Domestic violence exposure and depression symptoms among adolescents in a rural area in the Galle District

TT Ponnamperuma[1], VCD Kudagama[2]

[1]*Department of Community Medicine, Faculty of Medicine, University of Ruhuna Galle, Sri Lanka.*
[2]*Medical Officer of Health, Udugama, Galle, Sri Lanka.*

Correspondence: Dr. Thyagi Ponnamperuma
e-mail: *thejanip@med.ruh.ac.lk*
https://orcid.org/0000-0002-0031-3483
Submitted on 26.04.2021 and accepted for publication on 22.11.2022

ABSTRACT

Introduction: Violence in society and mental health problems associated with it are on the rise. Children and adolescents are the most vulnerable groups for this problem. Whether the child is a direct victim or a witness of a violent event, violence brings deleterious effect to his/her mental wellbeing. The present study, investigated the association between exposure to domestic violence and depression symptoms in adolescents.

Methods: A descriptive cross-sectional study was conducted in two large secondary schools in the Udugama medical officer of health (MOH) area. From grades 10 and 11, four classes were selected randomly from each school and all who were present on the day of data collection were enrolled for the study. A self-administered questionnaire was used to assess domestic violence exposures (CDEV- Scale) and depression symptoms (CES-DC scale) in these children.

Results: There were 346 children (females 52%), aged between 14 - 16 years. In the sample 25.1% (n=87) were exposed to domestic violence and among them, 31.5% met diagnostic criteria for depression. Depression was reported significantly more in the domestic violence exposed group than in the non-exposed group (χ^2=7.09; p<0.01). Depression symptoms significantly increased with the increased severity of domestic violence exposure (295) = -0.21, p<0.01. In the regression model, domestic violence exposure significantly predicted depression symptoms even after controlling for known confounders, age, gender, and socioeconomic status (β=0.13, p<0.01).

Conclusions & recommendations: Exposure to domestic violence is common and it significantly associated with depression in adolescents in the group studied. This highlights the need for domestic violence prevention programs, and mental health intervention and a support system for adolescents in the country.

Keywords: *Adolescents, depression, domestic violence, trauma.*

Introduction

Children are exposed to domestic violence (DV) when they see, hear, directly involve in, or experience, the aftermath of physical or sexual assaults that occur between their caregivers. Whether the child is a direct victim or a witness of such violent events, childhood exposure to violence brings many deleterious effects into their mental wellbeing.

Credible estimates of the prevalence of children exposed to violence between parents are less, but the existing data suggest that large numbers of children are affected globally. In the USA, about

25% of children are reported as having witnessed violence at home (1). In Sri Lanka, the prevalence of domestic violence is high as 49% (2) and therefore the values could be higher. Catani and the group revealed that 97% of children in Northern part of the country have exposure to domestic violence (3). A recent study conducted in the Southern part of the country has reported that 20% of children have physically experienced domestic violence, while 22.7% have witnessed domestic violence (4). All these studies provide much evidence on the high prevalence of exposure of children to domestic violence in the country.

Exposure to violence adversely influences children's psychological wellbeing. Whether the child is a direct victim or a witness of a violent event, childhood exposure to violence has been a cause for a range of psychopathologies. Depression is a common psychological problem in this age group with a prevalence of 5% in the population (5), and among the trauma-exposed it is reported as high as 24% (6). In Sri Lanka, depression is reported among 19.6% of children exposed to domestic violence (3). Even though the mental health problems in youth are relatively understudied there is increasing evidence that adolescents with depression have lasting negative effects. For example, depressive youth have a fivefold increased risk of suicide (7), and depression leads to long-lasting disability (8) and increases the risk of psychiatric diseases in adulthood (9). Therefore, if these adolescents are not identified and treated, they are more prone to school avoidance, alcoholism, drug abuse and to adolescent delinquency (10).

This study was designed to study the association between exposure to violence between parents and depression symptoms in a sample of adolescents selected from a rural area in the country.

Methods

Study setting and the sample

This was a school based cross-sectional study. Two large secondary schools in Udugama MOH area were selected. Four classes in grades 10 and 11 in each school were selected randomly to recruit the students. All students who were present on the day of data collection from selected classes were enrolled for the study. Students were seated separately in the school hall during the interval and a self-reported questionnaire was distributed to collect data. The entire questionnaire took approximately 30 minutes to complete.

Measures

The questionnaire comprised of 3 sections.

