. The Thai version of the Revised Olweus Bully/Victim Questionnaire was used to assess bullying involvement. Psychosocial problems were assessed using the Thai version of Child Behavioral Checklist (Thai Youth Checklist), parental version. A total of 253 students (68.7%) reported involvement in bullying over the preceding 2-3 months (4.3% as a bully, 34% as a victim, and 30.4% as a bullyvictim). A multivariate analysis revealed that being a bully was associated with having separated or divorced parents (AOR=5.0; 95% CI: 1.2-19.7), while being a bully-victim was associated with male gender (AOR=2.3; 95% CI: 1.3-4.3). Being a bully was associated with externalizing problems (AOR=4.5; 95% CI: 2.7-78.1), whereas being a bully-victim was associated with both internalizing and externalizing problems (AOR=2.2; 95% CI: 1.1-4.6; and AOR=3.8; 95% CI: 1.6-8.8, respectively). In conclusion, school bullying in Thailand is a severe problem and is significantly associated with psychosocial problems. Effective strategies for its prevention and management are urgently needed.

Keyword: school bullying, bully, victim, psychosocial problem, Thailand

INTRODUCTION

School bullying is a widespread problem affecting many children and adolescents world-wide. Its prevalence varies significantly from 6.7% in Sweden to as high as over 40% in Baltic countries (Hazemba *et al*, 2008; Craig

Correspondence: Jariya Tarugsa, MD, Department of Pediatrics, Faculty of Medicine Siriraj Hospital, Mahidol University, 2 Wangland Road, Bangkok Noi, Bangkok 10700, Thailand.

Tel: +66 (0) 2419 5830; Fax: +66 (0) 2419 8796 Email: jariya.tar@mahidol.ac.th et al, 2009; Cross et al, 2009). The 2005-2006 WHO, collaborative, cross-national survey of health behavior in school-aged children revealed that 26% of 11- to 15-year-old students were involved in bullying: 10.7% as a bully, 12.6% as a victim, and 3.6% as a bully-victim (Craig et al, 2009).

Bullying involves children who are bullies (those bullying others), being bullied, or both bullies and victims of bullying (bully/victims). Described as a subcategory of interpersonal aggression, bullying is characterized by intentionality, repetition, and an imbalance of power, with abuse of power being a primary distinction between bullying and other forms of aggression (Olweus, 1993; Hymel and Swearer, 2015). Bullying can take many forms, including direct (*eg*, physical harm, and verbal ridicules and threats) and indirect, such as exclusion, humiliation, rumor-spreading, and cyberbullying (Hymel and Swearer, 2015).

Experiences of school bullying have detrimental effects on children's physical and mental health, which can lead to adverse outcomes later in life. A meta-analysis of 6 longitudinal and 24 cross-sectional studies showed that bullied pupils were at least twice as likely as noninvolved peers to have psychosomatic problems such as headaches and stomachaches (Gini and Pozzoli, 2013). Many studies have shown that peer victimization contributes to children's internalizing symptoms that can persist into young adulthood (Reijntjes et al, 2010; Leadbeater et al, 2014). Moreover, results from a systematic review and meta-analysis of 29 studies indicate that being bullied is a major childhood risk-factor that uniquely contributes to later depression (Ttofi et al, 2011). A bully and a bully-victim, on the other hand, reportedly have more externalizing problems and an increased risk of later offending and anti-social behavior (Forero et al, 1999; Bender and Losel, 2011; Ttofi et al, 2011). Compared to noninvolved children, children who are involved in bullying have a higher risk of depression later in life (Farrington et al, 2012).

In Thailand, the existence of bullying and its negative impacts on physical and psychological well-being have increasingly become public health concerns over the last 10 years. An epidemiological study conducted in 2006 among 3,047 Thai students revealed that 47.9% of grade 4-6 and 28.6% of grade 7-9 students reported being bullied, and 28.3% of grade 4-6 and 21.6% of grade 7-9 students reported bullying others (Tapanya, 2006). The most common type of bullying was verbal bullying, such as teasing or racist remarks, followed by physical bullying, theft of property, the spreading of rumors, social exclusion, threats, and sexual harassment, in descending order of frequency. Data from the Thailand Global School-Based Health Survey (GSHS) of 2008 showed that the prevalence of bullying victimization among 2,758 adolescents in grades 7-10 across the country was 27.8% (Pengpid and Peltzer, 2013). Factors associated with being bullied included younger age, having been in a physical fight, physically inactive, truancy, lack of parental bonding, and psychosocial distress.

Despite the alarming prevalence, there are limited data on the psychosocial problems associated with school bullying in Thailand, particularly data using standardized measures. This study therefore aimed to assess the prevalence of bullying and the relationship between bullying and psychosocial problems among primary school students in Bangkok, Thailand.

