

Prevalence and correlates of infrequent and frequent bullying victimization among school adolescents from five Southeast Asian countries

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Abstract

The study aimed to assess the prevalence and its correlates of infrequent and frequent bullying victimization (=BV) among school-going adolescents in five “Association of Southeast Asian Nations” (ASEAN) member states. The cross-sectional sample comprised 33,184 school adolescents (14.6 years mean age) from five ASEAN countries of the “Global School-based Student Health Survey” (GSHS) in 2015. Results indicate that 30.6% of participants reported any past-month BV, 33.9% in boys and 27.5 in girls, ranging from 11.8% in Laos to 48.7% in the Philippines. In the adjusted multinomial logistic regression analysis, students from the Philippines and Thailand, experience of hunger, sedentary behaviour, attending physical education classes, being underweight, being overweight or obese, ever amphetamine use, physically assaulted, school truancy, participation in a physical fight, injury, low peer support and psychological distress were associated with BV. Almost one in three adolescents were bullied and several associated variables were identified which can assist in targeting the strategies of intervention.

Key words: Bullying victimization, risk factors, protective factors, adolescents, Asia

Introduction

“Bullying refers to aggressive behavior that is repetitive and intentional in which a power differential exists between the victim and bully. The negative effects of bullying on an individual's mental and physical health are substantial and in line with other major forms of child maltreatment.” [1] (p.235) Bullying victimization (=BV) can be better prevented if the epidemiology and determinants are known in a given population [1]. Globally, there is a high proportion of BV among adolescents (about 30% past month) [2], ranging from 50.9% (past month) in Nepal [3], 45.0% (past month) in 2011 in the Philippines [4], 41.3% (past month) in Pakistan [5], 44.6% (past year) in China [6], to 27.8% (past month) in Thailand [7] in Asian countries. There is limited recent information on the prevalence and correlates of BV among adolescents in ASEAN countries [8].

Sociodemographic, externalizing and internalizing factors have been identified as correlates of BV. Sociodemographic correlates of BV victimization include younger age groups, boys and lower socioeconomic status [6,7,9]. Externalizing symptoms increasing the odds of BV may include substance use, violence, injury, and truancy [6,7,9]. Internalizing symptoms increasing the odds of BV may include mental distress, no close friends, and sedentary behaviour [6,7,9]. Furthermore, parental and peer support have been identified as protective against BV [10,11]. The investigation aimed to estimate the prevalence and correlates of BV among in-school adolescents in five ASEAN countries.

Methods

Participants and procedures

This study uses cross-sectional data from the 2015 ASEAN “Global School-based Student Health Survey (GSHS)”. Using a two-stage cluster sampling strategy, nationally representative samples of middle school students were produced in Indonesia, Laos, the Philippines, Thailand, and Timor-Leste in 2015 [12]. “Under the supervision of trained survey administrators, students completed a self-administered questionnaire in their language during classroom periods” [12]. “The study proposal was approved by the Ministry of Education or Health and a national ethics committee, and verbal or written consent was obtained from the participating schools, parents, and students before the survey was administered.” [12].

Measures

The GSHS study measured used is shown in Table 1 [12]. BV was assessed with the question

“During the past 30 days, on how many days were you bullied?” (number of days) [12].

Infrequent BV was defined as 1-2 days/month and frequent BV as 3-30 days/month.

[12]. The “psychological distress items (no close friends, loneliness, anxiety, suicidal ideation and suicide attempt) were summed, and grouped into 0=0, 1=1 single and 2-5=2 multiple” [13].

Underweight was defined “as less than -2SD from the median for BMI by age and sex”, and overweight or obesity was classified as “more than +1 standard deviation (SD) from the median body mass index by age and sex.” [14] The “four items on parental or guardian support were summed, and classified into three groups, 0-1 low, 2 medium and 3-4 high support” [13].

“Sedentary behaviour was defined as spending 3 or more hours per day sitting” [15].

