

## Prevalence of peer violence among 13-15 year old adolescents in Sri Lankan schools.

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### Abstract

#### Objective

To determine the prevalence of peer violence in school, its circumstances and consequences among 13-15 year old adolescents in Gampaha district in Sri Lanka

#### Methodology

A cross sectional study was conducted among 13-15 year olds in Gampaha district schools (n=1700, Males=884; Females=816), recruited using multi-stage cluster sampling. Involvement in violence was measured using a locally developed validated self-report inventory.

#### Results

The prevalence of being a victim of peer violence in school (85.1%) was higher ( $p<0.001$ ) than the prevalence of being a perpetrator (66.5%). This pattern could be seen for both physical and relational violence. Boys were more often involved in violence compared to girls. Sixty-five percent of the participants had been both victims and perpetrators. Most of the violence occurred during 'free periods', within 'class rooms'. The majority (64%) of the victims reported injuries, but severe forms of injuries like cut injuries (7.8%), deeper removal of skin (5.9%), injury to eye (2.1%) and breaking bones (1.3%) were less common.

#### Conclusion

The prevalence of physical and relational violence among adolescents in school was high. Most of the violence occurred in class rooms during free periods, indicating its occurrence in absence of adult supervision. A majority of victims of physical violence sustained injuries. These findings indicate the need for urgent interventions.

**Key words:** Adolescents, peer violence, schools, physical violence, relational violence, participatory role

### Introduction

The national survey (n=29,911) on 'emerging issues among adolescents' reported that 75% of respondents had experienced some form of peer violence in Sri Lankan schools. Violence is understood differently in different cultures and societies. Epidemiological dimensions of violence are not well known and there is no universally accepted single definition of violence. Violence can take a variety of forms such as physical violence, verbal derogation, or passive obstruction (non verbal violence) like

not caring, excluding from company, etc. Similarly, the effects vary widely ranging from loss of life and physical injury, emotional harm, wounded pride, to violation of rights and freedom of choice. Violence is a learned behaviour and it could be caused by several factors operating at individual, family, peer relationship, community and societal level. Most of these factors are modifiable and thus violence is largely preventable. Public health approaches can play a crucial role in addressing its causes and consequences. Preventing violence is not

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DOI: <http://dx.doi.org/10.4038/jccpsl.v20i1.8069>

only a sound investment but is also a prerequisite for healthy societies.

In spite of peer violence among adolescents in schools has been widely explored in Western countries, it is relatively a new research area for South Asian Countries. Even though the available literature suggests it as a major problem in Sri Lankan schools, no study has explored the wide spectrum of peer violence among adolescents in schools (physical vs. verbal and nonverbal forms violence; perpetration vs. victimization), circumstances and the consequences of such violence. Studies from other settings have found that victims of peer violence in schools have been shown to suffer serious injury, significant social and emotional damage or even death. The absence of detailed and updated information on 'adolescents peer violence in schools' from South Asian Countries is a limitation needed in design of locally relevant violence prevention programmes. With this background, the study aimed to assess the prevalence of different types of peer violence, according to the adolescents' participatory role in violence and to describe its circumstances and consequences.

## Methods

A cross-sectional study was carried out from June to December 2010 in Gampaha District, Sri Lanka. The study participants were 13 to 15 years old adolescents studying in state sector schools. The required size of the sample was calculated based on the formula  $[n = (1.96)^2 * p(1-p)/d^2]$  for sample sizes for prevalence estimation. In this calculation, the prevalence of peer violence involvement among adolescents in schools was assumed to be 50% based on data from a previous local study and 'd', the absolute precision, was set at 0.05. When considering a correction for design effect of four, the sample size was 1536 and 14% non-response rate was added to that sample size.

Thus, required sample size was 1751. This sample was selected using probability proportionate to the number of 13-15 years old students in Gampaha district schools, using a multi-stage cluster sampling technique. 'A class room' was considered as a cluster. The cluster size was assumed to be 20 and 88 clusters were included in the study to select 1751 study participants. Adolescents, who were 13-15 years old and studying in government schools in Gampaha district, were eligible to participate in the study.

Eight-eight clusters were selected from 28 schools in Gampaha district using, multistage cluster sampling technique. Clusters were allocated to each grade in which 13-15 year olds were studying in proportion to the size of the student population in each of these grades in Gampaha district.

