

ORIGINAL ARTICLE

THE ASSOCIATED RISK FACTORS AND PSYCHOSOCIAL ADJUSTMENTS AMONG THE PEER VICTIMISED ADOLESCENTS IN MALAYSIA: A POPULATION-BASED NATIONWIDE STUDY

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ABSTRACT

The objective of this study is to determine the prevalence of victimisation among Malaysian school-attending adolescents with the associated risk factors; and the psychosocial impacts among victims. All data was obtained from the Global School Health Survey Malaysia (GSHS-M), where 25,461 students aged 13-18 years and from 234 randomly selected schools were recruited using a two-stage cluster sampling design. Data were analysed descriptively and multivariable logistic regression using SPSS version 20.0. About one-fifth of the respondents reported being victimised at least once in the past 30-days. The most prevalent type of bullying is making fun of gender and body image. Multivariable logistic regression analysis substantiated that the likelihood of victimisation was higher among the boys, students of the lower secondary form, those without a close friend, and the obese respondents. In addition, victims without parental support were more likely to miss school (aOR 0.81, 95% CI 0.59-1.13), considered suicide (aOR 1.60, 95% CI 1.18-2.18), make a suicide plan (aOR 1.45, 95% CI 2.01-1.08), as well as attempted suicide at least once in the past 12 months (aOR 0.48, 95% CI 0.33-0.69). Overall, specially tailored intervention strategies are pivotal in addressing school bullying among secondary school-going adolescents, particularly to minimise the physical and psychosocial impact among the victims.

Keywords: Victimized, School-going Adolescents, GSHS, Psychosocial Adjustments

INTRODUCTION

School bullying and peer victimisation among adolescents have become an international concern and received increased attention¹. It has been recognised by worldwide research as a leading adolescent health issue. A plethora of studies reported an association of adverse impacts on the physical, emotional, behavioural and psychosocial health among the victims and might chronically persist into adulthood². On the other hand, peer victimisation was widely reported as a precursor for later development of violent behaviour, substance abuse, unsafe sexual behaviour and even suicidal ideation or behavior³⁻⁴.

Bullying is generally referred to as aggression and power abuse to intentionally control or cause distress in others, which repeatedly happens over time due to power inequality⁵. These aggressions could happen in direct bullying, including physical hurt or verbal aggressions (made fun, threats, insults and harassment), or indirect bullying involves social relationship manipulation (gossiping, rumours spreading, left out of activity)⁶. The theory of bullying behaviour is best explained by the social exchange framework, which proposed the formation of the human relationship via the utilisation of subjective cost-benefits reasoning. The perpetrators obtain the rewarding such as

power, high-dignity group affiliation and social dominance via bullying⁷.

The aggressive problem of bullying was documented to be prevalent across countries^{3,8}. Nevertheless, much of the current literature was derived from western or developed societies. There was only a handful of up-to-date studies being performed among low to middle-income countries (LMIC). The prevalence figures in some low-resource countries were recorded, ranging from 5% up to 70%⁹. Another school-based health survey in the past decade¹⁰ reported a victimisation prevalence of 32% when exploring 19 LMICs.

In our local setting, the Malaysian Ministry of Education released statistics in 2016 that officially documented approximately 14,000 school bullying cases across the nation from 2012 until 2015¹¹. On the other hand, research in the past has been conducted to examine bullying behaviours, specifically among Malaysian students. For example, Yahaya (2005) reported a peer victimisation prevalence of 22.7% in Johor state in 2005¹². Meanwhile, Khalid (2007) found that verbal bullying is the most prevalent type of bullying while investigating students of Sarawak Religious School¹³. Moreover, Noran-Fauziah (2004) demonstrated an appalling high victimisation rate (95.8%) via psychological bullying while attempting to investigate schools

from four selected states in Malaysia¹⁴. Although these studies have collectively provided information on the bullying issues among Malaysian adolescents, the research was only limited to specific states and did not cover the adolescent population nationwide.