Table 1: Description of questions

Variables	Items	Responses (coding)
Age	“How old are you?”	“11 years old or younger to 18 years old or older”
Gender	“What is your sex?”	“Male, Female”
Economic status	“During the past 30 days, how often did you go hungry because there was not enough food in your home?”	“1 = never to 5 = always (coded 1-3=0 and 4-5=1)”
Bullying victimization	“[Bullying occurs when a student or a group of students say or do bad and unpleasant things to another student. It is also bullying when a student is teased a lot in an unpleasant way or a student is forced to withdraw from certain activities on purpose. It is not bullying when two students of about the same strength or power argue or fight or when teasing is done in a friendly and hilarious way.]” “During the past 30 days, on how many days were you bullied?”	“1=0 days to 7=All 30 days (coded 1=1, 2=2 and 3-7=3)”
Sedentary behaviour	“How much time do you spend during a typical or usual day sitting and watching television, playing computer games, talking with friends, or doing other sitting activities, such as country examples?”	“1=less than 1 hour per day; 2=1-2 hrs/day; 3=3-4 hrs/day; 4=5-6 hrs/day; 5=7-8 hrs/day and 6=8 or more hours per day”
Physical education (≥ 3 days/week)	“During this school year, on how many days did you go to physical education (PE) class each week?”	“1=0 days to 6=5 or more days (coded 1-3=0 and 4-6=1)”
Height	“How tall are you without your shoes on?”	
Weight	“How much do you weigh without your shoes on?”	
Current tobacco use	“During the past 30 days, on how many days did you smoke cigarettes/use any tobacco products other than cigarettes, such as ... country examples?”	“1=0 days to 7=All 30 days (coded 1=0 and 2-7=1)”
Amphetamine use	“During your life, how many times have you used amphetamines or methamphetamines?”	“1=0 times to 5=20 or more times (coded 1=0 and 2-5=1)”
Truancy	“During the past 30 days, on how many days did you miss classes or school without permission?”	“1=0 days to 5= 10 or more days (coded 1=0 and 2-5=1)”
Physical assault	“During the past 12 months, how many times were you physically attacked?”	“1=0 times to 8=12 or more times”
Physical fights	“During the past 12 months, how many times were you in a physical fight?”	“1=0 times to 8=12 or more times”
Injury	“During the past 12 months, how many times were you seriously injured?”	“1=0 times to 8=12 or more times (coded 1=0 and 2-8=1)”
Psychological distress		
No close friends	“How many close friends do you have?”	“1 = 0 to 4 = 3 or more (coded 1+=0, 0=1)”
Lonely	“During the past 12 months, how often have you felt lonely?”	“1=never to 5=always (coded 1-3=0 and 4-5=1)”
Worry	“During the past 12 months, how often have you been so worried about something that you could not sleep at night?”	“1=never to 5=always (coded 1-3=0 and 4-5=1)”
Suicidal ideation	“During the past 12 months, did you ever seriously consider attempting suicide?”	“Yes, No”
Suicide attempt	“During the past 12 months, how many times did you actually attempt suicide?”	“1=0 times to 5=6 or more times (coded 1=0 and 2-5=1)”
Social and family related protective indicators		
Peer support	“During the past 30 days, how often were most of the students in your school kind and helpful?”	“1=never to 5=always (coded 1-3=0 and 4-5=1)”
Parental supervision	“During the past 30 days, how often did your parents or guardians check to see if your homework was done?”	“1=never to 5=always (coded 1-3=0 and 4-5=1)”

Parental connectedness	“During the past 30 days, how often did your parents or guardians understand your problems and worries?”	“1=never to 5=always (coded 1–3=0 and 4–5=1)”
Parental bonding	“During the past 30 days, how often did your parents or guardians really know what you were doing with your free time?”	“1=never to 5=always (coded 1–3=0 and 4–5=1)”
Parental respect for privacy	“During the past 30 days, how often did your parents or guardians go through your things without your approval?”	“1=never to 5=always (coded 1–3=0 and 4–5=1)”

Data analysis

Statistical analyses were conducted with “STATA software version 15.0 (Stata Corporation, College Station, Texas, USA), taking the complex sampling design of the study into account”. Frequencies, percentages, and means were used to describe the study characteristics. Multinomial logistic regression was used to predict infrequent and frequent BV, with no BV as the reference category. Only complete cases were included in the analysis, and $p<0.05$ indicated significance.