Section 1 Demographic information and socio-economic status (SES):

Participants rated perceived SES by the youth version of the MacArthur Subjective Social Status Scale, validated for adolescents (Goodman *et al.,* 2001). We also measured adolescents' happiness at home by a question measured on 5 point Likert scale ranging from 4 = very happy to 0 = very unhappy.

Section 2 Exposure to violence:

This was measured by using the Child Exposure to Domestic Violence (CEDV) Scale. Ten questions assessed physical and emotional violence exposures at home by using a four-point Likert-type scale, rated as *Never* (0)*, Sometimes* (1)*, Often* (2), and *Almost Always* (3). Emotional violence exposure scored more than 2 (rated often and more) or physical violence exposure scored more than 1 (rated sometimes and above) were considered as exposure to domestic violence. The sum of scores in each subscale was added together to calculate the cumulative violence exposure score. As this questionnaire was not validated in Sri Lanka, it was translated to the Sinhala language and back translated to English and then again to Sinhala. The final questionnaire was pretest in a separate sample before using the questionnaire in the proper study.

Section 3 Depression:

The Center for Epidemiological Studies Depression Scale for Children (CES-DC) is used to screen for depression. It is a 20-item self-reported depression inventory with scores ranging from 0 to 60. Each response to an item is scored as 0 = *not at all,* 1 = *a little,* 2 = *some*, 3 = *a lot*. Higher CES-DC scores

indicate increasing levels of depression. The CES-DC, score of 15 is used as a cutoff value to identify children with depressive symptoms (Weissman et al. 1980). This questionnaire is not validated in the country, and therefore it was translated Sinhala language following the same steps used in the translation of CEDV scale and a pretest was done before using the tool in the proper study.

Ethical clearance was obtained by the Ethics Review Committee, Faculty of Medicine, University of Ruhuna, Galle, Sri Lanka. Permission for school-based assessment was obtained from the Department of Education, principals of the schools and from the teachers of the selected classes. Informed consent was obtained from the parents, and from the adolescents who participated in this study.

Statistical analysis

All analyses were performed with *SPSS* v.24, with two-tailed *p*-values ≤ 0.05 considered significant. The independent sample t-test was used to compare the means of continuous variables on domestic violence-exposed versus non-exposed groups. Multiple regression analysis (entry method) was used to identify the predictors of depression. Age, gender, age by gender interaction, SES, and DV exposure were included as independent variables and the depression score was used as the dependant variable.

Results

Sample Characteristics

The sample comprised of 346 adolescents, with 51.7% girls, aged ranged between 14 - 16 years (mean 14.91, SD 0.33). A majority of them were Buddhists (95.7%) and there were 2% Hindus and 1.4% Christians. Perceived family socioeconomic status according to the MacArthur subjective social status scale reported a mean of 5.56 (SD = 1.83, range = 1-10) indicating a medium social status. Among the adolescents, 22 have lost their fathers, 12 have lost their mothers and 2 were living with their stepmothers and another 2 with their stepfathers. Apart from 20 adolescents, all had siblings. The mean family size of the participants was 4.4 (SD=1.1, range 2-7).

Exposure to domestic violence

There were 87 (25.1%) adolescents exposed to at least one event of domestic violence. On average, these adolescents reported to have exposed to 1.67 (SD=1.33, range=0-10) different violent event types at their homes. Figure 1 shows different types of domestic violence exposures reported by adolescents. Destroying property, frequent disagreement, and arguments about the child were the frequently reported exposures. Both girls and boys had no difference in exposure to violence at home (*p*=0.734). As shown in Table 1, the exposed and the unexposed groups did not significantly differ in age and economic status. However, adolescent's happiness at home has significantly reduced in the DV exposed group compared to the non-exposed (*p*<0.001).

Depression symptoms

Diagnostic criteria for depression were met by 109 (31.5%) adolescents in the total sample. Adolescent's reported depression symptoms are illustrated in table 2. The mean score of depression symptoms in the sample was 14.1 (SD = 6.8, range 3-51). As shown in table 3, depression symptoms were unrelated to age, and socioeconomic status. The total depression score showed no gender difference (t (293) = 0.118, *p* = 0.906. When looking into individual depression symptoms, girls have scored high in many of the symptoms but a significant difference was observed only in three symptoms. Girls have scored high in symptoms of 'I felt down and unhappy' and 'I felt like crying' but boys have scored high in the symptom of "I was more quiet than usual' (Table 2). DV exposed adolescents reported more severe symptoms than the unexposed (Table 1). In the DV exposed subgroup with 87 children, 41 (47.1%) met the criteria for depression. Therefore, DV exposed group had a significantly higher number of adolescents with depression compared to the unexposed χ^2 (1, N=295) = 7.09, *p*=0.008).

