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Prevalence and Correlates of Frequent and Infrequent Bullying Victimization Among School Adolescents from Five Southeast Asian Countries

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Abstract

Background: Little is known about the frequency of bullying victimization (BV) among adolescents in Association of Southeast Asian Nations (ASEAN) member states. This study aims to assess the prevalence and correlates of frequent and infrequent BV among school-going adolescents in five ASEAN member states.

Methods: The cross-sectional sample of the Global School-based Student Health Survey (GSHS) of 2015 comprised 33,184 school adolescents (14.6 years mean age) from five ASEAN countries. Students completed a paper-based, self-administered questionnaire on BV in their own languages during classroom periods. Multinomial logistic regression was used to predict frequent and infrequent BV, with no BV as the reference category.

Results: 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 of students from the Philippines and Thailand, experience of hunger, sedentary behavior, attendance at physical education classes, being underweight, overweight, or obese, ever amphetamine use, physical assault, school truancy, participation in a physical fight, injury, low peer support, and psychological distress were all associated with BV.

Conclusions: Approximately one in three adolescents was bullied. Several associated variables were identified which can assist in targeting strategies of intervention.

Keywords: adolescents, Asia, bullying

INTRODUCTION

Bullying refers to aggressive behavior that is repetitive and intentional in which a power differential exists between the victim and the bully. The negative effects of bullying on an individual's mental and physical health can be substantial and in line with other major forms of child maltreatment.¹ 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 in Asian countries (about 30% past month),² ranging from past month levels of 50.9% in Nepal,³ 45.0% in 2011 in the Philippines,⁴ 41.3% in Pakistan,⁵ and 44.6% in China⁶ to a low of 27.8% in Thailand.⁷ There is limited recent information on the prevalence and correlates of the frequency of BV among adolescents in ASEAN countries.⁸ In order to better design anti-bullying programs among adolescents in ASEAN countries, it is

Department of Research Administration and Development, University of Limpopo, Turfloop, South Africa E-mail: kfpeltzer@gmail.com important to assess the prevalence and specific determinants of the frequency of BV.

Sociodemographics along with externalizing and internalizing factors have been identified as correlates of BV. Sociodemographic correlates of BV include younger age groups, boys, and lower socioeconomic status.^{6,7,9} Externalizing symptoms increasing the odds of BV may include substance abuse, violence, injury, and truancy.^{6,7,9} Internalizing symptoms increasing the odds may include mental distress, lack of close friends, and sedentary behavior.^{6,7,9} In contrast, parental and peer support have been identified as protective against BV.^{10,11}

METHODS

Participants and procedures

The study aimed to estimate the prevalence and correlates of BV among in-school adolescents in five ASEAN countries. It used secondary cross-sectional data from the 2015 ASEAN Global School-based Student Health Survey (GSHS The GSHS data are in the public domain).¹²

Using a two-stage cluster sampling strategy, nationally representative samples of middle school students were produced that year in Indonesia, Laos, the Philippines,

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Thailand, and Timor-Leste.¹² At the first stage, schools were chosen with probability proportional to size sampling, and at the second stage, classrooms with students aged 13–15 years were randomly selected in each school.¹² Under the supervision of trained survey administrators, students completed a self-administered questionnaire in their language during classroom periods.¹² All students in the selected classrooms, regardless of their ages, were eligible to participate. The questionnaire was translated into the local language of each participating country.¹²

This study complies with the STROBE guidelines. The study proposal was approved by the Ministry of Education or Health and a national ethics committee in each country, and verbal or written consent was obtained from the participating schools, parents, and students before the survey was administered.¹²

Measures

The GSHS study measure¹² used is shown in Table 1. BV was assessed with the question, During the past 30 days, on how many days were you bullied?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 attempts) were totaled, and grouped into 0=0, 1=1 single and 2–5=2 multiple.¹³ Cronbach alpha for the psychological distress measure was 0.7 in this study. 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 totaled and classified into three groups: 0–1 low, 2 medium, and 3–4 high support.¹³ Cronbach alpha for the parental support measure was 0.7 in this study. Sedentary behavior was defined as spending three or more hours per day sitting.¹⁵

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 frequent and infrequent BV, with no BV as the reference category. Only complete cases were included in the analysis, and p<0.05 indicated significance.