MATERIALS AND METHODS

Study population

Three public primary schools in Bangkok-Noi District, Bangkok were chosen by simple random sampling. All 4th to 6th grade students in three representative schools were included in the study. To obtain sufficient confidence intervals of $\pm 5\%$, the sample requirements were for at least of 365 respondents. The school-based surveys were conducted during August 2011 after having consents from school directors and parents. Also, student assents were solicited. Of the 720 sampled students, 423 (58.8%) returned the questionnaires, and 368 (51.1%) provided fully-completed questionnaires suitable for analysis. Research ethics approval was obtained beforehand from Siriraj Institutional Review Board (COA number: Si 358/2011).

Measures

The Thai version of the Revised Olweus Bully/ Victim Questionnaire (Tapanya, 2006), was used to assess the students' involvement in bullying. The guestionnaire comprises 42 guestions in 5 sections: however, this study only used 23 auestions selected from sections I (general information) and II (bullying problems: prevalence, forms, location, duration, and reporting). A definition of bullying was provided to help the students understand how they should answer the questions. Two key questions about being bullied (victim) or bullying others (bully) were asked as follows: "How often have you been bullied at school in the past couple of months?" and "How often have you taken part in bullying another student at school in the past couple of months?". The frequencies of the response categories were coded on a five-scale range. such as "I have not been bullied/have not bullied another student", "once or twice", "2-3 times a month", "about once a week", and "several times a week". Students who responded "2-3 times a month" or more frequently were categorized as "bully involvement", which can be either "victim", "bully", or "bully-victim". Students who responded less frequently than "2-3 times a month" were categorized as "noninvolved".

The psychosocial problems were assessed using the Thai version of the Child Behavioral Checklist (the Thai Youth Checklist, TYC), parental version. The Child Behavioral Checklist was originally developed by Achenbach and Ruffle, (2000) to identify problem behaviors for the last 6 months. The present study used the school-age form of TYC (for ages 6-16 years), which has been reported to have adequate psychometric properties in Thai children (Weisz et al, 1987). The TYC comprises 135 items measuring internalizing, externalizing, and other symptoms (Suwanlert and Chaiyasit, 1999). These items inquire about behavioral and emotional symptoms over the preceding six months, with scores ranging from 0-2 (0 = none; 1 = occasional; and 2 = frequent). The total scores are categorized into "normal", "problem", and "clinical" ranges. For children aged 6-11 years, "problem" ranges are total scores of 49-66 for boys, and

48-65 for girls; and "clinical" ranges are above 66 for boys, and above 65 for girls. For children aged 12 and older of both genders, scores of 42-57 and above 57 are considered "problem" and "clinical" ranges, respectively (Weisz *et al*, 1987; Suwanlert and Chaiyasit, 1999).

Other student characteristics (age, gender, educational level, temperament, academic performance, and parents' marital status) were collected by using a parent questionnaire developed by the investigators.

Statistical analyses

Descriptive statistics were used to demonstrate the students' characteristics in terms of percentage, mean, median and standard deviation. The association between the types of bullying involvement (victim, bully, and bullyvictim) and variables (such as gender, academic performance, developmental level, temperament, parents' marital status, and reports of internalizing and externalizing problems) were evaluated by the chi-square test. A multiple logistic regression was performed to determine the associations between the individual factors with each type of bullying involvement; these were reported as adjusted odds ratios (AOR) and 95% confidence intervals (CI). A p-value of <0.05 indicates statistical significance. The analyses were performed using SPSS (PASW) Statistics version 18.0 (IBM, Armonk, NY).

RESULTS

The median and mean ages of the students were 11 and 10.6 \pm 0.95 years, respectively (ranging from 9-14 years old), with 53.8% being female. Of the total of 368 students, 253 (68.7%) reported bullying involvement, subcategorized as bullies 4.3%; victims 34%; and bullyvictims 30.4%. The 5 most frequently reported ways of bullying included teasing (82.3%), theft of property (54.3%), insults (53.5%), physical bullying (52.2%), and the spreading of rumors (47%).

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The associations between student's characteristics and psychosocial problems with each type of bullying involvement.

