Original Research

An educational intervention to improve knowledge and attitudes to develop healthy dating relationships among undergraduates in Western Province

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Abstract

Introduction: Dating violence is a major public health issue which has failed to gain recognition in the country. It was never studied in the local setting despite the higher prevalence/incidence reported in other countries**.**

Objectives: To determine effectiveness of an educational intervention to improve knowledge and attitudes to develop healthy dating relationships among undergraduates in selected state universities in Western Province

Methods: This was done as a quasi-experimental study where an educational intervention was implemented to improve knowledge and attitudes to develop healthy dating relationships. Experimental and control groups were purposively selected from two different universities. The sample size calculated for each group was 65. Data were collected using a self-administered questionnaire at pre-intervention and six months post-intervention. The intervention comprised a lecture on "Dating relationships and dating violence" followed by discussions on case scenarios and a distribution of a booklet entitled "Healthy Relationships" among study participants. The control group was only given a lecture entitled "Time management, sexual and reproductive health and psychological well-being". The effectiveness of the intervention between groups was calculated using chi-square test and within the group improvement using McNemar test.

Results: Response rate was 91% (262/288) at the screening stage. There was a significant ($p<0.01$) improvement in good knowledge on dating violence and in favourable attitudes ($p=0.001$) on dating violence, gender stereotypes and gender roles, in the experimental group compared to the control group at six months post-intervention.

Conclusions & Recommendations: The educational intervention conducted proved to be effective in improving knowledge and attitudes. Recommend the application of educational intervention among the university students to develop healthy dating relationships.

Key words: *dating, violence, educational intervention, knowledge, attitudes*

Introduction

Dating violence is defined as "any behaviour in an intimate relationship that causes physical, psychological or sexual harm, including acts of physical aggression, forced intercourse, psychological abuse, and controlling behaviours" (1). In the Sri Lankan universities, dating violence has culminated in murder of female students, rape, sexual harassment and assault (2). "Strategies for universities to prevent Sexual and Gender Based Violence" was published by the University Grants Commission of Sri Lanka in 2015. It was a collaborative mission involving a large number of academic and administrative staff of several Sri Lankan universities from 2013 to 2014. Several consultative workshops and consultative questionnaires were used to develop this publication. It highlights the significance and impact of Sexual and Gender Based Violence (SGBV) for Sri Lankan universities, legal and policy framework available in the country to address issues related to gender, labour, youth and violence and also strategies to prevent and address SGBV in the universities.

Most of the global interventions are school-based or community-based with more attention given to secondary prevention rather than primary prevention. In primary prevention, the emphasis has been given to conveying accurate knowledge and appropriate attitudes about dating violence (3-4) combating pro-violence beliefs and gender stereotypes, promoting help seeking and conflict management and emotional regulation (3-5). When designing such programmes, youth should be involved from the designing stage onwards to make these successful. Most of the developed interventions have been helpful in improving knowledge and attitudes on dating violence. However, a clear assessment about the behavioural change and violence perpetration is unavailable in literature (6). 'Safe dates', 'Youth relationships project' and 'the Fourth Rare' are some of the successful programmes carried out so far (7). According to the literature, violence in dating relationships seems to be more prevalent than violence between married couples (8). Thus, despite high prevalence and negative outcomes experienced, it has failed to gain recognition as a critical public health issue in contrast to adult intimate partner violence (IPV) (3). In our country, although IPV among women/female students has been studied, minimum attention is given to both sexes. Dating violence has never been studied extensively. Paucity of information on correlates and consequences of dating violence in the country limits the possibility of developing preventive interventions.

According to the study done in a leading university in Colombo, 52% reported having current relationships with a partner and 73% of them had their partners within the premises (9). Assuming that at least 50% of the dating relationships will result in marriage, it is important to identify the magnitude and the correlates to prevent violence during the initial stages of the relationship. If neglected, this will be part and parcel of married couples' life and since by that stage, not only the victim (either partner), but the children too will be subjected to physical and emotional violence leading to mental health problems. Ultimately, they will end up developing violent and delinquent behaviours and also engage in risk taking actions (10).

