

Comparing Factors Associated With Intimate Partner Violence Among Rural and Urban Women in Northern Uganda

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Abstract

Intimate partner violence (IPV) is an important public health issue with negative effects at individual and societal levels. In northern Uganda, IPV prevalence is high but literature on it is limited. Northern Uganda has a long history of socio-economic and political upheavals, which are recognized risk factors for IPV. We compare IPV prevalence among rural and urban women

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in northern Uganda. This was a cross-sectional survey of 856 northern Ugandan women, 409 women living in rural areas, and 447 women working in an urban marketplace. Data were analyzed using logistic regression. High rates of emotional, physical, and sexual IPV were found. Almost four of five participants had experienced at least one type of IPV during their lifetime, and approximately half of the participants had experienced IPV in the 12 months prior to the survey. Many women stated that IPV was justified in certain situations. Younger age was a significant determinant of IPV in both cohorts (adjusted odds ratio [aOR] 0.95, 95% confidence interval [CI] [0.93–0.97]). Determinants of IPV among the rural cohort included male partner's alcohol abuse (aOR 2.22, CI [1.34–3.73]); having been in a physical fight with another man (aOR 1.90, 95% CI [1.12–3.23]); and controlling behaviors (aOR 1.21, CI [1.08–1.36]). Possible protective factors in the urban cohort included markers of economic empowerment such as being the decision maker on large household items (59.2% vs. 44.6%, $p = .002$) and having a mobile phone (20.4% vs. 12.4%, $p = .024$). Our study shows that IPV is a significant issue in northern Uganda. Economic empowerment is associated with lower rates of IPV in urban women, and interventions to reduce gender wealth inequality may reduce IPV prevalence. Further studies on enablers of IPV and the effect of conflict on IPV prevalence are needed to inform future interventions.

Keywords

domestic violence, cultural contexts, domestic violence and cultural contexts, violence exposure, war

Introduction

Intimate partner violence (IPV) is increasingly recognized by the World Health Organization (WHO) and the United Nations as a significant public health issue and a violation of human rights. IPV refers to “behavior by an intimate partner or ex-partner that causes physical, sexual or psychological harm, including physical aggression, sexual coercion, psychological abuse and controlling behaviors” (World Health Organization, 2021a). IPV is the most prevalent form of violence against women globally (World Health Organization, 2021a, 2021b; World Health Organization et al., 2013). A recent WHO analysis of global prevalence data reported that over a quarter of women aged 15 to 49 years who have been in a relationship had experienced IPV at least once since age 15 (World Health Organization, 2021b). The

negative health effects of IPV include injuries and homicides (physical health); depression, anxiety, and suicide (mental health); sexually transmitted diseases and unwanted pregnancies (sexual health); and increased risk of miscarriage, stillbirth, and low birth weight in pregnancy (reproductive health) (World Health Organization, 2021b; World Health Organization et al., 2013).

The rates of IPV in the WHO Sub-Saharan African (SSA) region consistently exceed the global average of 30% (World Health Organization, 2021b). A WHO 2018 report estimated rates of 33% (95% uncertainty interval [UI] 29%–38%) ranging from 27% in Southern (UI 19%–37%) and Western SSA (UI 22%–33%) to 44% (UI 33%–55%) in Central SSA (World Health Organization, 2021b).

Lifetime IPV prevalence rates in some individual SSA countries are even higher with point estimates of 47% in the Democratic Republic of the Congo, 46% in Equatorial Guinea, and 45% in Uganda (World Health Organization, 2021b). National studies report higher prevalence rates: the 2013 to 2014 Democratic Republic of the Congo Demographic and Health Survey (DHS) reported that 57% of ever-married women aged between 15 and 49 had experienced spousal violence (emotional, physical, or sexual) (Ministère du Plan et Suivi de la Mise en œuvre de la Révolution de la Modernité (MPSMRM) et al., 2014); the 2014 Kenya DHS found a lifetime IPV prevalence of 49.4% (Memiah et al., 2021); and the 2016 Uganda DHS found that 58.4% of married women reported ever having experienced emotional, physical, or sexual violence from a spouse (Uganda Bureau of Statistics & Inner City Fund, 2017).