Results

Sample characteristics

The overall sample comprised 33,184 school adolescents with a mean age of 14.6 years ($SD=1.7$) from Indonesia (“overall response rate=94%”), Laos (72%), Philippines (79%), Thailand (89%) and Timor-Leste (response rate=79%)” [12]. Almost one in three participants (30.6%) reported any BV in the past 30 days (33.9% in boys and 27.5 in girls). The prevalence of past month BV ranged from 11.8% in Laos to 48.7% in the Philippines. Almost one in five students (18.6%) reported BV on one to two days in the past month and 12.0% on three to 30 days in the past month (see Table 2).

Table 2: Sample and bullying victimization (BV) characteristics

Variable	Sample	Infrequent BV	Frequent BV
	N (%)	N (%)	N (%)
Socio-demographics			
All	33184	18.6	12.0
Country			
Indonesia	11142 (33.6)	13.9	6.7
Laos	3683 (11.1)	9.3	2.5
Philippines	8761 (26.4)	28.2	20.5
Thailand	5894 (17.8)	15.6	13.7
Timor-Leste	3704 (11.2)	21.5	7.1

Age (years)			
≤13	9611 (29.1)	18.3	12.2
14	6826 (20.7)	19.7	12.5
15	6396 (19.4)	20.6	12.8
≥16	10217 (30.9)	16.7	10.5
Gender			
Female	17991 (51.1)	17.6	9.6
Male	14902 (48.9)	19.8	14.1
Hunger			
Never	13808 (40.4)	13.8	8.7
Rarely	6346 (20.0)	20.8	14.0
Sometimes/mostly/always	12885 (39.6)	22.6	14.3
Risk behaviour			
Sitting 3 or more hours (during leisure-time)	9822 (32.6)	17.4	15.1
Attending physical education classes	7634 (22.8)	24.7	17.3
Body Mass Index			
Normal	23540 (77.3)	17.7	10.8
Underweight	2825 (8.7)	20.0	13.0
Overweight or obese	3780 (14.0)	15.9	15.9
Current tobacco use	4575 (13.9)	26.3	22.4
Current alcohol use	4883 (12.5)	26.9	22.6
Ever amphetamine use	963 (3.0)	34.6	39.7
School truancy	9231 (25.3)	25.4	18.8
Physically attacked	10306 (33.1)	28.0	21.4
In physical fight	8734 (28.0)	30.4	23.4
Sustained injury	10624 (36.9)	27.9	21.5
Psychological distress			
0	23816 (76.8)	16.0	7.6
1	5041 (14.6)	25.8	19.1
2-3	2844 (8.6)	27.9	30.6
Social-familial protective indicators			
High peer support	1112 (36.8)	15.2	9.8
Parental support			
0-1	17139 (51.6)	21.0	13.8
2	8479 (27.0)	17.7	10.0
3-4	6326 (21.4)	14.8	9.1

Associations with bullying victimization

In the adjusted multinomial logistic regression analysis, students from the Philippines and Thailand, experience of hunger, sedentary behaviour, attending physical education classes, being underweight, being overweight or obese, ever amphetamine use, school truancy, physically attacked, injury, involvement in physical fighting, and psychological distress were positively associated with infrequent and/or frequent BV. Being from Laos and Timor-Leste and peer support decreased the odds of infrequent and/or frequent BV (see Table 3).