We hypothesized that adolescents who were exposed to many traumatic events would have the most severe depression symptoms. As shown above (Table 3), domestic violence exposure significantly decreases happiness at home, and both these variables significantly intercorrelate with depression symptoms. To investigate the association between

DV exposure and depression symptomatology in greater detail, we conducted a hierarchical linear regression analyses the entry method. Socio-demographic variables were added in the first model, happiness at home in the second, and number of DV exposures in the third model.

Age by sex interaction showed no significant effect and therefore excluded from the model. As shown in Table 4, age, gender, socio-economic status showed no significant effect. In controlling for demographic factors, happiness at home, the number of DV exposures significantly increased the depression symptoms in adolescents.
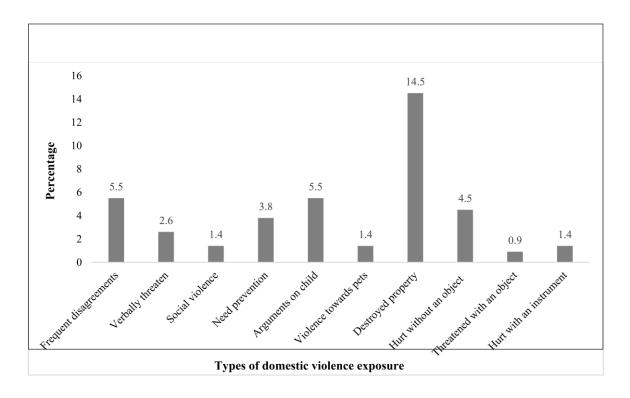

Figure 1: Number of participants (n =345) reporting each category of traumatic event

Table 1: Comparison between domestic violence exposed and the unexposed

	Exposed to domestic violence Mean (SD)	Unexposed to domestic violence Mean (SD)	t value	p value
Age	14.90 (0.36)	14.92 (0.33)	0.07	0.946
Economic status	5.37 (1.95)	5.62 (1.66)	1.07	0.263
Happiness at home	3.64 (1.17)	4.34 (0.95)	5.23	<0.001
Depression symptoms	15.71 (6.30)	13.42 (6.91)	2.63	0.009

Table 2: Depression symptoms reported by girls and boys

Depression Symptoms	Females			Males		
	N	$\bar\chi$	SD	$\bar\chi$	SD	t
1. I was bothered by things that usually don't bother me.	329	0.45	0.63	0.39	0.68	0.819
2. I did not feel like eating, I wasn't very hungry.	326	0.38	0.63	0.38	0.68	-0.024
3. I wasn't able to feel happy, even when my family or friends tried to help me feel better.	325	0.30	0.75	0.42	0.84	-1.325
4. I felt like I was just as good as other kids.	334	2.15	0.96	1.99	1.04	1.463
5. Felt like I couldn't pay attention to what I was doing.	326	0.80	1.04	0.78	0.94	0.193
6. I felt down and unhappy.	332	0.52	0.79	0.32	0.67	2.409*
7. I felt like I was too tired to do things.	325	0.68	0.84	0.64	0.77	0.531
8. I felt like something good was going to happen.	322	1.78	1.03	1.61	1.09	1.403
9. I felt like things I did before didn't work out right.	324	0.34	0.70	0.45	0.90	-1.230
10. I felt scared.	328	0.38	0.73	0.36	0.73	0.290
11. I didn't sleep as well as I usually sleep	331	0.25	0.72	0.20	0.54	0.829
12. I was happy.	331	0.64	0.98	0.65	0.91	-0.099
13. I was more quiet than usual	326	0.65	0.84	1.03	1.01	-3.619***
14. I felt lonely, like I didn't have any friends	320	0.27	0.68	0.32	0.72	-0.663
15. I felt like kids I know were not friendly or that they didn't want to be with me.	316	0.23	0.62	0.28	0.71	-0.558
16. I had a good time.	336	2.30	0.99	2.27	0.98	0.222
17. I felt like crying.	326	0.41	0.80	0.24	0.59	2.133*
18. I felt sad.	329	0.61	0.93	0.51	0.80	1.064
19. I felt people didn't like me.	325	0.30	0.69	0.35	0.75	-0.631
20. It was hard to get started doing things.	323	0.62	0.83	0.71	0.94	-0.962