National IPV rates obscure higher rates among diverse sub-groups within populations. Previous studies have reported a higher prevalence of IPV among certain sub-populations such as conflict affected areas (Black et al., 2019; Saile et al., 2013; Stark et al., 2010) and women living in rural areas (Nabaggala et al., 2021; Wado et al., 2021). The national rates reported by larger studies do not capture higher rates of IPV among sub-populations. Further, in some cases, these populations are specifically excluded from the national studies. The 2016 Uganda DHS excluded the conflict affected Acholi subregion due to concerns from land disputes (Uganda Bureau of Statistics & Inner City Fund, 2017) which may lead to under-reporting of IPV (Muluneh et al., 2020; Saile et al., 2013).

Uganda, especially northern Uganda, has endured a long history of civil war, and socio-economic and political upheavals (Kustenbauder, 2010). Despite an official ceasefire in 2006, many communities continued in a state of latent conflict with increasingly regular displays of open conflict, including clashes between communities and government representatives, violent

community clashes over resources, and sexual and gender-based violence including IPV (Advisory Consortium on Conflict Sensitivity (ACCS), 2013). Exposure to wars, conflicts, and associated violence in adulthood are recognized risk factors for IPV (Muluneh et al., 2020; Saile et al., 2013). Additionally, IPV in northern Uganda is exacerbated by other risk factors such as: limited access to services such as healthcare and education (World Health Organization, 2020), younger age of women in relationships (Black et al., 2019; Uganda Bureau of Statistics & Inner City Fund, 2017), and alcohol abuse and controlling behaviors among men (Black et al., 2019; Uganda Bureau of Statistics & Inner City Fund, 2017). Previous studies have reported a higher prevalence of IPV among women living in rural compared to urban areas in SSA (Clarke et al., 2019; Nabaggala et al., 2021; Wado et al., 2021).

Aim

We aimed to investigate prevalence of IPV among diverse sub-populations of women in northern Uganda. We compared the results from urban women in northern Uganda (the Urban Cohort) to those of the Rural Cohort reported previously (Black et al., 2019) and with the concurrent Uganda Demographic Health Survey (Uganda Bureau of Statistics & Inner City Fund, 2017).

Methods

Study Design

We carried out a cross-sectional survey among women working in the Gulu marketplace (Black et al., 2019).

Study questionnaire. The study questionnaire was developed using the validated Woman's Questionnaire from the 2011 Uganda DHS (Uganda Bureau of Statistics & IICF International Inc., 2012) on IPV and well-being. The questionnaire included all components of the DHS domestic violence module as well as demographics (age, educational attainment, literacy, employment status, marital or relationship status, and domestic situation); alcohol use and associated complications; reproductive health (number of pregnancies, number of children born and currently living, access to and use of contraception, and partner's attitudes toward contraception); access to reproductive health services and health literacy; and indicators of women's empowerment (economic empowerment, attitudes, and behaviors toward relationships and IPV). The Urban Cohort was asked additional questions on economic initiatives.

The domestic violence questions were a modified version of the Conflict Tactics Scale, which asks about specific actions in order to reduce reporting bias due to different understandings of what constitutes “violence.”

Women aged 16 years and over were eligible to participate in the study. The questionnaire was administered in English and Acholi. Participants had the option of completing the survey alone to maximize privacy, or having the survey administered by an interviewer. However, due to the low literacy rate among participants, all participants in the Rural Cohort and a majority (383/448, 85.5%) of participants in the Urban Cohort required the survey to be administered by an interviewer.

Sample size estimation and recruitment. A web-based calculator was used to derive a minimum sample size of 350 women for each cohort based on the proportion of women who had used family planning in the past year, a key indicator of women’s health. This sample size has sufficient statistical power to detect differences in determinants of IPV (Black et al., 2019). Consecutive sampling was used for all eligible women attending two rural Health Centers (Rural Cohort), and all eligible women working in a large urban marketplace in Gulu, northern Uganda (Urban Cohort). Data for the Rural Cohort were collected in November 2017, and the Urban Cohort in November 2018. In each cohort, recruitment continued up till the end of the advertised recruitment period to ensure sample sizes were met after data cleaning.

Data management and analysis. Questionnaire Development System (QDS) software by NOVA Research Company was used for programming and hosting the questionnaire on each tablet, as well as for uploading data into SPSS. Data were administered by UNSW, updated daily from the field and stored securely on a UNSW server. Hard copy versions of the questionnaire were a backup if a tablet malfunctioned.

