

Intimate partner violence among pregnant teenagers in Lira district, northern Uganda: a cross-sectional study

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Abstract

Background/aims Intimate partner violence during pregnancy is associated with adverse health outcomes for mothers and their unborn babies. Whereas the literature on intimate partner violence in the general population is extensive, little is known about this type of violence among pregnant teenagers, especially in resource-limited settings. This study aimed to determine the prevalence and factors associated with intimate partner violence among pregnant teenagers attending antenatal care clinics in Lira District, northern Uganda.

Methods This was a cross-sectional study of 310 pregnant teenagers attending antenatal care clinics at the Lira Regional Referral Hospital and Ogur Health Center IV. Eligible teenagers were recruited consecutively until the required sample size was accrued. Data were collected using a structured questionnaire. Intimate partner violence was determined using the Revised Conflict Tactile Scale 2. Logistic regression analysis was performed to identify factors associated with violence during pregnancy, while considering potential confounding factors.

Results The overall prevalence of intimate partner violence among pregnant teenagers was 40.6%. The prevalence of psychological violence was 37.1%, sexual assault was 29%, and physical violence was 24.8%. Partner alcohol intake (odds ratio=5.00, $P=0.000$); polygamy (odds ratio=2.80, $P=0.001$) and the inability of the teenage mother to make major decisions in the home (odds ratio=2.42, $P=0.006$) were independently associated with intimate partner violence during pregnancy.

Conclusions Approximately 4 in 10 pregnant teenagers in Lira district, northern Uganda experienced intimate partner violence. This is higher than has been reported in the general population of pregnant women in Uganda. Intimate partner violence screening and counselling should be part of the routine antenatal care package.

Key words: Intimate partner violence; Teenage pregnancy; Psychological violence; Physical violence

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Introduction

Intimate partner violence is a pattern of behaviour that involves violence or abuse by a person in an intimate relationship with or without sexual intimacy (Sugg, 2015). The victims of intimate partner violence are overwhelmingly women, who tend to experience more severe forms of violence (Tran et al, 2016). Violence against women, especially intimate partner violence, is a major public health concern, with a global estimate of one in three women experiencing either physical and/or sexual violence in their lifetime (García-Moreno et al, 2013). In sub-Saharan Africa, the prevalence of intimate partner violence during pregnancy remains high at 35%, while in Uganda, a study in 2019 found the prevalence of intimate partner violence among pregnant women was 27.8% (Shamu et al, 2013; Epuitali et al, 2019).

The prevalence of intimate partner violence is higher in younger mothers, especially among uneducated and economically disadvantaged women (Tran et al, 2016). Teenagers are more likely to experience intimate partner violence, especially if they have been previously

exposed to violent behaviour during their physiological development (Lundgren and Amin, 2015). In addition, pregnancy makes teenagers more vulnerable because of the physical, social, emotional and economic demands (Rurangirwa et al, 2017).

A number of factors are associated with intimate partner violence, such as previous exposure to violence, poverty, literacy levels, cross-generational marriage, and partner behavioural disorders (Aggarwal et al, 2016; Islam et al, 2017; Eputai et al, 2019). In Uganda, studies have been conducted among the general population of pregnant women, but there is a paucity of literature on intimate partner violence among pregnant teenagers in post-conflict northern Uganda. Therefore, the purpose of this study was to determine the prevalence and factors associated with intimate partner violence among pregnant teenagers attending antenatal clinics in Lira district, northern Uganda.

Methods

Study design and setting

This was a quantitative cross-sectional study conducted from December 2017 to March 2018 among 310 pregnant teenagers who were attending antenatal clinics at the Lira Regional Referral Hospital and Ogur Health Center IV. Lira Regional Referral is the largest hospital in the Lango sub-region of northern Uganda and is a teaching hospital. The hospital registers approximately 600 births monthly, with a daily average antenatal care attendance of 60 pregnant women. Approximately 30% of these women are teenagers. Ogur Health Centre IV, one of the facilities that refers mothers to the regional hospital, is also a high frequency facility, with approximately 100 births registered monthly and a daily average antenatal care attendance of 30 mothers, of which approximately 35% are teenagers (data taken from health facility register).