The measurement of prevalence of peer violence in schools was done by using the Sri Lankan Early Teenagers' Violence Inventory (SLETVI), a self-administered tool developed and validated by the authors. In developing this inventory, a comprehensive literature review and focus group discussions (FGDs) among adolescents, their teachers and parents, and a series of consultative meetings with experts in the field (psychology, school health, public health, psychiatry, education) were completed. The resulting information was used to operationalize the definition of peer violence and to identify and finalize the items to be included in the inventory.

Being a victim to peer violence among adolescents in school was defined in this study as 'being physically or psychologically hurt as a result of a specified violent act committed by a child in his/her school/in another school/in a tuition class. Similarly, being a perpetrator of peer violence in school was defined as 'subjecting

a child in his/her school/in another school/in a tuition class to a specified violent act with the intention of hurting him/her physically or psychologically'. The SLETVI comprised 37 items, which included physical and verbal or nonverbal violent acts (Table 1). The term 'relational violence' was used to collectively describe verbal and nonverbal or gestural forms of violence. The developed inventory was found to have good face and content validity assessed using a scoring system by a multidisciplinary panel of experts. Though peer sexual violence acts were included in the draft stages of the

inventory, they were deemed uncommon in the Sri Lankan school setting and received very low scores at the stage of validity assessment, which resulted in removal of these items. The final inventory was pre-tested among 15 adolescents in a school in Colombo district. Test-retest reliability of the instruments within a period of one week was assessed using Cohen's kappa. This revealed that inventory had good reliability with a Cohen's kappa coefficient of 0.86. Also the items related to circumstances and consequences of violence also had good reliability with a minimum Cohen's kappa coefficient of 0.76

**Table 1 Violent acts included in the SLETVI**

<b>Physical</b>	<b>Relational</b>
Pinching	Name calling
Scratching	Excluding from the company or not caring
Pulling hair	Teasing or laughing sarcastically
Pulling by tie/dress	Not allowing to be a member of their group
Pulling ear	Not allowing to sit with a friend you like
Knocking on head	Not allowing to do things you like
Slapping	Not allowing to play with them
Hitting with fist	Pitting friends against you
Slapping ears	Tattle tale teachers to put them against you
Shoving	Using bad words
Kicking	Looking down upon
Throwing objects	Threatening
Hitting head against some object	Stealing or taking belongings forcefully
Dragging along the floor	Telling tales about or spreading rumours using wall posters
Choking	Forcing to involve in love affair without your interest
Burning	Forcing to continue love affair without your interest
Assaulting with a pole	Influencing via SMS using mobile phones or threatening via phones
Assaulting with a sharp weapon	
Assaulting with other weapons	
Hitting genitals	

The participants were asked to report whether they had experienced or carried out any of the acts listed in SLETVI in the previous 6 months. Additionally, circumstances and consequences of violent acts experienced by the participants were inquired into. Time, place and persons involved in the violent incidents experienced or committed by the participants during the preceding six months period were inquired into. The participants were also asked about consequences in terms of occurrence of injuries and whether they reported the incident to the school authority. The participants were requested to respond the questions on circumstances and consequences, considering all the violent events they involved during preceding six months.

Following data entry, the frequency distributions of categorical variables were examined and

incompatible entries were identified and corrected by referring to the original questionnaire. Statistical analyses were conducted employing the software package SPSS - Statistical Package for Social Sciences (Version 16). The prevalence of being a victim was based on the percentage of all study participants who had been victimized for any of specified violent act in the SLETVI at least once during the preceding six months. Similarly, the prevalence of being a perpetrator was estimated based on the percentage of study participants who had committed any of specified violent acts in the SLETVI at least once during the preceding six months. Participatory roles were defined based on whether the participants reported ever having been a perpetrator or victim in the preceding 6 months.

**Figure 1 - Participatory Role in violence (Adopted from Gumpel, 2008)**

Victim	Perpetrator	
	Yes	No
Yes	Mixed perpetrator and victim	Pure Victim
No	Pure perpetrator	Un involved

The term 'pure victim' is used for study participants who had been subjected to any violent act specified in SLETVI at least once, but had not committed any violent act during the preceding six months. Similarly, study participants who had committed any violent act at least once, but had not themselves been subjected to any violent act are termed 'pure perpetrators'. The term 'mixed perpetrator-victim' is used about participants who had committed and had themselves been subjected to any violent act and 'uninvolved' refers to

participants who had not been involved in any violent act during the preceding six months.