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	1=never to 5=always (coded
	was not enough food in your home?	1–3=0 and 4–5=1)
Bullying	[Bullying occurs when a student or a group of students say or do bad	
victimization	and unpleasant things to another student. It is also bullying when a	
	student is teased a lot in an unpleasant way or forced to withdraw from	1=0 days to 7=All 30 days
	certain activities on purpose. It is not bullying when two students of	(coded 1=1, 2=2 and 3=7=3)
	about the same strength or power argue or fight or when teasing is	(couca 1=1, 2=2 and 5 7=5)
	done in a friendly and humorous way.]	
	During the past 30 days, on how many days were you bullied?	
Sedentary	How much time do you spend during a typical day sitting and watching	1=less than 1 hour per day;
behavior	television, playing computer games, talking with friends, or doing other	2=1–2 hrs/day; 3=3–4
	sitting activities, such as country examples?	hrs/day; 4=5-6 hrs/day; 5=7-
		8 hrs/day and 6=8 or more
		hours per day
Physical education	During this school year, on how many days did you go to physical	1=0 days to 6=5 or more
(≥3 days/week)	education (PE) class each week?	days (coded 1–3=0 and 4–
Hoight	Llow tall are you without your choos on?	6=1)
Moight	How rouch do you write without your shoes on?	
Current tobacco	During the past 20 days, on how many days did you smoke	
	cigarottos (uso any tobacco products other than cigarottos such as	1=0 days to 7=All 30 days
use	country examples?	(coded 1=0 and 2–7=1)
Amphetamine use	During your life how many times have you used amphetamines or	1=0 times to 5=20 or more
, imprictamine use	methamphetamines?	times (coded 1=0 and 2–5=1)
Truancy	During the past 30 days, on how many days did you miss classes or	1=0 days to 5=10 or more
2	school without permission?	days (coded 1=0 and 2–5=1)
Physical assault	During the past 12 months, how many times were you physically	1=0 times to 8=12 or more
-	attacked?	times

Table 1. continues

Variables	Items	Responses (coding)				
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	1=never to 5=always (coded				
	something that you could not sleep at night?	1–3=0 and 4–5=1)				
Suicidal ideation	During the past 12 months, did you ever seriously consider attempting	Yes. No				
	suicide?					
Suicide attempt	During the past 12 months, how many times did you actually attempt	1=0 times to 5=6 or more				
	suicide?	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	1=never to 5=always (coded				
	school kind and helpful?	1–3=0 and 4–5=1)				
Parental	During the past 30 days, how often did your parents or guardians check	1=never to 5=always (coded				
supervision	to see if your homework was done?	1–3=0 and 4–5=1)				
Parental	During the past 30 days, how often did your parents or guardians	1=never to 5=always (coded				
connectedness	understand your problems and worries?	1–3=0 and 4–5=1)				
Parental bonding	During the past 30 days, how often did your parents or guardians really	1=never to 5=always (coded				
	know what you were doing with your free time?	1–3=0 and 4–5=1)				
Parental respect	During the past 30 days, how often did your parents or guardians go	1=never to 5=always (coded				
for privacy	through your things without your approval?	1–3=0 and 4–5=1)				

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%). 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 (Table 2).

Associations with bullying victimization

For students from the Philippines and Thailand in the adjusted multinominal logistic regression analysis, experience of hunger, sedentary behavior, 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 (Table 3).

DISCUSSION

The 2015 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 but lower than in Nepal (50.9%),³ and Pakistan (41.3%).⁵ The prevalence of pastmonth BV (29.3%) in Thailand was similar to the 2008 Thailand GSHS (27.8%),⁷ the 48.7% in the Philippines was higher than the 2003 to 2011 GSHS (34.7%-45.0%),⁷ and of 20.6% in Indonesia was much lower than in the 2007 GSHS (50.0%) there.¹⁶ It is possible that school-based antibullying 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 in the 2014 Violence against Children Survey in Laos.¹⁸ The lower prevalence of BV among adolescents in Laos may be attributed to specific cultural norms and practices in that country, while the relatively high prevalence in Timor-Leste may be attributed due to the effects of a long history of conflict.19

Consistent with some previous research,^{6,20} this study found that the experience of hunger (or lower socioeconomic status) was associated with BV. This could mean that the provision of school food programs may help in reducing BV. Unlike some prior studies,^{21,22} this study did not find significant sex and age differences in the prevalence of BV. This could imply that bullying prevention in schools may be equally targeting boys and girls and adolescents of different age groups. Further research is needed to explore the nonsignificant age and sex differences.