The sustained but disregarded victimisation often leaves persistent negative sequelae on children's psychosocial functioning¹⁵. Thus, they are prone to develop clinical symptoms such as anxiety, depression, sleeping and eating disorders, bedwetting, school phobia, feelings of insecurity, low self-esteem, loneliness, somatic symptoms, substance abuse, unsafe sex behaviours and even depression later during the adulthood²⁻⁴. It had been documented that those adults who experienced peer victimisation during childhood were two times more likely to attempt suicide or be distressed by various psychosocial morbidity¹⁷. Therefore, the risky school children being targeted for victimisation must be identified early to accelerate timely prevention through the enhanced knowledge of the predictors, determinants, and protective factors of bullying victimisation. The determination of the development and occurrence of bullying in the school setting is of fundamental importance as this will be the primary step towards inhibition of further propagation of bullying behaviour.

The subject of bullying victimisation remains inadequately understood among the Malaysian population. Furthermore, the correlation of peer victimisation varies across countries due to differences in sociocultural characteristics and norms. Hence, further exploration of such determinants specifically linked to Malaysian adolescents is critically warranted because inconsistent findings were reported worldwide. In line with the most recent local literature by Tan et al. in 2019, which similarly determined the prevalence and factors associated with peer victimisation in Malaysia and emphasised the linkage between victimisation and tobacco use; alcohol and substance abuse; violence and physical fight involvement¹⁹. However, the present study has further investigated the psychosocial entanglement in depth besides an extension of the minutiae discussion on parental influence as a major protective factor. On the other hand, the content of this study was enriched by the description of types of bullying, in addition to the examination of body image as an associated factor, therefore complementary to the findings by Tan et al. as well as supplements the body of knowledge on Malaysian adolescent's health.

This study aimed to examine the prevalence and types of victimisation and its associated risk factors among Malaysian school-going adolescents and identify the psychosocial implications among the victims. We hypothesised

that the boys, younger age group, obese, underweight and students without close friends are more likely to be victimised; and are more prone to develop psychosocial adjustment, including suicidal thought, plan and attempt. Good parental and peer support has been hypothesised as the main protector factor against psychosocial adaptation.

METHODS

The data was drawn from the Global School Health Survey, Malaysia (GSHS-M), a nationwide cross-sectional study conducted from March to May 2017. The school-based survey geographically included all thirteen states and three federal territories in Malaysia. Secondary school adolescents aged 13-17 years from government and private schools were targeted as the study population.

Sampling

The 7710 primary and 2112 secondary schools owned by the government and listed by the Ministry of Education Malaysia were used as a sampling frame. The country was stratified based on states and federal territories according to the multistage stratified cluster sampling method. The initial stage was school (i.e. primary sampling units) selection with probability proportional to enrolment in forms 1 till form 5, resulting in 234 secondary schools being selected. The second stage involved the classes' selection (i.e. secondary sampling units) from the chosen schools. In this stage, systematic probability sampling with a random start was used. All students in all selected classes were included to participate in the current study. Permission from the Ministry of Education and the school authority was obtained before the data collection. The study was approved by the Ethics committee (NMRR-11-974-10401).

Instruments and Measures

The study instrument was adapted from the GSHS questionnaire developed by the Youth Risk Behavior Survey (YRBS), World Health Organization. The psychometric properties of all items of the YRBS have been reported with satisfactory criterion validity and internal consistency¹⁹. It has been employed in many countries globally. The items were translated into Malay and back-translated to English by a language expert. The content validity was assured by the content expert who evaluated and approved the translated tool, while construct validity has been generated among Malaysian adolescents²⁰. Besides, a pretest was performed to ensure face validity before the conduction of the actual survey. The objective and scope of the survey, as well as details of each item in the questionnaire, were entirely explained by the trained research assistant to all respondents before the data collection was initiated. Respondents were given a choice not

to answer any item, and the confidentiality of all information given was maintained. In addition, respondents were only allowed to participate in the study after they obtained written consent from their parents/guardians.

The dependent variable was the experience of being bullied, which was measured by the item: "Were you being bullied at least once in the past thirty days (Yes / No)" based on their perception. Accordingly, respondents who answered "Yes" were categorised as victims. The type of bullying was also examined via an item: "How have you been bullied in the past thirty days". The choices of answers include physical bullying (kicked, pushed or shoved), verbal bullying (e.g. made fun of race, religion, gender and body image), and even indirect bullying (e.g. left out of activities or some other way such as cyberbullying). The independent variables included gender (male/female), the form of study (lowers secondary/upper secondary), number of close friends (none/at least one), Obese (Yes/No), and underweight (Yes/No). Only respondents who reported being bullied at least once in the last thirty days were included in the analysis while examining the associated risk factors of being victimised.