When students are at the initial stages of developing dating relationships, exposure to primary preventive measures can help form and concrete relationships between the partners in future (9). It has been stated that conflict patterns in adults start as adolescents/ young adults (11). Development of appropriate patterns of behaviour with a partner and the characteristics nurtured at present is likely to be carried forward into the future as adults (12). Therefore, it is important to address this problem. Although policy makers in other countries have focused on developing community and school-based interventions, we have not given much attention to it. In the Sri Lankan culture addressing this issue at schools is also not that feasible. Therefore, this study can contribute to awareness about the hidden magnitude of the problem in our population and encourage the need for further studies at community level and also focus on development of more integrated preventive measures. Information gathered in this study will help university administrators to improve their strategies on sexual and gender-based violence prevention relevant to this population. The objective of this study was to determine the effectiveness of an educational intervention at six

months post intervention to improve knowledge and attitudes to develop healthy dating relationships among undergraduates in selected state universities in Western Province.

Methods

This research was conducted as a quasi-experimental study according to the feasibility in two state universities in Western Province. The intervention was done in August 2018 and the post- test in February 2019 among a group of second year undergraduates. Students with the ability to read, write and speak either Sinhala, Tamil or English were included while clergy were excluded due to ethical and socio-cultural issues. Those undergraduates with heterosexual dating relationships of ≥ 6 months duration were selected for the experimental group and subjected to the intervention, while the control group was not. According to the formula described by Pocock (1983) (13), the required number of study participants in each group was calculated. Anticipated percentage with adequate level of knowledge and attitudes on dating violence in the exposed group after the intervention (p_1) was taken as 50% (14) and that of the unexposed group after the intervention (p_2) was taken as 25% with a power set at 0.8 and confidence level of 95%. A 10% was added to the sample size for non-response. The calculated sample size for each group was 65. The required number was selected using simple random sampling.

A screening questionnaire and an anonymous, pre-tested, self-administered questionnaire with 40 close-ended questions were used for data collection. Consensual and content validity was assessed through Delphi technique. The internal consistency was 0.8 (Cronbach's alpha) and the test-retest reliability was >0.8 (Kappa co-efficient). It had sections on socio-demographic information of the participants, knowledge on violence related to different acts of physical violence, sexual violence, verbal abuse, controlling behaviours, reasons for such violence, general, physical and psychological effects of violence, consequences and prevention of dating violence and attitudes on violence in dating relationships, gender stereotypes and gender roles. Written informed consent was taken.

The intervention was developed based on extensive literature survey, expert opinion, findings from a survey on risk factors of dating violence identified in a previous study. The intervention included primary prevention for those who did not have dating violence in their relationships and secondary prevention for those who were already in violent dating relationships to prevent the next incident. The intervention aimed at educating how to recognize unhealthy and healthy relationships, challenging violence as an accepted normal behaviour/ conflict resolution method, educating both risk and protective factors of dating violence, introducing strategies to promote positive relationship establishment, and focusing on effective communication in relationships. Resource persons consisted of a consultant psychiatrist, a specialist in health promotion, a psychologist, a consultant community physician and the principal investigator. A lecture on "Dating relationships and dating violence", three different case scenarios for discussion and a booklet on "Healthy Relationships" were included in the intervention. For the control group, a lecture on "Time management, sexual and reproductive health and psychological well-being" was conducted.

Six months after the intervention, the effectiveness in relation to improvement of knowledge and attitudes on dating violence in heterosexual dating relationships, gender stereotypes and gender roles was assessed using the same questionnaire used for the pre-test. The same group of students involved in the intervention and control groups was contacted by sending a message to the group and also by contacting them individually.

Data analysis

Individual scores for each component and overall scores were calculated for descriptive analysis of knowledge and attitudes. A percentage score of 75 or above was categorized as "good knowledge" and other scores as "poor knowledge". For attitude component, a 5-point Likert scale was used for scoring attitudes with responses ranging from 'strongly disagree' to 'strongly agree'. A percentage

score of 75 or above was categorized as "favourable attitudes" and below 75 as "unfavourable attitudes". Effectiveness of the intervention was measured by comparing proportions with good knowledge and favourable attitudes between experimental group and control group using Chi-squared Test. Within the experimental and control groups, improvements were assessed using McNemar Test.

Results

Of the 288 second year university students screened, 262 responded giving a participation rate of 91%. Among those who responded, only 144 (55%) were found to have an ongoing dating relationship with a duration of six months or more. From them, 65 each were selected as the experimental and control groups using simple random sampling.

The mean age of the respondents was 22.2 (SD=0.9) years in the experimental group and 22.3 (SD=1.1) years in the control group. The range was 21 to 24 years in both groups. A majority of respondents in both experimental (n=62; 95.4%) and control (n=61; 93.8%) groups were Sinhalese. Both experimental (n=47; 72.3%) and control (n=48; 73.8%) groups predominantly consisted of females. There was no statistically significant difference in socio-demographic factors between the two groups.