Variables	Sample	Infrequent BV	Frequent BV	
Valiables	Percentage (%)	Percentage (%)	Percentage (%)	
Sociodemographic indicators				
All	100	18.6	12.0	
Country				
Indonesia	33.6	13.9	6.7	
Laos	11.1	9.3	2.5	
Philippines	26.4	28.2	20.5	
Thailand	17.8	15.6	13.7	
Timor-Leste	11.2	21.5	7.1	
Age (years)				
≤13	29.1	18.3	12.2	
14	20.7	19.7	12.5	
15	19.4	20.6	12.8	
210 Conder	30.9	16.7	10.5	
Gender	E11	176	0.6	
Male	/8.9	17.0	9.0 14 1	
Hupger	40.9	19.0	14.1	
Never	40.4	13.8	87	
Rarely	20.0	20.8	14.0	
Sometimes/mostly/always	39.6	22.6	14.3	
Risk behavior				
Sitting 3 or more hours (during leisure-time)	32.6	174	15 1	
Attending physical education classes	22.8	24.7	17 3	
Rody Mass Index	22.0	27.7	17.5	
Normal	77 3	177	10.8	
Underweight	8.7	20.0	13.0	
Overweight or obese	14.0	15.9	15.9	
Current tobacco use	13.9	26.3	22.4	
Current alcohol use	25	26.9	22.6	
Ever amphetamine use	2.0	24.6	20.7	
School truppor	25.0	25.4	10.0	
School it dancy	25.3	25.4	10.0	
Physically attacked	33.1	28.0	21.4	
In physical fight	28.0	30.4	23.4	
Sustained injury	36.9	27.9	21.5	
Psychological distress				
0	76.8	16.0	7.6	
1	14.6	25.8	19.1	
2-3	8.6	27.9	30.6	
Social-familial protective indicators				
High peer support	36.8	15.2	9.8	
Parental support				
0-1	51.6	21.0	13.8	
2	27.0	17.7	10.0	
3-4	21.4	14.8	9.1	

TABLE 2. Sample and bullying victimization (BV) characteristics

TABLE J. ASSOCIATIONS WITH DUNYING VICTIMIZATION (DV) INCLUCITY

Variable	Infrequent BV	Frequent BV	Infrequent BV	Frequent BV
variable	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 behavior				
Sitting 3 or more hours	0.94 (0.85, 1.05)	1.52 (1.33, 1.73)***	0.91 (0.80, 1.03)	1.40 (1.21, 1.61)***
(during leisure-time)		, . <i>,</i>	,	,
Attending physical education	1.83 (1.64, 2.03)***	2.10 (1.85, 2.37)***	1.26 (1.11, 1.44)***	1.29 (1.07, 1.55)**
classes				
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)
5 -	0.01 (0.00, 0.70)	0.00(0.40, 0.00)	0.02 (0.01, 1.00)	0.54 (0.75, 1.12)

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

Consistent with previous findings,^{7,21,23-25} the 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 behavior) and BV. Steenberg, Palic, and Elklit²⁶ 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} Findings underline the importance of coping and social skills training in reducing BV.²⁷

Some previous studies among adolescents^{10,11} found parental support protective against BV. While this was found in bivariate analysis in this study, it was no longer significant in the multivariable model. Peer support was protective against infrequent BV. This finding is consistent with a prior review where positive peer interaction was the strongest protective factor against being a bully/victim.²⁸ 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.²⁹ It is possible that in our study attending physical education classes increased the risk of BV. Consistent with a large previous study,³⁰ 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.³¹ Anti-bullying programs may want to include peer and parental support strategies in general, and strategies that support students who attend physical education and/or are underweight or overweight/obese, in particular.

Study strengths included the large, nationally representative adolescent school samples and the uniform GSHS methodology applied in the five study countries. Study limitations include self-reported data, the cross-sectional design, and the focus on school adolescents. Due to the cross-sectional design, we are unable to draw causative conclusions. For example, we do not have information on the validity of the GSHS questionnaire, though the GSHS is similar to the *CDC Youth Risk Behavior Survey* for which test and retest reliability has been established.³²

CONCLUSIONS

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

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

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REFERENCES

- 1. Rettew DC, Pawlowski S. Bullying. *Child Adolesc Psychiatr Clin N Am.* 2016;25:235–42.
- 2. Elgar FJ, McKinnon B, Walsh SD, Freeman J, D Donnelly P, de Matos MG, *et al.* Structural determinants of youth bullying and fighting in 79 countries. *J Adolesc Health.* 2015;57:643–50.
- 3. Rahman MM, Rahman MM, Khan MMA, Hasan M, Choudhury KN. Bullying victimization and adverse health behaviors among school-going adolescents in South Asia: Findings from the global school-based student health survey. *Depress Anxiety*. 2020;37:995–1006.
- 4. Peltzer K, Pengpid S. Health risk behaviour among inschool adolescents in the Philippines: Trends between 2003, 2007 and 2011, A cross-sectional study. *Int J Environ Res Public Health*. 2015;13:73.
- Shaikh MA. Bullying victimization among schoolattending adolescents in Pakistan. J Pak Med Assoc. 2013;63:1202–3.
- 6. Zhu Y, Chan KL. Prevalence and correlates of school bullying victimization in Xi'an, China. *Violence Vict*. 2015;30:714–32.
- 7. Pengpid S, Peltzer K. Bullying and its associated factors among school-aged adolescents in Thailand. *ScientificWorldJournal*. 2013;2013:254083.
- Sittichai R, Smith PK. Bullying in South-East Asian countries: A review. Aggress Violent Behav. 2015;23:22– 35.
- 9. Seo HJ, Jung YE, Kim MD, Bahk WM. Factors associated with bullying victimization among Korean adolescents. *Neuropsychiatr Dis Treat*. 2017;13:2429–35.
- 10. Abdirahman H, Fleming LC, Jacobsen KH. Parental involvement and bullying among middle-school students in North Africa. *East Mediterr Health J.* 2013;19:227–33.
- 11. Boel-Studt S, Renner LM. Individual and familial risk and protective correlates of physical and psychological peer victimization. *Child Abuse Negl.* 2013;37:1163–74.
- 12. World Health Organization. *Global school-based student health survey* (GSHS). New York: World Health Organization, 2019.
- 13. Pengpid S, Peltzer K. Bullying victimization and externalizing and internalizing symptoms among inschool adolescents from five Southeast Asian countries. *Child Youth Serv Rev.* 2019;106:04473.