To investigate the psychosocial impact of adjustments among those who reported being victimised in the past thirty days, the dependent variables were set as the missed school at least once in the past thirty days; ever considered suicide, ever made a suicide plan or attempted suicide at least once in the past twelve months; while the independent variables of interest include parental attitude and support: did parents check their homework, understand their problem and know what they were doing in the past thirty days (never/ seldom/ frequent).

Data Analysis

All statistical analyses were conducted SPSS statistical software Version 21 at an alpha level of 5%. The data were cleaned and weighted according to the study design and response rate utilising the updated population census. The prevalence of being victimised with its independent factors and types of bullying was illustrated via descriptive analysis. The chi-square analysis was employed to determine the associated factors of victimisation. After that, the simple logistic regression analysis was performed, and all independent factors with p values equal to or less than 0.25 were entered in a block in a single step into the multiple logistic regression model. The forced "Enter Method" was selected as the procedure for variable selection in the adjustment of confounding effect, as we are confidently assured with all independent determinants based on the literature review. Additionally, all independent variables were given equal importance in the model without discrimination to generate a 'real effect' of each

independent variable on the dependent outcome. Two-way interaction analyses showed no interaction between the independent variables.

Further analysis was performed on those who reported being victimised in the past thirty days to examine the four psychosocial impacts, including missed school, suicidal thoughts, suicide plans and suicidal attempts in the past 12 months. The prevalence for each psychosocial consequence was analysed descriptively. Similar to the description of analysis to determine the associated factors of victimisation, the risk factors of having a psychosocial impact among the victimised adolescents were analysed with chi-square analysis, followed by simple and multiple logistic regression.

RESULTS

About one-fifth (17.9%, 95% CI 16.8-19.0) of the respondents reported being bullied at least once in the past 30 days. The proportion of victimisation was significantly higher among boys (19.8%, 95% CI 18.7-21), those of lower secondary form (21.1%, 95% CI 19.7-22.5), adolescents without a close friend (31.8%, 95% CI 27.2-36.7) and the obese respondents (21.2%, 95% CI 19.2-23.4) (Table 1).

In addition, making fun of gender and body image has been identified as the most prevalent type of bullying as reported by the victims (41.0%, 95% CI 38.3-43.8), and it is followed by some other ways, including cyberbullying (27.4%, 95% CI 25.4-26.9), made fun of race religion (14.3%, 95% CI 12.6-16.3). On the other hand, direct physical bullying was only documented for 12.2% (95% CI 10.1-14.7), while leaving out of activities was the least prevalent type of bullying (5.0%, 95% CI 4.1-6.1) (Table 2).

Multivariable logistic regression analysis revealed that the likelihood of victimisation was higher among the boys (aOR 1.30, 95% CI 1.17-1.44), students of the lower secondary form (aOR 1.87, 95% CI 1.64-2.13), those without a close friend (aOR 2.09, 95% CI 1.66-2.64) as well as the obese respondents (aOR 1.29, 95% CI 1.13-1.47) (Table 3).

In the descriptive analysis of the four main psychological impacts among those adolescents who reported being victimised (n=4167), the prevalence of missed school, suicidal ideation, plan and attempts among the victims were observed as 12.9% (95% CI 8.6-15.1), 7.9% (95% CI 4.5-11.1), 6.4% (95% CI 3.8-8.2) and 6.8% (95% CI 4.2-9.9), respectively. From the chi-square analysis, the proportion of missed school was significantly higher among the lower secondary school children (21.8%, 95% CI 18.7-24) and those with parents who never understood their problems (27.5%, 95% CI 23.7-32.5). On the other

hand, the proportion of adolescents with suicidal thoughts was higher among the male (28.8%, 95% CI 23.2-34.7), those without any close friends (31.8%, 95% CI 27.2-36.7) and those with parents who never knew what their children are doing (24.3%, 95% CI 19.2-28.4). The proportion of missed school was significantly higher among the lower secondary school children (21.8%, 95% CI

18.7-24) and those with parents who never understand their problems (27.5%, 95% CI 23.7-32.5). On the other hand, the proportion of adolescents with suicidal attempts was higher among the male without a close friend (31.8%, 95% CI 27.2-36.7) and the obese respondents (21.2%, 95% CI 19.2-23.4).