	Vi	ctims	В	ully	Bully	-victim	Noninvolved	Total
LALLUIS	n (%)	OR (95% CI)	0%) U	OR (95% CI)	n (%)	OR (95% CI)	n (%)	N (%)
Gender Male Female	50 (40) 75 (60)	1.1 (0.6-1.9)	10 (62.5) 6 (37.5)	2.8 (0.9-8.3)	67 (59.8) 45 (40.2)	2.5 (1.4-4.3)*	43 (37.4) 72 (62.6)	170 (46.2) 198 (53.8)
Age 6-11 y 12-16 y	105 (84) 20 (16)	1.2 (0.6-2.5)	14 (87.5) 2 (12.5)	1.7 (0.3-7.9)	94 (83.9) 18 (16.1)	1.2 (0.6-2.5)	93 (80.9) 22 (19.1)	306 (83.2) 62 (16.8)
Academic performance Fair to very bad Good to excellent	42 (33.6) 83 (66.4)	1.7 (0.9-3.0)	6 (37.5) 10 (62.5)	2.0 (0.6-5.9)	43 (38.4) 69 (61.6)	2.0 (1.1-3.7)	27 (23.5) 88 (76.5)	118 (32.1) 250 (67.9)
Development Delayed Normal	15 (12) 110 (88)	1.8 (0.7-4.5)	0 (0) 16 (100)	dropped ^a	12 (10.7) 100 (89.3)	1.6 (0.6-4.1)	8 (7) 107 (93)	35 (9.5) 333 (90.5)
Temperament Difficult Easy	22 (17.6) 103 (82.4)	1.2 (0.6-2.5)	1 (6.2) 15 (93.8)	0.3 (0.0-3.2)	34 (30.4) 78 (69.6)	2.5 (1.3-4.9)*	17 (14.8) 98 (85.2)	74 (20.1) 294 (79.9)
Parents' marital status Separated/divorced Married	46 (36.8) 79 (63.2)	0.9 (0.5-1.6)	10 (62.5) 6 (37.5)	2.6 (0.8-7.7)	52 (46.4) 60 (53.6)	1.4 (0.7-2.3)	45 (39.1) 70 (60.9)	153 (41.6) 215 (58.4)
Family income ≤ 10,000 Baht/mo. > 10,000 Baht/mo.	80 (64) 45 (36)	0.8 (0.4-1.3)	12 (75) 4 (25)	1.3 (0.3-4.2)	76 (67.9) 36 (32.1)	0.9 (0.5-1.6)	81 (70.4) 34 (29.6)	249 (67.7) 119 (32.3)
Internalizing problems Yes Normal	23 (21.9) 82 (78.1)	1.1 (0.5-2.2)	3 (27.3) 8 (72.7)	1.5 (0.3-6.1)	29 (35.4) 53 (64.6)	2.2 (1.1-4.2)*	21 (20.2) 83 (79.8)	76 (25.2) 226 (74.8)
Externalizing problems Yes Normal	20 (19.6) (80.4)	1.8 (0.8-4.1)	5 (38.5) 8 (61.5)	4.7 (1.3-17)*	30 (36.1) 53 (63.9)	4.3 (1.9-9.3)*	11 (11.7) 83 (88.3)	66 (22.6) 226 (77.4)
OR, odds ratio; CI, com ªOne cell had 0 observe	idence interv. Itions, so the	al; *p < 0.05 in b category was dro	vivariate analy ppped from th	/ses. ne analysis; the a	ssociated OR	is infinity.		

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Table 1 shows the association between the students' characteristics and the psychosocial problems for each type of bullying involvement. A bivariate analysis revealed an association between being a bully-victim and the male gender (OR=2.5; 95% CI: 1.4-4.3) and difficult temperament (OR=2.5; 95% CI: 1.3-4.9).

The psychosocial problems assessed by the TYC revealed that 142 students (38.6%) had scores in the clinical-range, with 76 (20.7%) internalizing problems and 66 (17.9%) externalizing problems. A bivariate analysis revealed an association between being a bully and externalizing problems (OR=4.7; 95% CI: 1.3-17), and between being a bully-victim and internalizing problems (OR=2.2; 95% CI: 1.1-4.2) and externalizing problems (OR=4.3; 95% CI: 1.9-9.3).

The multivariate analyses indicated that some variables remained associated with some bullying involvement, as shown in Table 2. Being a bully was associated with having separated or divorced parents (AOR=5.0; 95% CI: 1.2-19.7), and being a bully-victim was associated with male gender (AOR=2.3; 95% CI: 1.3-4.3). Being a bully was associated with externalizing problems (AOR=4.5; 95% CI: 2.7-78.1), whereas being a bully-victim was associated with both internalizing and externalizing problems (AOR=2.2; 95% CI: 1.1-4.6; and AOR=3.8, 95% CI: 1.6-8.8, respectively).

DISCUSSION

Our study revealed a high prevalence (68.7%) of bullying involvement among Thai primary school students, most of which were being victims and bully-victims. Being a bully was associated with having separated or divorced parents, and externalizing problems. By comparison, being a bully-victim was associated with the male gender, internalizing problems, and externalizing problems.