The baseline characteristics of the total sample and exposure to IPV in each survey were described and compared. *T*-tests were used to compare IPV in the Rural Cohort and the Urban Cohort. A multivariable logistic regression was performed using the dependent outcome variable of participant’s experience of IPV in the previous 12 months and seven independent variables comprising: participant reporting seeing her partner drunk on most days, participant having knowledge that her partner had been involved in a physical fight with another man, participant’s age, participant’s parity, partner’s controlling behaviors, participant’s education, and partner’s concurrent relationships with other women. Variables were chosen based on *t*-test and chi-square tests showing they were reported significantly more frequently among

women with IPV exposure in the Rural Cohort or frequently reported as risk factors for IPV in other studies (Black et al., 2019).

Ethical Considerations

Researchers were trained to ensure adherence to sampling, data collection, and ethical protocols. Ethical approvals were granted by the UNSW Human Research Ethics Committee (HREC HC17795) and the Gulu University Research Ethics Committee (GU REC). Each participant provided verbal (indicated by thumb print) or written informed consent. Surveys were conducted privately with each participant and the information collected was accessed only by principal investigators for the purposes of statistical analyses. Women were informed about women's health services available to them at local health clinics and they were advised to speak with local healthcare workers if any issues arose for them after completing the survey.

Results

We interviewed 409 rural women (mean age 33 years), and 447 urban women (mean age 37 years) (Table 1). Women in the Urban Cohort were significantly more likely to have attended school (89.3% vs. 80.6%, $p < .001$) and able to read and write either in Acholi or English (53.4% vs. 30.1%, $p < .001$). Compared to the Rural Cohort, a significantly higher proportion of the Urban Cohort reported not being currently married or living with a man (34.5% vs. 16.9%, $p < .001$), and a lower proportion (66%) lived with their partner's relatives in their current or most recent relationship. The prevalence of HIV positive women was statistically different with 18.6% of women in the Urban Cohort being HIV positive compared to 13% in the Rural Cohort, which may be due to the higher proportion of women (77.4%) in the Urban Cohort having been tested for HIV in the previous 12 months. Partners of women in our Urban Cohort as compared to Rural Cohort were older (41.2 years vs. 38.3 years, $p < .001$) and a majority of them were skilled or semi-skilled (169/303, 55.8%).

There were 202 women from the Urban Cohort and 228 women from the Rural Cohort who reported experiencing IPV in the past year (Table 2), with a significantly higher prevalence of IPV in the Rural Cohort (55.7% vs. 45.2%, $p < .001$). Of women who reported experiencing IPV in the past year, the mean age in the Urban Cohort was 32 years, similar to the mean age of 31 years in the Rural Cohort, and the age of partners was also similar (37 years vs. 38 years, $p = .419$).

Table 1. Demographic Characteristics of Rural and Urban Women.

Demographics	Rural Cohort, n=409	Urban Cohort, n=447	p-Value*
Age: mean (SD)	32.98 (11.5)	37.08 (13.3)	<.001
Women aged 16 to 49 (n, %)	375 (91.7)	367 (82.1)	<.001
Number of children: mean (SD)			
Living	4.29 (2.36)	3.66 (1.86)	<.001
Dead	0.54 (1.16)	0.63 (1.08)	.342
Literacy (n, %)			
Able to read	107 (26.2)	240 (53.7)	<.001
Able to write	123 (30.1)	238 (53.4)	<.001
Highest education level completed (n, %)			
None	79 (19.4)	48 (10.7)	<.001
Some primary	269 (65.9)	213 (47.7)	<.001
Completed primary	48 (11.8)	125 (28.0)	<.001
Completed secondary or further	12 (2.9)	61 (13.6)	<.001
Ever used contraception (n, %)	270 (66)	274 (61.4)	.152
Currently using contraception (n, %)	135 (36.0)	115 (25.7)	.019
HIV test in last 12 months (n, %)	291 (71.1)	346 (77.4)	.036
HIV positive (n, %)	53 (13)	83 (18.6)	.025
Marital status (n, %)			
Currently married	191 (46.7)	131 (29.3)	<.001
Living with a man, not married	126 (30.8)	104 (23.3)	.013
Regular sexual partner, living apart	22 (5.4)	58 (13.0)	<.001
Not currently involved in sexual relationship	69 (16.9)	154 (34.5)	<.001
Age of partner (mean, SD)	38.27 (12.4)	41.16 (12.5)	.002
Living with partner's relatives in current or most recent relationship (number, %)	321 (78.5)	291 (66.0)	<.001
Partner's occupation (n, %)			
Skilled	28 (6.8)	99 (22.1)	<.001
Semi-skilled	37 (9.0)	70 (15.7)	.003
Military/police	18 (4.4)	26 (5.8)	.349
Other	8 (2.0)	49 (11.0)	<.001
Unskilled/manual	292 (71.4)	59 (13.2)	<.001
Partner's alcohol intake (n, %)			
Daily	137 (33.5)	132 (29.5)	.212
Once/twice weekly	56 (13.7)	75 (16.8)	.210
One to three times per month	15 (3.7)	12 (2.7)	.411
Less than once monthly	9 (2.2)	21 (4.7)	.047
Never	173 (42.3)	193 (43.2)	.795