Table 1: Prevalence of being victimised and its associated factors

Variables	Being bullied at least once in the past 30 days						Chi-square value	P value
	Yes			No				
	Estimated population (n)	Sample (n)	(%) 95 CI	Estimated population (n)	Sample (n)	(%) 95 CI		
Overall	378424	4167	(17.9) 16.8-19.0	1738016	19825	(82.1) 81.0-83.2		
Gender								
Male	209799	2368	(19.8) 18.7-21.0	847717	9543	(80.2) 79.0-81.3	65.02	<0.001
Female	167214	1787	(15.8) 14.5-17.3	887823	10257	(84.2) 82.7-85.5		
Form of study								
Lower secondary	275851	3093	(21.1) 19.7-22.5	1032665	12218	(78.9) 77.5-80.3	273.63	<0.001
Upper secondary	101469	1065	(12.6) 11.4-13.9	701111	7562	(87.4) 86.1-88.6		
Number of close friends								
None	20588	233	(31.8) 27.2-36.7	44187	495	(68.2) 63.3-72.8	102.19	<0.001
At least one close friend	352985	3884	(17.3) 16.2-18.4	1686218	19259	(82.7) 81.6-83.8		
Obese								
Yes	40026	475	(21.2) 19.2-23.4	148423	1761	(78.8) 76.6-80.8	20.96	<0.001
No	323075	3525	(17.3) 16.2-18.4	1546955	17551	(82.7) 81.6-83.8		
Underweight								
Yes	35950	385	(19.8) 17.8-21.9	145951	1597	(80.2) 78.1-82.2	7.02	0.026
No	327150	3615	(17.4) 16.3-18.6	1549427	17715	(82.6) 81.4-83.7		

N- Estimated population 2116440 n- sample 23992

Table 2: The types of victimisation

Type of bullied	Estimated Population (n)	Sample (n)	(%) 95 CI
Kicked, pushed, or shoved	36911	381	12.2 10.1-14.7
Made fun of race & religion	43277	452	14.3 12.6-16.3
Made fun of sex and body image	123629	1452	41.0 38.3-43.8
Left out of activities	15073	161	5.0 4.1-6.1
Some other way	82792	942	27.4 25.4-26.9

N- Estimated population 301684 n- sample 3388

Table 3: The associated risk factors of being victimised

Variables	Being victimised in the past 30 days			
	Adjusted OR	95 CI		P value
		Upper	Lower	
Gender				
Male	1.30	1.17	1.44	<0.001
Female	Ref			
Form of study				
Lower secondary	1.87	1.64	2.13	<0.001
Upper secondary	Ref			
Number of close friends				
None	2.09	1.66	2.64	<0.001
At least one close friend	Ref			
Obese				
Yes	1.29	1.13	1.47	<0.001
No	Ref			
Underweight				
Yes	1.15	1.00	1.33	0.046
No	Ref			

The multiple logistic regression (Table 4) substantiated that victimised respondent without a single close friend were more likely to have psychological adjustment, which included ever considering suicide in the past 12 months (aOR 2.04, 95% CI 1.28-3.26), ever making a suicide plan in the past 12 months (aOR 2.37, 95% CI 1.48-3.81), and attempted suicide at least once in the past 12 months (aOR 0.31, 95% CI 0.20-0.47). Moreover, victims with less or non-supportive parents were reported to be significantly more likely to have adverse psychosocial impacts. Those with parents who never understand their

children's problems were more likely to miss school in the past 30 days (aOR 1.92, 95% CI 1.68-2.23); while victims of school bullying with parents who never know what children were doing in the past 30 days were more likely to have missed school in the past 30 days (aOR 2.81, 95% CI 1.59-3.13), considered suicide in the past 12 months (aOR 1.60, 95% CI 1.18-2.18), made a suicide plan in the past 12 months (aOR 1.45, 95% CI 2.01-1.08), as well as attempted suicide at least once in the past 12 months (aOR 0.48, 95% CI 0.33-0.69).