Knowledge on dating violence

The proportion of respondents with good knowledge on different knowledge components has increased in the experimental group at post-intervention compared to the pre-intervention, while it remained the same or lower in the control group (Table 1).

In the pre-intervention assessment, the proportion of respondents with good knowledge was higher in the control group (n=40; 61.5%) than in the experimental group (n=38; 58.5%). This difference was not statistically significant (p=0.9). This proportion of respondents with good knowledge has improved significantly (p<0.0001) in the experimental group (n=58; 89.2%), compared to the control group (n=36; 55.4%) at post-intervention. There was a statistically significant (p<0.0001) improvement of knowledge in the experimental group at post-intervention compared to pre-intervention, while there was no statistically significant (p=0.6) improvement in knowledge in the control group at the same two points.

Attitudes on dating violence, gender stereotypes and gender roles

The proportion of respondents with favourable attitudes on individual items of attitudes has increased in the experimental group at post-intervention compared to pre-intervention, while there was a negligible improvement or same or lower in the control group at post-intervention compared to the pre-intervention (Table 2). The proportion of respondents with favourable attitudes was higher in the experimental group (n=32; 49.2%) than in the control group (n=28; 43.1%). This difference was not statistically significant (p=0.6) while the proportion of respondents with favourable attitudes has improved significantly (p=0.001) in the experimental group (n=48; 63.8%) compared to the control group (n=29; 44.6%) at post-intervention (Table 3). There was a statistically significant (p<0.001) improvement of attitudes, in the experimental group six months post-intervention compared to pre-intervention level, while there was no statistically significant (p=0.6) improvement in attitudes in the control group six months post-intervention compared to pre-intervention level (Table 4).

Discussion

There was a significant improvement (p<0.0001) in good knowledge and favourable attitudes (p=0.001) in the experimental group compared to the control group at six months post-intervention. Since the main aim of the intervention was on improving knowledge and attitudes on dating violence, an educational intervention was used. It was expected that improvement in knowledge would improve their attitudes positively leading to a positive impact on dating violence.

The non-participation rate of 9% at the screening

Table 1: Comparison of knowledge on dating violence between experimental and control groups at pre-intervention and six months post-intervention

Components of knowledge	Good knowledge (%)			
	Experimental group		Control group	
	Pre	Post	Pre	Post
Physical violence	80.0	96.9	72.3	72.3
Sexual violence	72.3	100.0	69.2	70.8
Verbal violence	60.0	100.0	60.0	60.0
Controlling behaviours	58.5	100.0	50.8	50.3
Reasons for violence	67.7	87.7	78.5	78.5
Psychological effects	86.2	98.5	78.5	76.9
Physical effects	56.9	96.9	63.1	63.1
General effects	70.8	93.8	70.8	64.6
Consequences and prevention	72.3	98.5	47.7	46.2

stage may have led to a selection bias affecting external validity, which makes it a non-representative sample of the reference population from which it arose. However, the experimental and control status was assigned to universities purposively, based on convenience and feasibility. Therefore, this assignment given to the two groups can result in baseline differences due to the presence of confounding factors affecting the internal validity of the study. In the pre-intervention assessment, there were no significant baseline differences between the two groups with regards to major confounding factors like age, sex and ethnicity. However, there were non-significant differences in outcome measures of knowledge and attitudes between the two groups. Hence, the two groups were considered similar with minimal selection bias which is a strength of this study.

The two universities are placed geographically apart with different subject streams and hence there is only a minimal possibility for contamination (which is an internal threat to validity) to occur. This threat occurs due to passing of information related to the intervention to the control group, leading to a change in the dependent variable of the control group, thus reducing the impact of the intervention on the experimental group. Depending on the highly significant improvement in both knowledge and attitudes of the experimental group at the post intervention stage, it is quite unlikely for contamination to have taken place.

There was no loss to follow up in any of the groups and thus the threat of experimental mortality does not apply here. Compensatory rivalry is another possible threat, which occurs if and when, the control group becomes aware that the experimental group has received desirable goods and services. This leads the former group to become more competitive and, may motivate them to exert an additional effort and reduce or reverse the anticipated effects of the intervention on the experimental group (15). There is no evidence for this in the present study, as both proportions with good knowledge and favourable attitudes in the control group have either declined or remained almost the same following the intervention.

By achieving the control of almost all possible threats to internal validity, it could be assumed that the effectiveness of the intervention is unlikely to be due to extraneous factors but purely due to the intervention conducted (independent variable). Thus, the validity of the study findings is considered a strength of this study.