*T-test for continuous and χ^2 for categorical data, testing difference between women in the Rural and Urban Cohort.

Among women who reported experiencing IPV in the past year, those in the Urban Cohort were significantly more likely to have attended school (93.1% vs. 86.4%, $p < .001$) and able to read and write either in Acholi or English (60.9% vs. 29.8%, $p < .001$) compared women in the Rural Cohort.

Table 2. Demographic Characteristics of Rural and Urban Cohort Who Had Experienced IPV in Past Year.

Demographics	Rural Cohort, <i>n</i> =228	Urban Cohort, <i>n</i> =202	<i>p</i> -Value*
Prevalence of IPV (%)	55.7	45.2	<.001
Age: mean (<i>SD</i>)	31.35 (9.8)	32.25 (10.1)	.341
Women aged 16 to 49 (number, %)	220 (96.5)	189 (93.6)	.160
Number of children per women: mean (<i>SD</i>)			
Living	4.29 (2.3)	3.27 (1.8)	.446
Dead	0.49 (0.9)	0.41 (1.1)	.898
Literacy (number, %)			
Able to read	60 (26.3)	122 (60.4)	<.001
Able to write	68 (29.8)	123 (60.9)	<.001
Highest education level completed (number, %)			
None	31 (13.6)	14 (6.9)	.024
Some primary	164 (71.9)	85 (42.1)	<.001
Completed primary	28 (12.3)	66 (32.7)	<.001
Completed secondary or further	3 (1.3)	37 (18.3)	<.001
Ever used contraception (number, %)	161 (70.6)	142 (70.3)	.943
Currently using contraception (number, %)	82 (37.3)	66 (32.7)	.031
HIV test in last 12 months (number, %)	169 (74.1)	166 (82.2)	.044
HIV positive (number, %)	33 (14.8)	49 (24.3)	.010
Marital status (number, %)			
Currently married	109 (47.8)	66 (32.7)	.001
Living with a man, not married	84 (36.8)	64 (31.7)	.261
Regular sexual partner, living apart	13 (5.7)	32 (15.8)	<.001
Not currently involved in sexual relationship	22 (9.6)	40 (19.8)	.003
Age of partner (mean, <i>SD</i>)	37.06 (11.4)	38.12 (11.4)	.419
Dwelling with partner's relatives in current or most recent relationship (number, %)	188 (82.5)	115 (56.9)	<.001
Partner's occupation (number, %)			
Skilled	17 (7.5)	49 (24.3)	<.001
Semi-skilled	16 (7.0)	45 (22.3)	<.001
Military/police	7 (3.1)	5 (2.5)	.709
Other	4 (1.8)	28 (13.9)	<.001
Unskilled/manual	181 (79.4)	28 (13.9)	<.001
Partner's alcohol intake (number, %)			
Daily	93 (40.8)	51 (25.2)	<.001
Once/twice weekly	29 (12.7)	42 (20.8)	.024
One to three times per month	7 (3.1)	7 (3.5)	.818
Less than once monthly	6 (2.6)	9 (4.5)	.304
Never	90 (39.5)	88 (43.6)	.390

Note. IPV = intimate partner violence.

**T*-test for continuous and χ^2 for categorical data, testing difference between women in the Urban and Rural cohorts.

A significantly higher proportion of women in the Urban Cohort reported not being currently married or living with a man (19.8% vs. 9.6%, $p = .003$), and a lower proportion (56.9%) lived with their partner's relatives in their current

or most recent relationship compared to rural women. The prevalence of HIV positive women was significantly higher in our Urban Cohort (24.3% vs. 14.8%, $p = .010$) which again may be due to the significantly higher proportion of women (82.2%) having been tested for HIV in the previous 12 months. Almost half of the partners of women in the Urban Cohort were skilled or semi-skilled (94/202, 46.5%) compared to the lower proportion found in the Rural Cohort (33/228, 14.5%). A significantly higher proportion of partners of women in the Rural Cohort drank alcohol daily compared to partners of women in the Urban Cohort (40.8% vs. 25.2%, $p < .001$).