Table 4: The associated risk factors of having psychosocial impacts among the victimised adolescents

Variables	Missed school at least once in the past 30 days			Ever considered suicide past 12 months			Ever make a suicide plan past 12 months			Attempt suicide at least once in the past 12 months		
	aOR	95 CI	P value	aOR	95 CI	P value	aOR	95 CI	P value	aOR	95 CI	P value
Gender												
male	0.95	0.77-1.16	0.601	0.62	0.48-0.80	<0.001	0.70	0.54-0.90	0.006	1.43	1.11-1.85	0.006
Female	ref			ref			ref			ref		
Form of study												
Lower secondary	1.35	1.09-1.68	< 0.01	0.96	0.73-1.26	0.773	1.01	0.72-1.40	0.973	0.78	0.58-1.06	0.113
Upper secondary	ref			ref			ref			ref		
Number of close friends												
None	0.78	0.53-1.14	0.192	2.04	1.28-3.26	0.003	2.37	1.48-3.81	<0.001	0.31	0.20-0.47	<0.001
At least one	ref			ref			ref			ref		
Parents check homework past 30 days												
Never	1.17	0.91-1.50	0.166	1.27	0.88-1.83	0.004	0.91	0.64-1.31	0.078	1.13	0.74-0.92	0.043
Seldom	1.29	1.00-1.69		0.88	0.61-1.26		0.70	0.47-1.05		1.47	1.03-2.11	
Frequent	ref			ref			ref			ref		
Parents understand problems past 30 days												
Never	1.92	1.68-2.23	0.004	1.24	0.82-1.87	0.353	1.54	1.04-2.27	0.067	1.66	1.47-1.92	0.028
Seldom	0.73	0.59-0.90		1.01	0.70-1.46		1.11	0.82-1.52		0.75	0.53-1.06	
Frequent	ref			ref			ref			ref		
Parents know what children do past 30 days												
Never	2.81	1.59-3.13	0.023	1.60	1.18-2.18	0.010	1.45	1.01-2.08	0.033	0.78	0.43-0.89	0.001
Seldom	0.75	0.61-0.92		1.19	0.90-1.58		1.27	1.05-1.70		0.57	0.50-0.89	
frequent	ref			ref			ref			ref		

DISCUSSION

Bullying victimisation was a universal public health concern, instigating many adolescents. The present nationwide study revealed that the prevalence of peer victimisation among Malaysian school-going adolescents was about one in five (17.9%). Our figure was relatively smaller compared to other low-middle-income countries such as Thailand (27.8%)²¹ and Sub-Saharan Africa (38.8%)²². However, it is somehow higher than developed Western regions such as Sweden (10.6%)²³ and Australia (12%)²⁴. The discrepancy in the trend reported from different countries could be due to different socioeconomic and cultural backgrounds. True enough, the cultural divergence in the understanding, definition and conceptualisation of bullying during the cross-national data collection has been reported²⁵. Individuals from different sociocultural backgrounds perceived and interpreted bullying dissimilarly. Besides, differences in the methodological scale assessing school bullying might also contribute to the large difference in the cross-national prevalence. Moreover, the rate of bullying victimisation mirrors the attainment in the implementation of national initiatives such as health policy and country-wide national campaign preventive program²⁶. In addition, the fairly low prevalence of being victimised among Malaysian adolescents might be secondary to some diverse factors, such as the small-sized country with a culture of tolerance and acceptance within the community that yields long-standing social stability and a balanced community.

The present study reported that “made fun of gender and body image” is the most prevalent type of bullying, consistent with the National Human Right Society Malaysia (HAKAM) report on bullying issues in Malaysian schools in 2018. Although the most extravagant physical bullying cases were reported in the media, which obtained the greatest public attention, instead of verbal and social bullying, is most common in Malaysian schools, including teasing, made fun, name-calling and gossiping. On the other hand, the concern about cyberbullying as another type of social bullying rather than direct physical bullying has been raised by Cyber Security Malaysia. Cyberbullying among Malaysian students has been reported to be growing almost daily, with 338 cases reported in 2016 compared to only 291 cases in 2014²⁷. In line with our study, a similar study conducted New Zealand similarly reported the predominant type of bullying was made fun of body image or facial appearance²⁸. Nevertheless, the types of bullying, either direct or indirect bullying, were predicted by the sociocultural environment. However, multiple studies consistently reported that the boys were more likely to be involved in physical bullying while the girls were more involved in verbal or indirect bullying. The

stereotypical participation in bullying victimisation among boys and girls is related to social roots. More aggressive and violent behaviour was traditionally reinforced among boys, while the girls were more prone to indirect involvement inhomogeneous with the classical stereotypes of femininity. These stereotypes affirm the approach used by different genders to ensure a prominent and outstanding place in peer relations²⁹.