First year students need time to get adjusted and settle to the new environment. It was assumed that by the second year they are more accustomed to the

Table 2: Comparison of individual items of attitudes between experimental and control groups at pre-intervention and six months post-intervention

Components of attitudes	Favourable attitudes, No. (%)			
	Experimental group		Control group	
	Pre	Post	Pre	Post
Sometime violence is the sole method to communicate	7 (10.8)	8 (12.3)	9 (13.8)	9 (13.8)
Relationship violence is a personal affair	11 (16.9)	12 (18.5)	17 (26.1)	17 (26.1)
Some females need to be assaulted	8 (12.3)	9 (13.8)	7 (10.8)	7 (10.8)
Sometimes need to use physical violence to control partner	14 (21.5)	16 (24.6)	12 (18.5)	12 (18.5)
Sometimes need to use threats to control partner	9 (13.8)	10 (15.4)	6 (09.2)	6 (9.2)
Partners have a right to insult each other	9 (13.8)	10 (15.4)	9 (13.8)	9 (13.8)
Males find it difficult to control their sexual urge	26 (40.0)	30 (46.0)	25 (38.5)	24 (36.9)
Female partner must engage in sex to confirm commitment	15 (23.1)	15 (23.1)	10 (15.4)	10 (15.4)
Most males dislike to go out to have sex	40 (61.5)	46 (70.8)	39 (60.0)	38 (58.4)
Partners should know all about each other	16 (24.6)	18 (27.7)	15 (23.1)	16 (24.6)
Males should lead a relationship	13 (20.0)	16 (24.6)	13 (20.0)	13 (20.0)
Partners should control the other	10 (15.4)	11 (16.9)	10 (15.4)	10 (15.4)
Most females depend on male partners for safety	16 (24.6)	19 (29.2)	18 (27.7)	18 (27.7)
Always male partner should take decisions	13 (20.0)	13 (20.0)	9 (13.8)	9 (13.8)
Always female partner should take decisions	10 (15.4)	13 (20.0)	9 (13.8)	9 (13.8)
Both should not take decisions always	38 (58.5)	43 (66.1)	38 (58.5)	38 (58.5)
Female partner should always obey male partner	7 (10.8)	8 (12.3)	2 (3.1)	2 (3.1)
Female should keep male happy to maintain a relationship	30 (46.2)	32 (50.7)	26 (40.0)	26 (40.0)
Dating violence reduce with time	35 (53.8)	38 (58.4)	38 (58.4)	38 (58.4)
Relationship should not be terminated if partners are violent	29 (44.6)	33 (50.7)	28 (43.1)	28 (43.1)
Violence is not severe even if relationship continues despite violence	37 (56.9)	39 (60.0)	36 (55.4)	36 (55.4)
Dating violence do not result in long term consequences	19 (29.2)	20 (30.7)	18 (27.7)	18 (27.7)
Despite consequences partners should bear up anything and everything	10 (15.4)	12 (18.5)	10 (15.4)	10 (15.4)
Violence is a conflict resolution method in a relationship	18 (27.7)	20 (30.8)	16 (24.6)	16 (24.6)

Table 3: Comparison of attitudes between the experimental and control groups at pre-intervention and six months post-intervention

Attitudes	Pre-Intervention			Post-Intervention		
	Experimental	Control	Test value# p value	Experimental	Control	Test value# p value
Favourable	32 (49.2%)	28 (43.1%)	0.3	48 (73.8%)	29 (44.6%)	10.3
Unfavourable	33 (50.8%)	37 (56.9%)	0.6	17 (26.2%)	36 (55.4%)	0.001
Total	**65 (100%)**	**65 (100%)**	-	**65 (100%)**	**65 (100%)**	-

Chi-squared Test at df=1

Table 4: Comparison of attitudes on dating violence within the experimental and control groups between pre intervention and, six months post-intervention (N=65)

Pre-intervention		Post-Intervention		Test value#
		Favourable	Unfavourable	p value
Experimental group	Favourable	31 (47.7%)	1 (1.5%)	13.2
	Unfavourable	16 (24.6%)	17 (26.2%)	**<0.001**
Control group	Favourable	27 (41.5%)	1 (1.5%)	0.3
	Unfavourable	2 (3.1%)	35 (53.8%)	0.6

McNemar Test at df=1

environment and have developed dating relationships. Third year and fourth year students were excluded since they must spend more time on academic work to complete their degrees. The higher response rate of 91% justifies the selection of second year students as the study population. Final stages of sampling were conducted using simple random sampling which ensures representativeness of the sample to the reference population despite the experimental and control groups were selected purposively.