To describe circumstances and consequences of peer violence, the number of participants who involved in violence was considered as denominator, while number of participants who identified specified responses (e.g.: For place of occurrence of violence: class room, play-ground, etc) were considered as the denominator.

Ethical clearance was obtained from Ethics Review Committee of the Faculty of Medicine,

Colombo, Sri Lanka. Administrative clearance for data collection was obtained from the Director of Education, Western Province, Zonal Directors and Principals of all selected schools for data collection. Informed consent was obtained from study participants after explaining the objectives of the research and they were assured the nature of their voluntary participation. The confidentiality of information provided was ensured and any identification data of study participants were not obtained. Participants were identified by a number to

facilitate conducting the data collecting session. Respondents were made to sit apart while answering the questionnaire and teachers were requested to be away from the place of data collection.

### Results

Of the eligible sample of 1751 adolescents, 1700 responded to the questionnaire giving a response rate of 97%. The remaining 51 (3%), refused. Table 2 shows basic socio-demographic characteristics of the study sample.

**Table - 2 Distribution of basic socio-demographic characteristics of study sample**

<b>Socio-demographic characteristics</b>	<b>Number (Total= 1700)</b>	<b>Percentage</b>
<b>Age in completed years</b>		
13	565	33.3
14	577	33.9
15	558	32.8
<b>Sex</b>		
Male	884	52.0
Female	816	48.0
<b>Ethnicity</b>		
Sinhala	1615	95.0
Tamil	46	2.7
Muslim	27	1.6
Malay	7	0.4
Burgher	5	0.3
<b>Religion</b>		
Buddhism	1530	90.0
Christianity	54	3.2
Catholicism	48	2.8
Hinduism	34	2.0
Islam	34	2.0
<b>Residence</b>		
Rural	1138	66.9
Urban	562	33.1

Each of the three age groups comprised approximately one third of the study sample, and 52% were males. A large majority were Sinhalese (95.0%), Buddhists (90%) and from rural settings (66.9%).

The prevalence estimates of peer violence involvement in school are shown in Table 3.

**Table 3 Prevalence estimates of peer violence involvement in school**

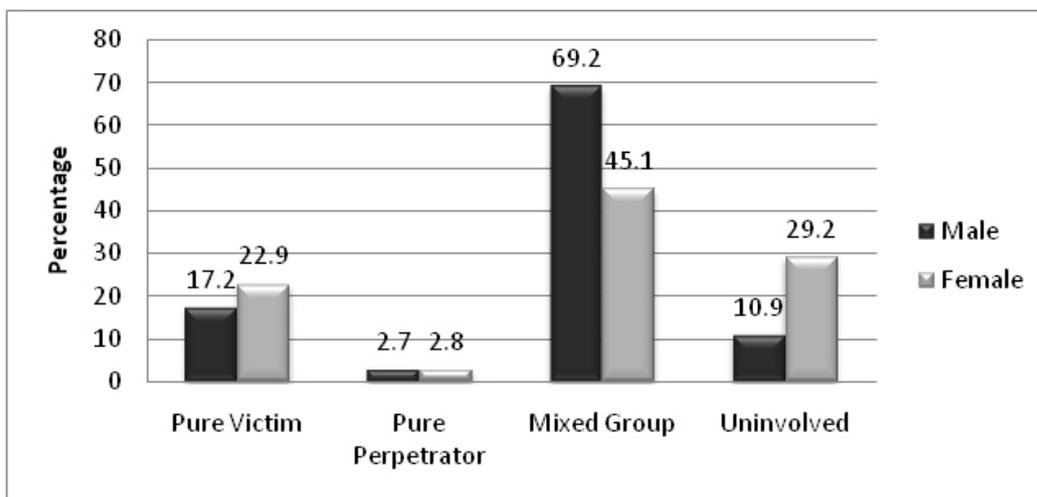
Interpersonal Violence	Total (n=1700)			Male(n=884)			Female (n=816)			Significance of difference between male and females
	No	%	95%CI	No	%	95%CI	No	%	95%CI	
Victim of peer violence	1447	85.1	83.4-86.8	793	89.7	87.7-91.7	654	80.1	77.4-82.8	$\chi^2=30.61$ df=1,p<0.001
victim of peer physical violence	1319	77.6	75.6-79.6	764	86.4	84.1-88.7	555	68.0	64.8-71.2	$\chi^2=82.71$ df=1,p<0.001
victim of peer relational violence	1196	70.4	68.2-72.6	640	72.4	69.5-75.3	556	68.1	64.9-71.3	$\chi^2=3.69$ df=1,p=0.055
Perpetrator of peer violence	1130	66.5	64.3-68.7	666	75.3	72.5-78.1	464	56.9	53.5-60.3	$\chi^2=65.00$ df=1,p<0.001
perpetrator of peer physical violence	1027	60.4	58.1-62.7	636	71.9	68.9-74.9	391	47.9	44.5-51.3	$\chi^2=102.40$ df=1,p<0.001
perpetrator of peer relational violence	866	50.9	48.5-53.3	537	60.7	57.5-63.9	329	40.3	36.9-43.7	$\chi^2=70.85$ df=1,p<0.001