Similar to the Rural Cohort, demographic characteristics in the Urban Cohort were significantly different between women who had and had not experienced IPV in the previous 12 months (Table 3). Women who had experienced IPV in the last 12 months were younger compared with women who had not experienced IPV in the last 12 months (mean age 32.3 vs. 40.9, $p < .001$). They were significantly more likely to be able to read or write (60.9% vs. 46.9%, $p = .003$) and to have obtained some level of education (93.1% vs. 86.1%, $p = .018$). Their partners were younger (mean age 38.1 vs. 43.8, $p < .001$) and they were less likely to live with their partner's relatives (56.9% vs. 71.8%, $p = .001$). In terms of sexual health, a significantly higher proportion reported using contraception at the time of the survey (32.7% vs. 22.4%, $p = .015$) and underwent a HIV test in the last 12 months (82.2% vs. 7.3%, $p < .001$); however, they were also more likely to be HIV positive (24.3% vs. 13.9%, $p = .005$).

Compared to the Rural Cohort, a slightly lower proportion of the Urban Cohort had ever experienced physical (56.2%), emotional (63.8%), and sexual (43.8%) abuse by a partner but a slightly higher level of lifetime exposure to any IPV (80.5%) (Table 4). The percentage of women who experienced IPV by any partner in the past year was lower in our Urban Cohort for all types of IPV, including exposure to any IPV (45.0%) in the past year compared to women participants in the Rural Cohort (Table 5). However, the reported prevalence of IPV in both of our cohorts was much higher than that reported in the 2016 Uganda DHS (Uganda Bureau of Statistics & Inner City Fund, 2017).

Although IPV levels were higher in the Rural Cohort, participants in the Urban Cohort also had high levels of lifetime exposure to IPV (80.5%) with almost half saying that they were exposed to IPV in the past year (45.0%). Over half of the women ($n = 251$, 56.2%) reported that a previous or current partner had ever physically hurt them, with over two-fifths of them experiencing this in the past year ($n = 105$, 23.5%). Lifetime exposure to emotional abuse was the highest, followed by physical and sexual abuse (Table 4); likewise, the prevalence of IPV experience in the past year by any partner was the highest for emotional abuse, followed by physical and sexual abuse (Table 5). Over a third of participants reported that a partner had physically forced them

Table 3. Demographic Characteristics of Urban Cohort by Experience of IPV in the Past Year.

Demographics	Total Participants	Experience of IPV in Past Year	No Experience of IPV in Past Year	p-Value*
Number (%)	447	202 (45.2)	245 (54.8)	
Age (mean, SD)	37.08 (13.3)	32.25 (10.08)	40.91 (14.38)	<.001
Number of children (mean, SD)				
Living	3.66 (1.86)	3.27 (1.82)	3.94(1.84)	<.001
Dead	0.63 (1.08)	0.41 (1.09)	0.82 (1.07)	.370
Literacy (number, %)				
Able to read	240 (53.7)	122 (60.4)	118 (48.2)	.010
Able to write	238 (53.4)	123 (60.9)	115 (46.9)	.003
Highest education level (number, %)				
None	48 (10.7)	14 (6.9)	34 (13.9)	.018
Some primary	213 (47.7)	85 (42.1)	128 (52.2)	.029
Completed primary	125 (28.0)	66 (32.7)	59 (24.1)	.043
Completed secondary or further	61 (13.6)	37 (18.3)	23 (9.4)	.006
Ever used contraception (number, %)	274 (61.4)	142 (70.3)	132 (53.9)	<.001
Women aged 16 to 49 (number, %)	367 (82.1)	189 (93.6)	178 (72.7)	<.001
Currently using contraception (number, %)	115 (25.7)	66 (32.7)	55 (22.4)	.015
HIV test in last 12 months (number, %)	346 (77.4)	166 (82.2)	18 (7.3)	<.001
HIV positive (number, %)	83 (18.6)	49 (24.3)	34 (13.9)	.005
Marital status (number, %)				
Currently married	131 (29.3)	66 (32.7)	65 (26.5)	.156
Living with a man, not married	104 (23.3)	64 (31.7)	40 (16.3)	<.001
Regular sexual partner, living apart	58 (13.0)	32 (15.8)	26 (10.6)	.102
Not currently involved in sexual relationship	154 (34.5)	40 (19.8)	114 (46.5)	<.001
Age of partner (mean, SD)	41.16 (12.47)	38.12 (11.36)	43.75 (12.76)	<.001
Dwelling with partner's relatives in current or most recent relationship (number, %)	291 (66.0)	115 (56.9)	176 (71.8)	.001
Partner's occupation (number, %)				
Skilled	99 (22.1)	49 (24.3)	50 (20.4)	.329
Semi-skilled	70 (15.7)	45 (22.3)	25 (10.2)	<.001
Military/police	26 (5.8)	5 (2.5)	21 (8.6)	.006
Other	49 (11.0)	28 (13.9)	21 (8.6)	.075
Unskilled/manual	59 (13.2)	28 (13.9)	31 (12.7)	.707
Partner's alcohol intake (number, %)				
Daily	132 (29.5)	51 (25.2)	81 (33.1)	.071
Once/twice weekly	75 (16.8)	42 (20.8)	33 (13.5)	.039
One to three times per month	12 (2.7)	7 (3.5)	5 (2.0)	.354
Less than once monthly	21 (4.7)	9 (4.5)	12 (4.9)	.826
Never	193 (43.2)	88 (43.6)	105 (42.9)	.881