Self-administered questionnaires were used at all phases due to the sensitive nature of dating violence and the stigma related to it. Most of the research studies done on relationship violence were based on self-reporting (16). Increased level of social desirability makes people develop a strong desire to be seen positively by others in the society. This can ultimately lead to underreporting of values when self-reporting (17). Nevertheless, self-reporting is better compared to using interviewers, where there will be vast under-reporting due to social desirability bias, as this is an extremely sensitive issue involving social stigma.

All the variables in the present study were handled as categorical data except for the assessment of mean age. Hence the statistical test used was Pearson's chi square test with Yate's continuity correction to compare between experimental and control groups at pre-intervention and post-intervention of the intervention study.

The intervention required only 230 minutes (nearly four hours) to complete. Thus, it may be concluded that changes in attitudes and beliefs can be achieved within a short period of time (18). This is considered as one of the advantages of this intervention. Short duration of the intervention could be one reason for the undergraduates to have got attracted to the programme, in addition to the appealing lecture topic which aroused their curiosity.

One important limitation of the study was non assessment of the impact of improvement of knowledge and attitudes on reducing dating violence. If the knowledge and attitudes were assessed initially to see whether the group with poor knowledge and attitudes experienced more dating violence, there could have

been baseline evidence to support the results of the intervention. It is strongly recommended that future research should focus on this aspect. Furthermore, selection of an arbitrary threshold score of 75 to define good/ poor knowledge or attitudes need to be assessed by a sensitivity analysis to confirm whether results are sensitive to change in the threshold. Not performing a sensitivity analysis is considered as a limitation.

Hickman, Jaycox and Arnoff (2004) (19) conducted an education-based prevention programme addressing partner violence among adults and youths, to reduce victimization and perpetration by improving knowledge and attitudes on dating violence. They have reported a significant improvement in the mean knowledge scores in the intervention group compared to the control group. However, no overall change in attitudes was seen and no statistical data were reported. Macgowan (1997) (20) used a curriculum on dating violence among adolescents and adults where regular classroom teachers did the programme as five one-hour periods for one week among 6th to 8th grade students. He reported that knowledge on dating abuse and attitudes on non-physical aggression improved towards positive direction after the intervention, supporting the present study results. However, no data were available for this study too.

Intervention was developed following a thorough literature review and experts were involved from the development stage until the end. The lecture discussion was done by a psychiatrist in the intervention arm and by a specialist in health promotion who was also involved in the intervention, in the control arm.

As the intervention was found to be effective, it will be conducted among the control group and also other undergraduates in future to improve awareness and help them develop healthy relationships. Already the students' union of one of the universities, where intervention took place has requested to do the programme for the rest of their students as well. The booklet prepared on "Healthy relationships" will be forwarded to the Gender Unit and Adolescent Health Unit in Family Health Bureau which are focal points in the health sector involved in reducing domestic/ relationship violence to build healthy and safe families.

Conclusions & Recommendations

In conclusion, the level of participation for the intervention was satisfactory. It is recommended that it could be adopted and included as a routine programme conducted for undergraduates in other universities and vocational training institutes with long term follow up.

Public Health Implications

- An educational intervention could be utilized to improve knowledge and attitudes on dating violence significantly.
- Focus should be on assessing the impact of the intervention in relation to the reduction of dating violence at post intervention as it will help to decide future programmes that accommodate better prospects of prevention of violence.

Author Declarations

Competing interests: The authors declare that they have no competing interests.

Ethics approval and consent to participate: Ethical clearance for the study was obtained from the Ethics Committee at the Faculty of Medicine, University of Colombo before the initiation of the study (EC–15–162). Informed, written consent was taken from the participants and participation was voluntary.

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Author contributions: EHKF: Developing the study proper, data collection, analysis and preparation of the manuscript. AB: Designing the study, reviewing the manuscript, revising and planning data analysis.