Population and sampling

The study included all pregnant teenagers attending antenatal clinics during the study period, irrespective of the gestational age, gravidity, or parity. Pregnant teenagers who had conditions such as severe anemia or severe malaria, as determined through a medical report from the doctor, and those experiencing labour pains were excluded from the study.

The Kish Leslie formula was used to calculate the sample size (Straus, 2004). An intimate partner violence prevalence of 27.8% among pregnant women in Eastern Uganda, as reported by Eputai et al (2019), was used for sample size estimation, assuming 80% power and 95% confidence intervals. This gave a sample size of 310 women. Participants were consecutively enrolled until the desired sample size was reached.

Study variables

The outcome variable was intimate partner violence during pregnancy, while the independent variables included individual, relational, and pregnancy factors, as theorised in the ecological framework for intimate partner violence (Heise, 1998). These were considered to be potential confounders.

Intimate partner violence was conceptualised as any physical, sexual, or emotional violence by a partner in an intimate relationship (Antai, 2011). The revised Conflict Tactic Scale 2 was adapted and used to measure intimate partner violence among pregnant women (Straus and Douglas, 2004). Physical violence was defined as an act of pushing, pulling, slapping or twisting the arm or hair, punching, kicking or beating, choking, burning or attacking the woman with a knife, gun or any other weapon (Straus and Douglas, 2004). Emotional violence was defined as a husband or an intimate partner who humiliated, insulted, shouted, or threatened the woman with a knife, gun, or another weapon (Straus and Douglas, 2004). Sexual violence was defined as an intimate partner who used verbal threats or physically forced the woman, or insisted on sex against the woman's will, without the use of physical force (Straus and Douglas, 2004). In this study, intimate partner violence during pregnancy was defined as experiencing at least one of the acts specified in the Conflict Tactic Scale 2 exclusively while the woman was pregnant (Straus and Douglas, 2004).

Childhood exposure to violence was defined as any witness of a violent behaviour in childhood or at the in-law's home. A partner's age was considered to be an exposure factor, as the older the partner, the less the bargaining power in a relationship; this age difference

can result in the older partner making decisions on behalf of the teenager, which may lead to conflict and violent methods of conflict resolution (Challa et al, 2018).

Data collection

Data were collected on a daily basis by identifying pregnant teenagers from the antenatal care register. Unique identification numbers were given to the participants, informed consent was obtained and a copy of the written consent form was given to the participant. Eligible participants were directed to a private area for the interview.

An interviewer-administered pre-tested structured questionnaire was used to collect data. Sociodemographic data collected included age of the participant, type of family (whether she was married to a nuclear family or extended family), marital status, occupation of the participant and monthly income of the participant in United States dollars.

The Conflict Tactile Scale 2 was adapted by the researcher for measuring intimate partner violence during pregnancy. The tool is an open access tool with good internal reliability ($r=0.79-0.95$), and excellent validity (Straus et al, 1996; Straus, 2004). This is the first study to use the Lango translated version of the tool, which was translated by an expert from Makerere University School of Language Sciences. The data collection tool was pre-tested on 31 pregnant teenagers from the Aduku Health Center IV to ensure consistency and validity, and necessary modifications were made.

The 39-item tool includes scales to measure physical assault, psychological aggression and sexual coercion, physical injury and negotiation (Straus, 2004). This study measured psychological aggression, physical assault and sexual coercion only, which comprises 27 items. The items were reduced to 16 to fit only the aspects being measured and the study population.

The 16 items were scored according to response on how often violence occurred, with 0=never, 1=sometimes, 2=often. Any score of 1 or more in any of the items on the tool represented an experience of intimate partner violence. A total score for prevalence of intimate partner violence was calculated as the total scores per item reported. A score of 0 represented the absence of intimate partner violence, and a score of 1 or above represented experiences of intimate partner violence.

This tool was liable to information bias because of the nature of information being collected; the information is very sensitive and participants were liable to hold back information. This was mitigated by clearly explaining the reason for collecting the information and providing both audio and visual privacy.