The high prevalence of school bullying found in this study might partly be due to the younger

age of the study population. This is consistent with the global trend of a high rate of bullying among primary school students, which decreases with age (Olweus, 1993; Carlyle and Steinman, 2007). However, due to the usage of different methodological approaches and a variety of questionnaires, there has been a wide variation in the prevalence rates of school bullying reported by international studies. The high rate of bully-victims reported in this study conforms to some other studies (Yang et al, 2006; Craig et al, 2009). Bully-victims have been described by researchers as being aggressive, provocative, or reactive victims who represent a high risk group for experiencing psychosocial problems (Lyznicki et al, 2004). It is not known if these children were first bullied and subsequently became a bully, or if they first bullied others and then received retaliation. The low proportion of being bully found in this study might be due to the fact that bullying is viewed as an unacceptable act and therefore the level of self-reporting of being a bully is likely to be understated (Smith et al, 2002). It is also possible that some of those students did not realize that their behaviors represented bullying, despite the surveyed students having been given a definition of bullying.

In this study, we did not find any factors, including psychosocial problems, associated with being a victim. However, being a bully was associated with having separated or divorced parents, and being a bully-victim was associated with the male gender. Other studies have revealed that bullies are more likely to be male and victims are more likely to be female, but the victimization gender-difference disappeared with advance in age (Craig *et al*, 2009). We also found that being a bully was associated with externalizing problems, whereas being a bullyvictim was associated with both internalizing and externalizing problems. This is consistent with findings from many previous studies (Juvonen et al, 2003; Wolke and Lereya, 2015; Rettew and Pawlowski, 2016). According to the "gateway theory", chronic victimization might be viewed

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Multiple logistic regression testing the associations between individual factors with bullying involvement.

	>	ictims	Ξ	Bully	Bull	y-victim
Factors	Bata coefficient	AOR (95% CI)ª	Bata coefficient	AOR (95% CI) ^a	Bata coefficient	AOR (95% CI)ª
Male	-0.027	1.0 (0.5-1.7)	1.255	3.5 (0.9-13.2)	0.851	2.3 (1.3-4.3)*
Age 6-11 y	0.135	1.1 (0.5-2.3)	0.249	1.3 (0.2-7.5)	0.035	1.0 (0.4-2.3)
Poor academic performance	0.521	1.6 (0.8-3.0)	0.783	2.2 (0.5-8.3)	0.489	1.6 (0.8-3.2)
Delayed development	0.466	1.5 (0.5-4.0)	dropped ^b	dropped ^b	-0.168	0.8 (0.3-2.4)
Difficult temperament	0.097	1.1 (0.5-2.2)	-2.162	0.1 (0-1.3)	0.643	1.9 (0.9-4.0)
Separated/Divorced parents	-0.084	0.9 (0.5-1.7)	1.607	5.0 (1.2-19.7)*	0.465	1.6 (0.8-2.9)
Low family income (≤ 10,000 Baht/mo.)	-0.333	0.7 (0.3-1.3)	-0.265	0.8 (0.1-3.2)	-0.255	0.8 (0.4-1.5)
Internalizing problems	0.061	1.1 (0.5-2.2)	0.95	2.6 (0.5-13.2)	0.807	2.2 (1.1-4.6)*
Externalizing problems	0.479	1.6 (0.7-3.7)	2.677	4.5 (2.7-78.1)*	1.329	3.8 (1.6-8.8)*
Constant	0.032		-4.2		-1.168	
AOR, adjusted odds ratio; C, confidence inte ^a Adjusted for gender, parents' marital statu:	erval. is, internalizino	g and externalizing	g problems.			
* $p < 0.05$ in multivariate analyses, with non	ninvolved child	ren as the compai	ison group.			
^b One cell had 0 observations, so the catego	ory was droppe	ed from the analys	sis; the associa	ted OR is infinity.		

as a step further in the gateway progression of risk, placing the bully-victim at a higher risk for psychopathology (Craig *et al*, 2009).

A few limitations of this study should be noted. Firstly, the data were cross-sectional; therefore, the direction of the relationships between the problems reported and bullying involvement cannot be determined. In addition, this study was conducted on school students in Bangkok, the capital of Thailand, therefore the results may not be generalizable to other settings. Finally, the method of self-reporting used to assess the degree of bullying, and the responses to the parent-reports used to assess the psychosocial problems, may not have been totally reliable and accurate.

Despite these limitations, the results from this study highlight the significance of the problem of school bullying and its associated psychosocial problems. This can assist in raising and maintaining public awareness of school bullying, and can serve as a database for the development of bullying intervention programs. Prevention strategies such as promoting communication skills, problem solving skills, and developmentallyappropriate self-help programs should also be integrated into bullying-prevention programs.

In conclusion, school bullying has a high prevalence among Thai students in grades 4, 5 and 6. We found that being a bully was associated with having separated or divorced parents, while being a bully-victim was associated with the male gender. We also found an association between being a bully and externalizing problems, and between being a bully-victim and both internalizing and externalizing problems. This highlights the importance of preventive interventions to target school bullying.

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CONFLICTS OF INTEREST

The authors declare no personal or professional conflicts of interest.

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