References

1. Bassera M, Leitao M, Fernandes M, Scatena L, Vidinha T, Silva L, Ferraine, M. Prevalence of Dating Violence among Adolescents from Brazilian Public Schools of Recife/Pe – Brazil. *J Nurs* 2015; 4(7): 91-99. DOI: 10.12707/riv15006.
2. University Grants Commission. *Preventing Sexual and Gender Based Violence: Strategies for Universities.* Colombo, 2015. Available from: https://www.ugc.ac.lk/downloads/publications/SGVB.pdf.
3. Offenhauer P& Buchalter A. *Teen dating violence-A literature review and Annotated bibliography.* Washington, 2011. Available from: https://www.ncjrs.gov/pdffiles1/nij/grants/235368.pdf.
4. Abramsky T, Watts C, Marena C, Devries K, Kiss L, Ellsberg M, Jansen H, Heise L. What factors are associated with recent intimate partner violence? Findings from the WHO multi-country study on women's health and domestic violence. *BMC Public Health* 2011; 11: 109. DOI: 10.1186/1471-2458-11-109.
5. Wolfe D, Wekerle C, Scott K, Stratman A, Grasley C, Reitzel-Jaffe D. Dating violence prevention with at-risk youth: A controlled outcome evaluation. *J Consult Clin Psychol* 2003; 71(2): 279-291. DOI: 10.1037/0022-006x.71.2.279.
6. Whitaker D, Whitaker D, Morrison S, Lindquist C, Hawkins S, O'Neil J, Nesius A et al. A critical review of interventions for the primary prevention of perpetration of partner violence. *Aggress Violent Behav* 2006; 11(2): 151-166. DOI: 10.1016/j.avb.2005.07.007.
7. Niolon P, Kearns M, Dills J, Rambo K, Irving S, Armstead T, Gilbert L. *Preventing intimate partner violence across the lifespan: a technical package of programs, policies, and practices.* Atlanta: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, 2017. Available from: https://www.cdc.gov/violenceprevention/pdf/ipv-technicalpackages.pdf.
8. Ohnishi M, Nakao R, Shibayama S, Matsuyama Y, Oishi K., & Miyahara, H. Knowledge, experiences and potential risks of dating violence among Japanese university students: a cross-sectional study. *BMC Public Health* 2011; 11: 339. DOI: 10.1186/1471-2458-11-339.
9. Gunawardena N, Weerasinghe M, Rajapaksa L, Wijesekera P, Chathuranga P. Romance, sex and coercion: insights into undergraduate relationships. *SL J Psychiatry* 2011; 2(2): 54-59. DOI: 10.4038/sljpsyc. v2i2.4042.
10. Roman N& Frantz J. The prevalence of Intimate Partner Violence in the family: A systematic review of the implications for adolescents in Africa. *Fam Pract* 2013; 30: 256-265. DOI: 10.1093/fampra/cms084.
11. Halpern C, Oslak S, Young M, Martin S, Kupper L. Partner violence among adolescents in opposite sex romantic relationships: findings from the national longitudinal study of adolescent health. *Am J Public Health* 2001; 91:1679-1685. DOI: 10.2105/ajph.91.10.1679.
12. Straus M. Prevalence of violence against dating partners by male and female university students worldwide. *Violence Against Women* 2004; 10(7): 790-811. DOI: 10.1177/1077801204265552.
13. Pocock S. *Clinical Trials: A Practical Approach.* New York: John Wiley & Sons, 1991.
14. Machisa M & Dorp R. *The Gender Based Violence Indicators Study Botswana.* Botwsana, 2012. Available from: http://genderlinks.org.za/wp-content/uploads/imported/articles/attachments/15554_gbv_indicators_executivesummary.pdf.
15. Roberts S. *Threats to Internal & External Validity.* PDF4PRO. Available from: https://pdf4pro.com/view/threats-to-internal-amp-external-validity-31ec7d.html.
16. Arias I & Beach S. Validity of self-reports of marital violence. *J Fam Viol* 1987; 2: 139-149. DOI: 10.1007/bf00977038.
17. Chan K. Gender Symmetry in the Self-Reporting of Intimate Partner Violence. *J Interpers Violence* 2011; 27(2): 263-286. DOI: 10.1177/0886260511416463.
18. Michau L, Horn J, Bank A, Dutt M, Zimmerman C. Prevention of violence against women and

girls: lessons from practice *Lancet* 2015; 385(9978): 1672-1684. DOI: 10.1016/s0140-6736(14)61797-9.

19. Hickman L, Jaycox L, Aronoff J. Dating violence among adolescents: Prevalence, gender distribution, and prevention program effectiveness. *Trauma, Violence and Abuse* 2004; 5(2): 123-142. DOI: 10.1177/1524838003262332.

20. Macgowan, M. An evaluation of a dating violence prevention program for middle school students. *Violence Vic* 1997; 12(3): 223-235. DOI: 10.1891/0886-6708.12.3.223.