Two research assistants were selected and trained on the data collection procedures, tools and ethical considerations of the study. At the end of each day of data collection, the questionnaires were checked for accuracy and consistency, and stored until they could be entered in a database.

Data analysis

Data were entered, cleaned and analysed using the SPSS version 23.0. The prevalence of intimate partner violence was determined using univariable analysis as a proportion. Continuous variables were analysed using mean and standard deviation, if normally distributed, and frequencies for categorical variables.

Bivariable analysis was carried out to find associations with the outcome variable (intimate partner violence). Odds ratios and 95% confidence intervals were used to measure association between intimate partner violence and predictor variables, and $P<0.05$ indicated statistical significance. Some of the continuous variables at univariable analysis were categorised and included in the bivariable-level analysis. All variables with $P<0.25$ at bivariable analysis were entered into a multivariable logistic regression model to determine independent associations with intimate partner violence, and $P\leq 0.05$ was considered statistically significant.

Ethical considerations

Approval was given by Makerere University School of Health Sciences Research and Ethics Committee: reference number SHSREC REF: 2017-059. Clearance was obtained from the District Health Officer and the office of the Hospital Director of the Lira Regional Referral Hospital. The study participants were informed about the purpose, benefits and risks of

participating in the study, and written informed consent was obtained. Confidentiality and privacy were maintained by using codes instead of participants' names and interviewing participants one at a time in a private space. Pregnant teenagers under 18 years of age were treated as emancipated minors. Pregnant teenagers who were found to be violated were referred to a social counselor for psychosocial support.

Results

The mean age of the participants was 17.37 years (SD \pm 1.07). A third (33.9%) of the teenagers were 19 years old and, on average, their partners were older with a mean age of 24.26 (SD \pm 3.74) years. The sociodemographic characteristics of participants and their partners are shown in **Table 1**.

Table 1. Sociodemographic characteristics of participants and partners	
Variable	Frequency, n=310 (%)
Mean age of participants (SD), years	17.87 (\pm 1.07)
Mean age of participant's partner (SD), years	24.26 (3.74)
Tribe	
Lango	269 (86.8)
Other	41 (13.2)
Education level	
Primary	257 (82.9)
Secondary	53 (17.1)
Education level of partner	
Primary	175 (56.5)
Secondary	107 (34.5)
Tertiary	28 (9)
Occupation	
Self employed	29 (9.4)
Peasant farmer	197 (63.5)
Unemployed	84 (27.1)
Religion	
Christian	297 (95.8)
Muslim	13 (4.2)
Average monthly income of participant (USD)	
<60	286 (92.3)
\geq 60	24 (7.7)
Marital status	
Married	304 (98.1)
Unmarried	6 (1.9)
Nature of relationship	
Monogamous	237 (76.5)
Polygamous	73 (23.5)