Note: * <0.05, **<0.01, ***<0.001

Table 3: Descriptive statistics and intercorrelations

Variable				Pearson correlation (r)				
	n	Mean	(SD)	1.	2.	3.	4.	5.
1. Age	345	14.9	(0.3)					
2. Socioeconomic status	330	5.6	(0.8)	0.14*				
3. Happiness at home	342	3.6	(1.1)	0.02	0.16**			
4. Domestic violence exposure	345	0.5	(0.9)	-0.04	-0.07	-0.32**		
5. Depression symptoms	295	14.18	(6.8)	-0.01	-0.04	0.28**	0.21**	

Note: * <0.05, **<0.01, ***<0.001

Table 4: Hierarchical Multiple Regression Analyses Predicting Depression Symptom Severity

Predictor		B	SE B	β	ΔR^2	R^2	Overall F
Model 1 2					0.003	0.008	0.701
	Age	1.08	1.24	0.49			
	Gender	0.56	0.83	0.13			
	SES	0.30	0.24	0.78			
Model 2 3					0.096	0.103	7.90***
	Age	0.83	1.17	0.14			
	Gender	0.40	0.80	0.29			
	SES	0.08	0.29	0.19			
	Happiness at home	-2.05	0.38	0.32***			
Model 3 2 3					0.015	0.119	7.35***
	Age	0.80	1.17	0.39			
	Gender	0.36	0.79	0.26			
	SES	0.08	0.23	002			
	Happiness at home	1.80	0.40	0.28***			
	DV exposure	0.83	0.38	0.13**			

Notes. DV: domestic violence; SES: socioeconomic status， * <0.05, **<0.01, ***<0.001

Discussion

This study assessed exposure to domestic violence and its association with depressive symptoms among adolescents. This is among the few studies conducted in developing countries that has explored adolescent mental health and its association with witnessing domestic violence. It was alarming to identify that one in four adolescents (25%) in this area have witnessed violent events that occurred between their parents. A previous study in the Galle district has also demonstrated a similar result with 23% of adolescents being exposed to violence at home (11). With the overall prevalence of intimate partner violence among couples in the country being 25 - 30% (12), it is mind blowing to see that almost all violent incidents that happens between parents are observed by children. Parents or caregivers should understand the seriousness of this finding that not only they but children at home are also gets victimized and they also suffer from the consequences of violence (13).

The main goal of this study were to identify the association between domestic violence exposure and depression symptoms. The results revealed that 47% of adolescents' who experienced domestic violence has met the criteria for depression. A school-based screening conducted in the Rathnapura area using the same questionnaire had also identified a similar prevalence rate (36%) of depression in this age group (14). Our finding are further supported by the meta-analysis, which states that 24% of trauma-exposed adolescents meet criteria for clinically significant depression irrespective of the country and the method of measurement (6). The regression analysis showed that DV exposure significantly predicts depression symptoms in adolescents even after controlling for age, gender, and socioeconomic status. However, such conclusions are restricted by cross-sectional study design but there is strong support from the previous meta-analysis that domestic violence exposure is a strong predictor of depression and it has 2.6 times greater odds for the clinical diagnosis of depression in adolescents (6). Further, we observed that neither DV exposure nor depression symptoms associate with demographic factors or socioeconomic status. This indicates that irrespective of age, gender, or economic status children exposed to DV are vulnerable to develop depression.

Currently, many public health interventions are implemented to reduce domestic violence in the country but these programmes are addressing mothers more than the children in the society. Further, these services have been implemented in most of the urban areas but not in the rural areas where the violence is common (15). Schools probably are the best place to conduct violence screening and mental health intervention programs as schools are there in all areas and services do not have to combat the stigma that is often attached to them (16). There is evidence that mental health programmes conducted within the schools are effective in the Sri Lankan culture (17). Therefore, we recommend conducting school-based violence screening programs and mental health support programs in both urban and rural areas to minimize this problem in the country.

This study has several strengths and limitations. The key strength is the participation of a high number of adolescents as it was conducted in schools which gave them an environment with less stigma for mental health assessments. The main limitation is that the study didn't assess children experiencing DV, which might be a stronger reason for depressive symptoms. Also, the cross-sectional nature of the study hinders demonstrating the causal relationship of DV exposure in developing depression symptoms. Further, we had no validated questionnaire to measure DV exposure and depression symptoms in this age group.