The results indicated that the boys were significantly more likely to have been victimised than the girls. This was supported by the ideology that differences exist between male gender construction from the female gender construction. Boys have a higher threshold for the acceptance of power practices and are more willing to report their victimisation experience than girls³⁰. Literature has identified strong evidence that bullying victimisation has a direct correlation with sexuality and gender, especially in the context of feelings of belonging to a social group and school. The cultivation theory proposed that gender construct is influenced by the socialisation composed of multiple factors in a child’s life, such as play between peers, teacher-child relationships, and media influences³¹. Through social learning, boys were portrayed as aggressive, direct, ingenious and closely linked to power relationships. Therefore, the gender considerations and the involvement in victimisation situations will allow the formation and conceptions of intervention practices in schools applying the inter-sectorial focus.

The age trend displayed an obvious pattern with bullying victimisation. The younger children are often associated with higher levels of victimisation than the elder age group. This observation reflects the power imbalance between students of different ages. We hypothesised this age-related decline plausibly due to the younger children having more students older than them in school who can bully them. On the other hand, the younger age group has not acquired the assertive skills to handle bullying incidents to discourage further bullying effectively. As adolescents grow up, the physical, social and psychological development changes provide the protective factor against victimisation and the equalisation of physical size, which further inhibits victimisation. Besides, young adolescents might report bullying victimisation more than the elder age group because of the social climate³². Therefore, a systematic assessment of bullying in schools is imperative and should reflect the age group of the adolescents involved. The younger age groups require more intensive prevention efforts and intervention programs. For example, they need to be educated on the appropriate handling techniques and social skills while facing victimisation.

Our study documented that obese children had higher odds of being bullied due to its correlation with making fun of body image, which is the most prevalent type of victimisation reported. This finding was identical to the findings reported from 41 low-and middle-income countries that obese students were associated with a greater risk of being victimized³³. The victims' physical appearance and body image have become part of the commonly targeted aspects of bullying, and a high body mass index is generally associated with physical inactivity. It had been postulated that physically inactive children were less fit compared to those physically active children.

Therefore, it was unable to protect or prevent them from being bullied. Furthermore, physical activities could help maintain psychosocial well-being and improve social skills³⁴. On the other hand, obese children are more likely to perceive a negative self-image, which might further weaken self-esteem and self-confidence, making them more vulnerable to peer bullying. Recognising the basis of body weight as one of the risk factors of victimisation, specific and focused intervention must consider physical activity to improve overall health and against obesity. In addition, the recommendation of cultural and psychosocial intervention is another important measure to reduce victimisation secondary to the basis of body image or negative self-image. The school authority and teachers have the greatest responsibility in counteracting school bullying by providing adequate concern and support, besides developing a positive classroom climate to inhibit bullying culture towards students with imperfections.

The present study observed suicidal tendencies among more than one in twenty victims (6%-8%). The victimised children are highly distressed and traumatised due to the aversive experience of peer abuse. Therefore, they might reinforce negative self-concept, display internalising problems, exhibit social withdrawal and even suffer from depression. Those who lack peer and parental support were reported more prone to develop psychological distress, including truancy and suicidal behaviors^{16,35}. Sustained victimisation will mark significant and persistent health impacts, especially socio-emotional functioning. This is because adolescence is the transitional period from childhood into adulthood; hence, the developmental phase will be marked by overall physical, mental, and social changes. Peer victimisation had been reported to have an association with several adjustment difficulties, including depression and self-harm, school-related fear, anxiety and avoidance, low self-esteem and negative self-evaluations¹⁻⁴. In addition, poor self-esteem was reported to mediate the relationship between victimisation and suicidality. Numerous longitudinal studies in the past two decades