The prevalence of being a victim of peer violence was higher than the prevalence of being a perpetrator. Higher percentages of male adolescents were involved in violence as perpetrators as well as victims compared to females. These patterns were observed in both physical and relational violence.

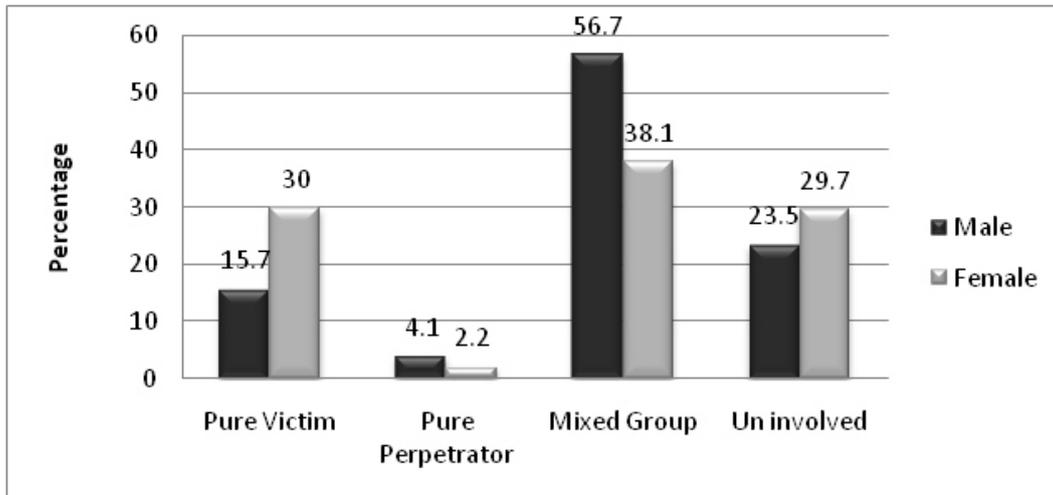
The majority, 1101 (64.8%) of the adolescents, were mixed perpetrator-victims of violence.

Three hundred and forty six (20.4%) and 29 (1.7%) adolescents were pure victims and pure perpetrators, respectively. Of the sample, 224 (13.2%) were uninvolved in any violence.

More than half of the study sample (57.6%) was mixed perpetrator-victims of physical violence. A higher male percentage (69.2%), was observed in the mixed perpetrator-victim group of physical violence than females (45.1%) (Figure 2).



**Figure 2 - Distribution of the study sample by participatory role in physical violence and sex**



**Figure 3 - Distribution of the sample by participatory role in relational violence and sex**

With regard to relational violence, 47.8% adolescents were mixed perpetrator-victims; of them higher percentage was males (males=56.7%, females=38.1%) (Figure3).

The most common time in which adolescents had been victimized to physical (79.1%) and relational (81.6%) violence was during 'time slots in school with no assigned work'(when a teacher is not available in the class, designated as 'free periods'). Also it was the most common time to perpetrate physical (79.7%) and relational (85.7%) violence. Other common timings reported were during 'school interval', 'after school hours' and 'during lessons'. A large majority of physical (83.0 %) and relational (89.4 %) violence victims identified 'class room' as the most common place of experiencing violence in school. Similarly, a large majority of physical (83.6 %) and relational (87.3%) violence perpetrators also reported 'class room' as the most common place for them to commit violence. 'School playground', 'tuition classes, 'on way to or from school' and 'school garden' were the other common places identified. A large majority of victims (84.5%) and perpetrators (80.5%) of physical violence as well as victims (88.2%) and perpetrators (80.8%) of identified

their 'perpetrator' or 'victim' as a peer of the same age or grade.