Conclusions and Recommendations

In the selected group of adolescents one in four were exposed to domestic violence and one out of three are having depression symptoms. DV being a taboo topic in the community with cultural barriers leading to underreporting, identified figures may be much lower than what the actual values are. Therefore, there is an overwhelming need for domestic violence prevention and mental health interventions and a support system for adolescents in the country. Furthermore, this study also suggests the need for more research in this direction to provide more information to design programs for the prevention of domestic violence and care of adolescents exposed to domestic violence.

References

1. Finkelhor D, Turner H, Ormrod R, Hamby SL. Violence, abuse, and crime exposure in a national sample of children and youth. *Pediatrics*. 2009; **124**(5): 1411-23.

2. Kaushalya KSS, Ponnamperuma T. Domestic Violence Exposure of Married Women in a Rural area - Sri Lanka. *Galle Medical Journal*. 2018; **23**: 1-8.

3. Catani C, Jacob N, Schauer E, Kohila M, Neuner F. Family violence, war, and natural disasters: a study of the effect of extreme stress on children's mental health in Sri Lanka. *BMC Psychiatry*. 2008; **33**(8): 1-10.

4. Ponnamperuma T, Nicolson NA. Negative Trauma Appraisals and PTSD Symptoms in Sri Lankan Adolescents. *J Abnorm Child Psychol.* 2016; **44**(2): 245-255.

5. Costello EJ, Egger H, Angold A. 10-year research update review: the epidemiology of child and adolescent psychiatric disorders: I. Methods and public health burden. *J Am Acad Child Adolesc Psychiatry*. 2005; **44**(10): 972-986.

6. Vibhakar V, Allen LR, Gee B, Meiser-Stedman R. A systematic review and meta-analysis on the prevalence of depression in children and adolescents after exposure to trauma. *J Affect Disord.* 2019; **255**: 77-89.

7. Weissman MM, Wolk S, Goldstein RB, Moreau D, Adams P, Greenwald S, *et al.* Depressed adolescents grown up. *JAMA*. 1999; **281**(18): 1707-1713.

8. Gore FM, Bloem PJ, Patton GC, Ferguson J, Joseph V, Coffey C, *et al.* Global burden of disease in young people aged 10-24 years: a systematic analysis. *Lancet.* 2011; **377**(9783): 2093-2102.

9. Carballo JJ, Munoz-Lorenzo L, Blasco-Fontecilla H, Lopez-Castroman J, Garcia-Nieto R, Dervic K, *et al.* Continuity of depressive disorders from childhood and adolescence to adulthood: a naturalistic study in community mental health centers. *Prim Care Companion CNS Disord.* 2011; **13**(5).

10. Chapman DP, Whitfield CL, Felitti VJ, Dube SR, Edwards VJ, Anda RF. Adverse childhood experiences and the risk of depressive disorders in adulthood. *J Affect Disord.* 2004; **82**(2): 217-225.

11. Ponnamperuma T, Nicolson NA. The Relative Impact of Traumatic Experiences and Daily Stressors on Mental Health Outcomes in Sri Lankan Adolescents. *J Trauma Stress.* 2018; **31**(4): 487-498.

12. Guruge S, Jayasuriya-Illesinghe V, Gunawardena N, Perera J. Intimate partner violence in Sri Lanka: a scoping review. *Ceylon Med J.* 2015; **60**(4): 133-138.

13. Hindin MJ, Gultiano S. Associations between witnessing parental domestic violence and experiencing depressive symptoms in Filipino adolescents. *Am J Public Health.* 2006; **96**(4): 660-663. DOI: 10.2105/AJPH.2005.069625

14. Rodrigo C, Welgama S, Gurusinghe J, Wijeratne T, Jayananda G, Rajapakse S. Symptoms of anxiety and depression in adolescent students; a perspective from Sri Lanka. *Child Adolescents Psychiatry Mental Health.* 2010; **4**: 10.

15. Guruge S, Jayasuriya-Illesinghe V, Gunawardena N. A review of the Sri Lankan health-sector response to intimate partner violence: looking back, moving forward. *WHO South East Asia J Public Health.* 2015; **4**(1): 6-11.

16. de Silva V, Hanwella R. Mental Health in Sri Lanka. *Lancet.* 2010; **376**(9735): 88-89.

17. Berger R, Gelkopf M. School-based intervention for the treatment of tsunami-related distress in children: a quasi-randomized controlled trial. *Psychother Psychosom.* 2009; **78**(6): 364-371.