Table 3: Associations with bullying victimization (BV) frequency

Variable	Infrequent BV	Frequent BV	Infrequent BV	Frequent BV
	URRR (95% CI)	URRR (95% CI)	ARRR (95% CI)	ARRR (95% CI)
Sociodemographic indicators				
Country				
Indonesia	1 (Reference)	1 (Reference)	1 (Reference)	1 (Reference)
Laos	0.60 (0.22, 0.52)***	0.34 (0.22, 0.52)***	0.69 (0.54, 0.88)**	0.54 (0.35, 0.85)**
Philippines	3.14 (2.68, 3.66)***	4.72 (2.97, 5.61)***	2.28 (1.93, 2.68)***	3.48 (2.80, 4.34)***
Thailand	1.26 (1.05, 1.51)*	2.30 (1.78, 2.96)***	1.17 (0.99, 1.38))	1.64 (1.32, 2.03)***
Timor-Leste	1.72 (1.44, 2.04)***	1.19 (0.91, 1.55)	1.09 (0.88, 1.34)	0.69 (0.52, 0.92)*
Age (years)				
≤13	1 (Reference)	1 (Reference)	---	---
14	1.10 (0.97, 1.26)	1.05 (0.89, 1.24)		
15	1.17 (0.96, 1.43)	1.10 (0.91, 1.32)		
≥16	0.87 (0.72, 1.05)	0.83 (0.66, 1.04)		
Gender				
Female	1 (Reference)	1 (Reference)	1 (Reference)	1 (Reference)
Male	1.23 (1.11, 1.36)***	1.55 (1.32, 1.82)***	0.95 (0.86, 1.06)	1.16 (0.96, 1.41)
Experience of hunger				
Never	1 (Reference)	1 (Reference)	1 (Reference)	1 (Reference)
Rarely	1.80 (1.62, 2.01)***	1.91 (1.62, 2.25)***	1.22 (1.08, 1.39)**	1.16 (0.99, 1.36)
Sometimes/mostly/always	2.02 (1.85, 2.21)***	2.02 (1.77, 2.30)***	1.61 (1.44, 1.80)***	1.50 (1.30, 1.73)***
Risk behaviour				
Sitting 3 or more hours (during leisure-time)	0.94 (0.85, 1.05)	1.52 (1.33, 1.73)***	0.91 (0.80, 1.03)	1.40 (1.21, 1.61)***
Attending physical education classes	1.83 (1.64, 2.03)***	2.10 (1.85, 2.37)***	1.26 (1.11, 1.44)***	1.29 (1.07, 1.55)**
Body mass index				
Normal	1 (Reference)	1 (Reference)	1 (Reference)	1 (Reference)
Underweight	1.21 (1.05, 1.39)*	1.29 (1.10, 1.50)**	1.22 (1.00, 1.48)*	1.24 (1.04, 1.47)*
Overweight or obese	0.89 (0.78, 1.01)	1.09 (0.01, 1.31)	0.98 (0.83, 1.17)	1.30 (1.08, 1.57)**
Current tobacco use	2.13 (1.69, 2.68)***	3.04 (2.39, 3.88)***	1.17 (0.95, 1.41)	1.04 (0.82, 1.32)
Current alcohol use	2.23 (1.87, 2.65)***	3.19 (2.53, 4.01)***	1.07 (0.89, 1.28)	0.86 (0.71, 1.05)
Ever amphetamine use	5.30 (3.41, 8.23)***	10.03 (7.08, 14.24)***	1.79 (1.08, 2.96)*	1.96 (1.11, 3.46)*
School truancy	2.04 (1.79, 2.33)***	2.56 (2.18, 3.00)***	1.18 (1.04, 1.33)**	1.14 (0.97, 1.35)

Physically attacked	3.08 (2.77, 3.43)***	4.44 (3.94, 5.01)***	1.93 (1.72, 2.17)***	2.39 (2.06, 2.76)***
In physical fight	3.61 (3.22, 4.06)***	5.19 (4.51, 5.98)***	1.77 (1.54, 2.03)***	2.03 (1.70, 2.43)***
Sustained injury	3.53 (3.14, 3.97)***	5.52 (4.71, 6.48)***	1.99 (1.77, 2.24)***	2.33 (2.03, 2.67)***
Psychological distress				
0	1 (Reference)	1 (Reference)	1 (Reference)	1 (Reference)
1	2.24 (1.95, 2.57)***	3.49 (2.99, 4.07)***	1.57 (1.35, 1.84)***	2.16 (1.85, 2.51)***
2-3	3.20 (2.74, 3.75)***	7.41 (6.29, 8.71)***	1.74 (1.46, 2.08)***	3.47 (2.87, 4.19)***
Social-familial indicators				
High peer support	0.64 (0.57, 0.72)***	0.66 (0.58, 0.74)***	0.79 (0.70, 0.89)***	0.87 0.74, 1.02)
Parental support				
0-1	1 (Reference)	1 (Reference)	1 (Reference)	1 (Reference)
2	0.76 (0.67, 0.87)***	0.65 (0.57, 0.75)***	1.00 (0.89, 1.13)	0.94 (0.80, 1.11)
3-4	0.61 (0.53, 0.70)***	0.56 (0.48, 0.66)***	0.92 (0.81, 1.06)	0.94 (0.79, 1.12)