A larger majority (64.4%) of physical violence victims reported an injury as a consequence of violence, most commonly superficial removal of skin (abrasion) (74.8%) and bruises (37.6%). More severe forms of injuries such as cut injuries (7.8%), laceration or deeper removal of skin (5.9%), injury to eye (2.1%), burns (1.4%) and fractures or breaking bones (1.3%) were also reported. The upper limbs (69.1%) were the most commonly injured part of the body, followed by the lower limbs (35.6%), and head and face (18.8%). Based on self-reporting, 30.7% of victims who got injured due to physical violence had been managed at the first aid unit in the school, 12.1% had been treated by a doctor at a private clinic, 6.2 % had been treated at the Out Patient Department at a hospital and 6.1% had been hospitalized. Altogether, 103 participants out of 1700 sample were treated by a doctor indicating 6% prevalence of serious forms of violence.

As a response to the violence experienced, 60.7% physical and 40.9% relational violence victims had beaten their perpetrator then and there or at a later occasion. Only 47.9% physical

and 45.4% relational violence victims had reported the incident to school authority. Among the victims who didn't report the incident, the majority, (53.4% of physical and 60.2% of relational violence victims), believed violence to be a 'normal behaviour' among students. Further 18.2% physical and 16.8% relational violence victims didn't report as the injury/pain was not severe. And 15.6% physical and 14.2% relational violence victims didn't report because of their past experience of unfavourable consequences of such report. Another 11.2% physical and 11.2% relational violence victims didn't report as they had been threatened by the perpetrator to not to report. Unawareness of a procedure to make such complaint was the reason for 7.4% physical and 6.7% relational violence victims to not to report.

As a consequences of perpetrating violence, 39.3% physical and 20.9% relational violence perpetrators were beaten by the victim. Further, 15.4% physical and 17.4% relational violence perpetrators were punished physically by the school authority for committing violence.

### **Discussion**

High prevalence of being a victim (85.1%) and perpetrator (66.5%) of peer violence in schools suggests the need of urgent attention on this problem. These findings are not directly comparable with previous studies conducted in Sri Lanka, as no study has presented prevalence data on victimization or perpetration of physical and relational violence separately and no study has assessed violence using whole spectrum of violent acts used in the present study.

The prevalence of being a victim of peer violence in schools in present study was significantly higher than being a perpetrator. A similar pattern was observed in previous studies done in Sri Lanka. Wijesekera (2003) investigated physical violence among adolescents

(n=630) in Kalutara educational division and found the prevalence of being a victim and perpetrator of physical violence were 43.7% and 35.5%, respectively. Similarly, the National Survey found that the prevalence of victimization for physical attacks was 18.4% and perpetration 10.4%.<sup>[1]</sup> This could have been caused by under reporting of perpetration compared to victimization, since violence is a socially unacceptable behavior. In spite of several precautions, taken to avoid this error, present study too showed a significant difference between prevalence of being a perpetrator and victim. This difference could arise if one perpetrator victimized more than one person. However, there could be a possibility of adolescents who did not participate in the study were more likely to be perpetrators than victims.

The present study found that boys were more commonly involved in all forms of violence compared to girls. Perpetration and victimization of physical violence as well as perpetrations of relational violence were more common among boys. Victimization for relational violence was also more common among boys, but this difference was marginally significant. Male predominance in physical violence both as a perpetrator and victim is supported by other studies conducted in United States and Israel. A similar pattern has been observed in other studies carried out in Sri Lanka too. The National survey reported that the prevalence of being a perpetrator of physical attacks was higher among boys (15.9%) compared to girls (6.1%). The study by Hewamalage (2010) among 14-15 year old adolescents (n=246) in schools at Kesbawa education division, Sri Lanka also revealed that males were more commonly involved in physical assaults (45.4%) than females (16.7%). Physical and psychological changes occur due to sex hormones during adolescence leads to differences in physical appearance and behavioral patterns between boys and girls.