documented the psychosocial maladjustment, which significantly increased over time, and even poor mental health outcomes, which extended into later adulthood, have been linked with the experience of being involved in interpersonal violent^{3-4,36}. The experience of being bullied may cause poor emotional adjustment secondary to the negative self-concept among the youth, reflecting the stress of being victimised repeatedly. The victims of school bullying may intentionally skip class or miss school to avoid peer victimisation. This vulnerable group were absent from school as they were likely to feel lonely, nervous, anxious and fearful of attending school due to previous experience. As a result, bullying victimisation may severely impact the academic achievements of the students.

The connectedness and bonding arise from peer support, and parental supervision has been recognised as the protective factors against victimization³⁷. Excellent parental practice and acquiring more close friends were found to be less socially isolated; therefore, they were negatively associated with victimisation. The positive parent-child bonding, including parental emotional support and family warmth, enabled behavioural and emotional pliancy in response to victimization³⁸. The developmental and attachment theory proposed that early caregivers' experiences were essential to deeply influence children's behaviours in peer interactions or relationships in later life³⁹. Children who were dissatisfied with their family function and parental care were more likely to be involved in bullying or even be victims of bullying. On the other hand, the "friendship protection hypothesis" suggests the quality of support in friendships helps to protect against bullying. In other words, by acquiring more close friends, adolescents will be less socially isolated and negatively related to peer victimisation.

Effective socialisation among peers results in an effective response to victimisation, therefore less vulnerable to aggressive peers. The study reported that when adolescents encountered peer abuse, they mostly sought help from their parents or peers rather than school teachers, which strongly suggested that emotional support from social influencers, parents, and peers was of paramount importance⁴⁰. In contrast, students with a lack of family support and aberrant peer relationship were consistently correlated with victimisation exposure and even significantly related to suicidal behaviours. As they step forward to strengthen these two protective factors in bullying victimisation among the youth, the school-based intervention program must be designed involving parents or guardians for better engagement among students in school. It is worth noting that the "Check and Connect" model can be one of the highly recommended measures to be employed. The "Check" model monitors the risk factors of bullying

victimisation. In contrast, the "Connect" model includes effective communication between students, school and parents so that students may seek better ways of handling victimisation issues. A one-to-one mentor-mentee system is needed to establish a long-term relationship among school staff, students and parents. On the other hand, peer group-based intervention is necessary to educate adolescents about negative peer pressures. Children will be able to engage in interactive group sessions, which are useful in addressing useful topics of moral values and peer communication.

This study had a few limitations. Firstly, the data were collected in a cross-sectional survey, hence generating causality to those associated factors revealed in the study. Secondly, the self-administered questionnaire might allow misreports from some participants, either intentionally or unintentionally. Recall bias may limit its validity. The respondents might have different interpretations of the abusive interactions and variations in the willingness to report such a humiliating yet painful experience. This current GSHS only recruited adolescents who attended school and may not comprehensively represent all adolescents nationwide as the bullying behaviour may vary between the two groups. Nevertheless, this study's sample size represented the Malaysian adolescent population and hence provided nationally representative estimates. The study also utilised a widely accepted globally standardised instrument, thus allowing substantial comparison with other international data and designing comprehensive antibullying measures tailored to the associated factors referring to the issue in Malaysian society. Bullying and peer victimisation constitute more than correlates of suicidality. Therefore, future research with long-term follow-up is highly recommended to identify specific causal pathways between bullying and suicidality.

CONCLUSION

Bullying victimisation is global public health and social problem. The study identified the vulnerable group and the psychological consequences following bullying victimisation among Malaysian school-going adolescents. Hence, the vulnerable groups warrant focus and prioritisation. A more specially tailored and targeted intervention on moderating the outcomes of bullying is imperative to minimise the physical and psychosocial impact on the victims. The establishment of the bullying prevention policy is of paramount importance to reduce expenditure on bullying-related injuries and ill health problems. Therefore, the schools should provide all fundamental resources to address the matter. The preventive program and intervention must be initiated in early-stage before bullying rates continue to rise to ensure

that aggressive synergy patterns are addressed before they become rooted.

Conflict of interest

The authors declare no potential conflict of interest.

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