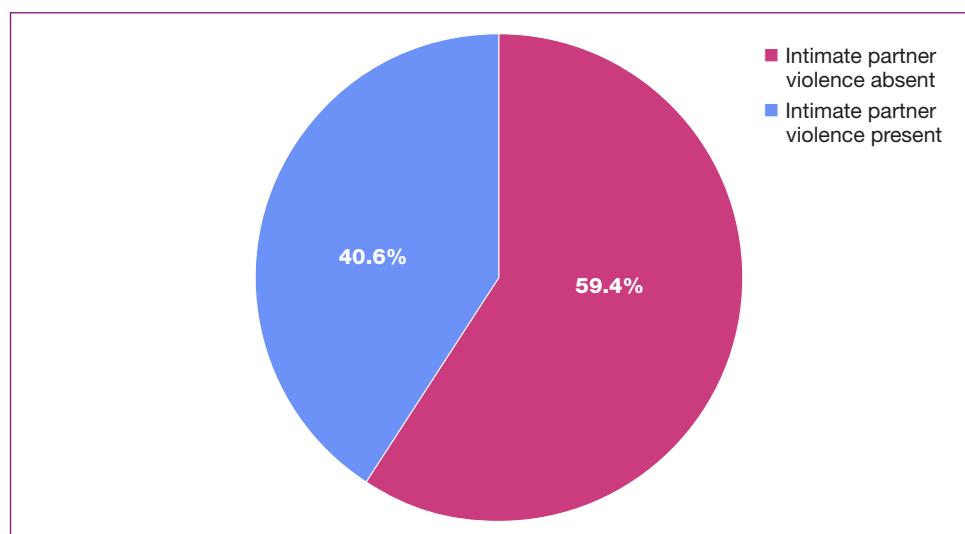


Figure 1. Prevalence of intimate partner violence experienced by respondents

Table 2. Obstetric characteristics of the study participants	
Variable	Frequency, n=310 (%)
Gravidity	
Primigravidae	215 (69.4)
Multigravida	95 (30.6)
Is the current pregnancy intended?	
Yes	138 (44.5)
No	172 (55.5)
Prior contraceptive use	
Yes	41 (13.2)
No	269 (86.8)
Has an attempt to terminate the current pregnancy been made?	
Yes	24 (7.7)
No	286 (92.3)

Intimate partner violence

A total of 40.6% of participants experienced intimate partner violence during pregnancy (confidence interval: 35.13–46.34; **Figure 1**) and most (89%) had experienced intimate partner violence during their current pregnancy. Psychological aggression was the most prevalent form of violence (37.1%; confidence interval: 31.70–42.74), sexual coercion was found in 29.0% (confidence interval: 24.04–34.43) of participants, and physical assault occurred in 24.8% (confidence interval: 20.13–30.04) of participants.

Obstetric characteristics

Most participants (69.4%) were primigravidae, and almost three quarters (74.2%) attended their first antenatal clinic session in the second trimester. Nearly half of the participants intended to be pregnant (44.5%), and only 13.2% had used contraceptives before their current pregnancy (**Table 2**).

Table 3. Social characteristics of study participants

Variable	Frequency, <i>n</i> =310 (%)
Ever witnessed violence as a child	
Yes	182 (58.7)
No	128 (41.3)
Who makes major decisions in the home?	
Husband	215 (69.4)
Self	16 (5.2)
Both	79 (25.5)
Conflict resolution in the home	
With a lot of difficulties	22 (7.1)
With some difficulty	117 (37.7)
Easy enough	171 (55.2)
Alcohol use by participant	
Often	2 (0.6)
Sometimes	26 (8.4)
Never	289 (91)
Alcohol use by partner	
Often	76 (24.5)
Sometimes	88 (28.4)
Never	146 (47.1)
Signs of relationship insecurity by partner	
Often	78 (25.2)
Sometimes	135 (43.5)
Never	97 (31.3)

Social characteristics of study participants

More than half (58.7%) of the study participants reported witnessing violence in their childhood. The majority (69.4%) of respondents reported that their husbands were responsible for making major decisions in the home. Very few (9.0%) of the participants reported drinking alcohol either often or sometimes; however, over half (52.9%) of the participants' partners were reported to drink alcohol either often or sometimes (Table 3).

Factors associated with intimate partner violence: bivariable analysis

The following factors were associated with intimate partner violence at bivariate analysis: decision-making in the home, nature of relationship, alcohol consumption, age of participant, age of partner and duration of marriage. The analysis is displayed in Table 4.

Age of the participant (odds ratio=0.41, $P=0.02$) and that of the partner (odds ratio=4.45, $P=0.02$) were associated with intimate partner violence. Partners who were older were over four times more likely to perpetrate violence and younger participants were less likely to experience violence. Participants who had been married for more than a year were two times more likely to experience intimate partner violence (odds ratio=2.42, $P<0.001$). Participants

Table 4. Factors associated with intimate partner violence at bivariable analysis