In adolescence, boys increase their muscle mass and bone density thereby increases their physical strength. At the same time, they acquire psychological changes that which sometimes could result in aggressive reaction patterns and consequently physical violence. Also, there is a cultural tendency for males to easily get involve in physical violence. Inability to react to physical violence by a male is considered as a shame in Sri Lankan and some other cultures. Peer pressure, cultural expectations of male dominance and competition to fulfil unlimited requirements with limited resources are some of social reasons for male adolescents to get involved in physical violence. Due to the cultural values in the Sri Lankan context, boys rarely physically harass girls and girls rarely harass boys.

The studies described in the literature show a mixed pattern of results related to sex specific involvement of relational violence among peers in schools. Similar to the findings of the present study involvement in relational violence has been found to be higher among males by some researchers, whereas other studies have found similar levels of involvement among male and female adolescents. The research on relational violence per se was found to be scarce in the local literature. The differences in research findings could be due to the cultural differences or the types of relational violent acts assessed.

The present study allowed description of the participatory role in peer violence in schools since it assessed both victimization and perpetration of peer violence. Approximately half of study sample was mixed perpetrator-victims of physical as well as relational violence. This is probably because adolescent victims are reactive to the aggression or violence by their peers. Less power difference among peers may be a factor which motivates victims to use violence against their perpetrators to defend themselves.

A considerable proportion of perpetrators had become victims as a consequence of violence they committed. The study carried out by Wijesekera (2003) in Sri Lanka also revealed that 50.3% of the victims fought back to react to violence.

The most common time when adolescents had been involved in violence was during time slots with no school work which is designated as 'free periods' and most common place to occur violence was 'class room'. These findings were in keeping with the findings of Sri Lankan studies. However, these findings were not consistent with some studies carried out in Western countries. Goldstein (1983) in United States reported violence was less likely to happen in the classrooms and more likely to occur in unsupervised, crowded places such as hallways, stairwells, cafeterias, bathrooms and locker rooms. Astor and the team (1999) in their study carried out in United States found that all 166 reported violent events had occurred in locations where there were students but a few or no adults. Violent events had occurred in classrooms only when the teacher was absent while violence more often occurred in public areas during transition times since there was little or no adult supervision. Contextual differences in relation to where students spend their unsupervised time (in some countries students are not allowed to stay in the classroom during breaks) and the level of supervision in breaks in different countries could be the reason for the differences in findings. Thus it is likely that violence is more likely to occur if students tend to spend their breaks in areas where there is a lack of teacher supervision.

The present study was carried out in 28 schools in which 7-17yrs old students are studying, but a large majority of participants had involved in violence with peers of the same age or grade. This finding is supported by the results of other studies too. This may be due to that adolescents are more likely to socialize with same age peers and they would be more likely to get into fights or conflicts with their age mates.

A large majority of physical violence victims in the present study had been injured, but most injuries were minor. This is in keeping with the study carried out in Sri Lanka by Wijesekera. The present study revealed that only a small percentage (6.1%) of victims of physical violence had required hospitalization. Hewamalage (2010) also found that only 4.1% of physical assaults in the school setting lead to medical treatment in her study among adolescents students in Sri Lanka. These findings are similar to the findings of study carried out in United States by Kachur (1996), who found that severe forms of physical violence less commonly in the schools compared to other community settings.

Limitations of present study also should be noted. The study was carried out in Gampaha district, Sri Lanka and generalizing the finding to the rest of the country should be done with caution. Being a perpetrator of violence is a socially unacceptable behaviour and participants may have been more willing to report being a victim than being a perpetrator, despite of the measures taken to avoid report bias. Even though, many measures were taken to include all possible violent acts among adolescents in the data collecting tool (SLETVI), still there is a possibility of not picking up all forms violent acts among adolescents. Further, the participants may have had difficulties in remembering all events of violence during past six months.

### **Conclusions and Recommendations**

High prevalence of peer violence suggests that schools are not safe places for the mental and physical well being of adolescent students. It further indicates that adolescents in this study context have limited non-violent problem solving skills. The study also found that violent culture had been normalized in schools

and it indicates the urgent need for attitudinal change against violence. Interventions should be designed to target the large majority, 'mixed perpetrator/victims' to break the vicious cycle of violence. Students should be informed that schools will not tolerate bullying or any other forms of violence. To introduce a non-violent culture in schools, teachers should be encouraged to use non-violent disciplinary methods. The concept of violence in schools needs to be included in the teacher training curriculum in order to promote teachers' support and contribution in violence prevention programmes. Schools should also have a proper channel of reporting violence, pre-identified procedures and personnel in schools to deal with violence among students. Students should be encouraged to report any violence to the school authority. Further research studies are recommended to identify risk factors of peer violence in order to tailor preventive programmes.