URRR=Unadjusted Relative Risk Ratio; ARRR=Adjusted Relative Risk Ratio; CI=Confidence Interval; ***P<.001; **P<.01; *P<.05

Discussion

The investigation assessed the prevalence and correlates of BV among school adolescents in five ASEAN countries. The overall prevalence of BV (30.6%) was similar to the global prevalence (30%) [2], and lower than in Nepal (50.9%) [3], and Pakistan (41.3%) [5]. The prevalence of past-month BV of 29.3% in Thailand was similar to the 2008 Thailand GSHS (27.8%) [7], of 48.7% in the Philippines was higher than in the 2003 to 2011 Philippines GSHS (34.7%-45.0%) [7], and of 20.6% in Indonesia was much lower than in the 2007 Indonesia GSHS (50.0%) [16]. It is possible that school-based anti-bullying interventions in Indonesia have been effective in reducing BV [17]. Among the five ASEAN study countries, Laos had the lowest prevalence of BV (11.8%). These figures may compare with the prevalence of any physical violence victimization among adolescents (13-17 years) (8.2% in boys and 6.6% in girls) in the past 12 months from “Violence against Children Survey in Laos” in 2014 [18]. The lower prevalence of BV among adolescents in Laos may be attributed to specific cultural norms and practices in Laos, and the relatively high prevalence in Timor-Leste may be attributed due to effects of a long history of conflict [19].

Consistent with some previous studies [6,20], this study found that the experience of hunger (or lower socioeconomic status) was associated with BV. Unlike some previous studies [21,22], this study did not find significant sex and age differences in the prevalence of BV. Further research is needed to explore the nonsignificant age and sex differences.

Consistent with previous findings [7,21,23-25], this study found an association between externalizing symptoms (ever amphetamine use, school truancy, physically attacked, in a physical fight, and injury), internalizing symptoms (psychological distress and sedentary behaviour) and BV. Steenberg, Palic and Elkliit [26] note that “victims of bullying generally lack in the use of adaptive coping strategies making students with high externalizing and internalizing symptoms more vulnerable to BV.” On the other hand, adolescents who are being bullied may consequently develop more externalizing and internalizing symptoms [22,24].

Some previous studies among adolescents [10,11] found parental support protective against BV, while in this study this was found in bivariate analysis but was no longer significant in the multivariable model. Peer support was protective against infrequent BV. This finding is consistent with a previous review where positive peer interaction was the “strongest protective factor against being a bully/victim.” [27]. In this study, the attendance of physical education increased the odds for BV, while in another study “BV was associated with fewer days in physical education.” [28]. It is possible that in our study attending physical education classes increased the risk of BV. Consistent with a large previous study [29], this survey showed that

both underweight and overweight/obesity were associated with BV. Previous research showed that “weight stigmatization translates into pervasive victimization, teasing, and bullying.” [30].

Study strengths included the large nationally representative adolescent school samples and the uniform GSHS methodology applied in the five study countries. Study limitations include the self-report of the data, the cross-sectional design, and the focus on school adolescents.

Conclusion

The study found among school-going adolescents across five ASEAN countries that almost one in three adolescents were bullied in the past month. Several risk factors for BV were identified, including hunger or food insecurity, sedentary behaviour, attending physical education classes, being underweight, being overweight or obese, ever amphetamine use, physically attacked, in a physical fight, injury, truancy, psychological distress and low peer support, which can assist in designing intervention strategies in this adolescent school population.

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