- Cole TJ, Bellizzi MC, Flegal KM, Dietz WH. Establishing a standard definition for child overweight and obesity worldwide: International survey. *BMJ*. 2000;320:1240–3.
- Guthold R, Cowan MJ, Autenrieth CS, Kann L, Riley LM. Physical activity and sedentary behavior among schoolchildren: A 34-country comparison. *J Pediatr*. 2010;157:43–9.e1.
- 16. World Health Organization (WHO). *Global School-based Student Health Survey Indonesia 2007 Fact Sheet*. New York: World Health Organization, 2007.
- Sivaraman B, Nye E, Bowes L. School-based anti-bullying interventions for adolescents in low- and middle income countries: A systematic review. *Aggress Violent Behav.* 2019;45:154–62.
- National Commission for Mothers and Children, Lao Statistics Bureau and UNICEF Lao PDR. *National Violence against Children Survey in Lao PDR*. Preliminary Report. Lao PDR: National Commission for Mothers and Children, 2016.
- 19. Silove D, Brooks R, Bateman Steel CR, Steel Z, Hewage K, Rodger J, *et al*. Explosive anger as a response to human rights violations in post-conflict Timor-Leste. *Soc Sci Med*. 2009;69:670–7.
- Wilson ML, Dunlavy AC, Berchtold A. Determinants for bullying victimization among 11–16-year-olds in 15 lowand middle-income countries: A multi-level study. *Soc Sci.* 2013;2:208–20.
- 21. Fleming LC, Jacobsen KH. Bullying among middle-school students in low and middle income countries. *Health Promot Int*. 2010;25:73–84.
- 22. Siziya S, Rudatsikira E, Muula AS. Victimization from bullying among school-attending adolescents in grades 7 to 10 in Zambia. *J Inj Violence Res.* 2012;4:30–5.

- 23. Acquah EO, Wilson ML, Doku DT. Patterns and correlates for bulling among young adolescents in Ghana. *Soc Sci.* 2014;3:827–40.
- 24. Arhin DK, Oppong Asante K, Kugbey N, Oti-Boadi M. The relationship between psychological distress and bullying victimisation among school-going adolescents in Ghana: A cross-sectional study. *BMC Res Notes*. 2019;12:264.
- 25. Eastman M, Foshee V, Ennett S, Sotres-Alvarez D, Reyes HLM, Faris R, *et al.* Profiles of internalizing and externalizing symptoms associated with bullying victimization. *J Adolesc.* 2018;65:101–10.
- 26. Steenberg LM, Palic S, Elklit A. A review of psychological factors related to bullying victimization in schools. *Aggress Violent Behav.* 2012;17:383–7.
- Silva JLD, Oliveira WA, Carlos DM, Lizzi EADS, Rosário R, Silva MAI. Intervention in social skills and bullying. *Rev Bras Enferm*. 2018;71:1085–91.
- 28. Zych I, Farrington DP, Ttofi MM. Protective factors against bullying and cyberbullying: A systematic review og meta-analyses. *Aggress Violent Behav.* 2019;45:4–19.
- 29. Roman CG, Taylor CJ. A multilevel assessment of school climate, bullying victimization, and physical activity. *J Sch Health*. 2013;83:400–7.
- Lian Q, Su Q, Li R, Elgar FJ, Liu Z, Zheng D. The association between chronic bullying victimization with weight status and body self-image: A cross-national study in 39 countries. *PeerJ*. 2018;6:e4330.
- 31. Puhl RM, King KM. Weight discrimination and bullying. Best Pract Res Clin Endocrinol Metab. 2013;27:117–27.
- 32. Brener ND, Collins JL, Kann L, Warren CW, Williams Bl. Reliability of the youth risk behavior survey questionnaire. *Am J Epidemiol*. 1995;141:575–80.