### **Acknowledgment**

We convey our gratitude to Prof. S. Sivayogan, Prof. Priyanjali Zoysa and Dr. Ayesha Lokubalasooriya for their expert guidance and advice given from the initial stages of the study. Further we extend our gratitude to all other experts, teachers, parents and all those who reviewed the questionnaire and made valuable suggestions. We are also grateful for the extensive co-operation provided by the zonal directors, school principals, teachers, parents and students. Our gratitude further extends to all the study participants who generously participated in this study.

### **Disclosure of interest**

"None declared"

## Funding

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

## References

1. UNICEF. National Survey on Emerging Issues among Adolescents in Sri Lanka, National Survey Report. Colombo, Sri Lanka: Ministry of Health, 2004.
2. Sparks RF. The perception of violence. *Medicine Science and the Law*. 1972; 12: 244-7.
3. WHO. National Report on Violence and Health in Sri Lanka. Colombo: World Health Organization, Ministry of Healthcare and Nutrition, 2008.
4. Gumpel TP. Behavioral Disorders in the School: Participant Roles and Sub-Roles in Three Types of School Violence. *Journal of Emotional and Behavioral Disorders*. 2008; 16: 145-62.
5. Gunn J, Blackburn R and Taylor PJ. *Forensic Psychiatry: Clinical, Legal and Ethical Issues*. Oxford: Butterworth-Heinemann, 1993, p.784.
6. Krug EG, Dahlberg LL, Mercy JA, Zwi AB and Lozano R. World Report on Violence and Health. Geneva: World Health Organization, 2002.
7. Lwanga SK and Lemeshow S. Sample size determination in health studies : a practical manual. Geneva: World Health Organization, 1991.
8. Wijesekera KL. Selected factors associated with physical violence and immediate consequences of violent incidents among advanced level students in Kaluthara Educational division. *Post Graduate Institute of Medicine*. Colombo, Sri Lanka: University of Colombo, 2003.
9. Wijeratne M, Seneviratne R, Gunawardena N, Østbye T, Lynch C and Sandøy IF. Development of the Sri Lankan Early Teenagers' Violence Inventory: An Instrument to Measure Peer Violence in Schools. *BioMed Research International* 2014; 2014 (2014): 11.
10. Khoury-Kassabri M, Astor RA and Benbenishty R. Student victimization by school staff in the context of an Israeli national school safety campaign. *Aggressive Behavior*. 2008; 34: 1-115.
11. Kaufman P, Chen X, Choy SP, et al. Indicators of School Crime and Safety 2000. Washington, D.C.: U.S. Department of Education, Office of Educational Research and Improvement, NCES 2001-017, U.S. Department of Justice, Office of Justice Programs, NCJ-184176, 2000.
12. Hewamalage AP. School violence among grade 10 students in Kesbawa education division in Sri Lanka. *Post Graduate Institute of Medicine*. Colombo: University of Colombo, 2010.
13. Olweus D. Bullying at School: Basic Facts and Effects of a School Based Intervention Program. *Journal of Child Psychology and Psychiatry*. 1994; 35: 1171-90.
14. Boulton MJ and Underwood K. Bully/victim problems among middle school children. *British Journal of Educational Psychology*. 1992: 73-87.
15. Seals D and Young J. Bullying and victimization: prevalence and relationship to gender, grade level, ethnicity, self-esteem, and depression. *Journal of Adolescence*. 2003; 38: 735-47.

16. Archer J. Sex Differences in Aggression in Real-World Settings: A Meta-Analytic Review. *Review of General Psychology*. 2004; 8: 291-322.
17. Bettencourt BA and Miller N. Gender differences in aggression as a function of provocation: a meta-analysis. *Psychological Bulletin*. 1996; 119: 422-47.
18. Goldstein AP, Apter SJ and Harootunian B. *School violence*. Prentice-Hall, 1984.
19. Astor RA, Meyer HA and Behre WJ. Unowned places and times: Maps and interviews about violence in high schools. *American Educational Research Journal*. Spring, 1999; 31: 3-42.
20. Kachur SP, Stennies GM, Powell KE, et al. School-Associated Violent Deaths in the United States, 1992 to 1994. *The Journal of the American Medical Association*. 1996; 275: 1729-33.