Variable	Intimate partner violence present, n=126 (%)	Intimate partner violence absent, n=184 (%)	Crude odds ratio (95% confidence interval)	P-value
Age of the participant (years)				0.02
≤16	10 (23.8)	32 (76.2)	0.41 (0.19–0.81)	
>16	116 (43.3)	152 (56.7)	1.00	
Age of the partner (years)				0.02
<20 years	3 (14.3)	18 (85.7)	1.00	
>20 years	123 (42.6)	166 (57.4)	4.45 (1.28–15.43)	
Participant's monthly income (Ugandan shillings)				0.15
≤50000	122 (40.8)	117 (59.2)	1.21 (0.35–4.21)	
>50000	4 (36.4)	7 (63.6)	1.00	
Witness of violence in childhood				0.63
Yes	76 (41.8)	108 (58.20)	1.12 (0.71–1.77)	
No	50 (39.1)	78 (60.9)	1.00	
Duration of marriage (years)				<0.001
≤1	68 (33.3)	136 (66.7)	1.00	
>1	58 (54.7)	48 (45.3)	2.42 (1.49–3.91)	
Nature of relationship				<0.001
Monogamy	79 (33.3)	158 (66.7)	1.00	
Polygamy	47 (64.4)	26 (35.6)	3.62 (2.09–6.27)	
Participant responsible for decision making in the home				<0.001
Yes	106 (49.3)	109 (50.7)	3.65 (2.09–6.39)	
No	20 (21.1)	75 (78.9)	1.00	
Partner intake of alcohol				<0.001
Yes	99 (60.4)	65 (39.6)	6.71 (3.98–11.31)	
No	27 (18.5)	119 (81.5)	1.00	
Participant alcohol intake				0.03
Yes	17 (60.7)	11 (39.3)	2.45 (1.11–5.43)	
No	109 (38.7)	173 (61.3)	1.00	

whose partners were reported to make the decisions in the home were almost four times more likely to experience intimate partner violence (odds ratio=3.65, $P<0.001$). Participants who were in polygamous relationships were over 3.5 times more likely to experience intimate partner violence (odds ratio=3.62, $P<0.001$). Partners who consumed alcohol were almost seven times more likely to perpetrate intimate partner violence (odds ratio=6.71, $P<0.001$).

Factors associated with intimate partner violence at multivariable analysis

Multivariable analysis of the factors associated with intimate partner violence are shown in **Table 5**. The partner being responsible for major decision making in the home remained a significant factor at multivariable analysis. Partners who dominated decision making

Table 5. Multivariable logistic regression analysis of the factors associated with intimate partner violence during pregnancy among study participants

Variable	Crude odds ratio (95% confidence interval)	P-value	Adjusted odds ratio (95% confidence interval)	P-value
Age of the participant (years)				
≤16	0.41 (0.19-0.81)	0.02	0.53 (0.22-1.38)	0.21
>16	1.00		1.00	
Age of the partner (years)				
<20	1.00		1.00	
>20	4.45 (1.28-15.43)	0.02	2.77 (0.73-10.56)	0.14
Duration of marriage (years)				
≥1	1.00		1.00	
<1	2.42(1.49-3.91)	<0.001	1.69 (0.97-2.93)	0.07
Nature of relationship				
Monogamy	1.00		1.00	
Polygamy	3.62(2.09-6.27)	<0.001	2.79 (1.50-5.23)	0.001
Decision making in the home				
Husband	3.65(2.08-6.39)	<0.001	2.42 (1.29-4.54)	0.01
Both	1.00		1.00	
Partner intake of alcohol				
Yes	6.713(3.98-11.31)	<0.001	4.99 (2.87-8.71)	<0.001
No	1.00		1.00	
Participant alcohol intake				
Yes	2.45(1.11-5.43)	0.03	1.24 (0.48-3.22)	0.66
No	1.00		1.00	

in the home were twice as likely to perpetrate intimate partner violence (adjusted odds ratio=2.42, $P=0.006$). Participants in a polygamous relationship were almost three times more likely to experience intimate partner violence (adjusted odds ratio=2.80, $P=0.001$), and participants whose partners consumed alcohol were almost five times more likely to experience intimate partner violence (adjusted odds ratio=4.99, $P<0.001$).

Discussion

Intimate partner violence (40.6%) among pregnant teenagers in two health units in Lira district, northern Uganda is higher than the national prevalence (27.8%) among pregnant women (Eputai et al, 2019) and the global prevalence of 30% among women in the general population (Jewkes et al, 2017).

However, the prevalence of intimate partner violence in this study was lower (40.6%) compared to findings reported by several other studies. A study in Nigeria reported a prevalence of 46.6% among the general population of women (Tanimu et al, 2016). Recent studies from sub-Saharan Africa among women found higher prevalence of intimate partner violence: 64.1% in the Democratic Republic of the Congo, 42.3% in Zimbabwe, and 70.9%

in Ethiopia (McCloskey et al, 2016). Similarly, a study in the United States of America reported up to 67.4% of women experiencing sexual and physical violence (Jewkes et al, 2017). A study conducted by Al-Modallal et al (2015) in Jordan reported a 43% prevalence of intimate partner violence. Similarly, a cross-sectional study in Bangladesh reported a prevalence of 66.4% among women (Islam et al, 2017). The differences in findings of the current study may be related to the differences in population characteristics, since the study was conducted exclusively among teenage women. Additionally, the study used an interviewer-administered data collection tool, which is liable to information bias.

In the present study, psychological aggression was the most commonly experienced form of violence, which is in line with the findings of Chisholm et al (2017). Similarly, a study conducted in South Africa reported 56.3% of participants experienced psychological aggression as the most prevalent form of violence (Matseke et al, 2016). A study conducted in Bangladesh among married women reported psychological aggression being the most prevalent at 65% (Islam et al, 2017). Another study conducted in South Africa reported psychological aggression as the most common form of violence experienced by women (Groves et al, 2015). It is possible that the complexity of identifying emotional and psychological aggression and the number of different tools available to do so could affect the accuracy of the results. It may also be the result of the laws and legislation attached to evidence of physical violence, which may cause fear in the perpetrators. Therefore, psychological aggression is commonly inflicted because it is harder to provide evidence for (Williamson, 2010).

The findings of this study are consistent with a study in Jordan that reported partners drinking alcohol were four times more likely to perpetrate violence compared to partners who did not drink alcohol (Damra et al, 2015). Similarly, a study conducted by Aggarwal (2016) reported more evidence of violence in partners who had alcohol dependency symptoms (Aggarwal et al, 2016). Alcohol intoxication contributes to psychological distress by altering biochemical substances in the body, which results in constricted thinking, impaired problem-solving abilities and impulsiveness, which in turn might precipitate aggression and violent behaviour (Okano et al, 2016).

Major decision making in the home being dominated by the participant's partner was significantly associated with intimate partner violence in this study. Pregnant teenagers who were unable to make decisions in the home were twice as likely to experience intimate partner violence compared to their counterparts. This is consistent with the findings of a study from Rwanda that reported husbands dominating decision making as being strongly associated with intimate partner violence (Wako et al, 2015). Another study in Bangladesh reported an increased likelihood of violence by partners dominating major decision making in the home (Islam et al, 2017). Violence against women is more common in communities where there are marked gender inequalities, especially where these inequalities are reinforced by cultural, social and religious factors, which have important associations with power relations and violence (García-Moreno et al, 2015).

Participants in a polygamous relationship were four times more likely to experience intimate partner violence compared to those in a monogamous relationship. The findings may be related to competition between co-wives for limited resources, including attention of the husband (Thomson et al, 2015). This may also be related to the role of conflict resolution strategies in marital relationships. When multiple individuals are involved in an intimate relationship, tension can develop, creating conflict; conflict in a marriage may take on many forms of resolution, including violence, with the woman commonly being the victim (Wheeler et al, 2010).

Limitations

This was a clinic- and hospital-based study and so the findings may not reflect the experiences of women in the community who do not attend antenatal care clinics. This was a cross-sectional study that is unable to give a causal relationship. Therefore, the findings of this study should be interpreted within this limitation.

Conclusions

Approximately 4 in 10 pregnant teenagers in the two health facilities in Lira district experience intimate partner violence. This is higher than reported in the general population

of pregnant women in Uganda. Teenagers were more likely to experience violence if they were in a polygamous relationship, were unable to make major decisions in the home and had a partner who drank alcohol. Intimate partner violence screening and counselling should be part of the routine antenatal care package, and should include information on the cycle of intimate partner violence and prevention mechanisms. A study of the lived experiences and coping mechanisms of this population is recommended.

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Conflicts of interest

The authors declare that there are no conflicts of interest.

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