Note. IPV = intimate partner violence.

*T-test for continuous and χ^2 for categorical data, testing difference between women who had and had not experienced IPV in the past year.

Table 4. Women Who Reported Experiencing IPV Ever in Their Lifetime by Any Partner.

Type of IPV	Rural Cohort (n = 409)	Urban Cohort (n = 447)	DHS Uganda* (n = 6,879)
Physical abuse (%)	61.1	56.2	43.7
Emotional abuse (%)	64.8	63.8	41.1
Sexual abuse (%)	46.9	43.8	24.7
Any IPV (%)	78.5	80.5	58.4

Note. IPV = intimate partner violence; DHS = Demographic and Health Survey.

*DHS only included ever-married women whereas the Rural and Urban Cohorts included all women.

Table 5. Women Who Reported Experiencing IPV in the Past Year by Any Partner.

Type of IPV	Rural Cohort (N=409)	Urban Cohort (N=447)	DHS* Uganda (N=6,879)	DHS* Northern Uganda** (N=1,384)
Physical abuse (%)	35.0	23.5	22.5	27.8
Emotional abuse (%)	42.8	35.6	29.3	31.9
Sexual abuse (%)	28.1	21.3	16.6	12.0
Any IPV (%)	55.7	45.0	39.6	42.5

Note. IPV = intimate partner violence; DHS = Demographic and Health Survey.

*DHS only included ever-married women whereas the Rural and Urban Cohorts included all women.

**Calculated from available data of sub-regions in the DHS-may be affected by rounding error.

to have sexual intercourse when they did not want to ($N = 164$, 36.6%), which was higher than the proportion of women (30.3%) reported in the Rural Cohort (Table 6).

On average, women thought that there were at least two “good reasons for a man to hit his wife” (Table 7), such as if she did not complete her household work to his satisfaction ($n = 37$, 8.3%), or if she disobeyed him ($n = 81$, 18.1%). Women who reported experiencing IPV reported a mean of 3.08 (SD 1.97) controlling behaviors. There were 11.2% ($n = 50$) women whose partners tried to keep them from seeing their friends and 9.4% ($n = 42$) whose partners ignored them and treated them indifferently. Women’s attitudes to intimate relationships were explored, and over 80% of women agreed with that “a good wife obeys her husband even if she disagrees” ($n = 365$, 81.7%) and that “it is important for a man to show his wife who is the boss” ($n = 375$, 83.9%).

Table 6. Women Who Reported Experiencing IPV Ever in Their Lifetime by Type.

IPV Type	Rural Cohort	Urban Cohort	DHS Uganda
Emotional			
Insulted me and made me feel bad about myself (%)	57.0	53.2	33.9
Belittled or humiliated me in front of other people (%)	27.0	26.7	22.3
Did things to scare or intimidate me on purpose (%)	43.1	39.9	Not reported
Threatened to hurt me or someone I care about (%)	37.8	28.5	19.0
Physical			
Slapped me or threw something at me that could hurt me (%)	47.4	44.6	35.0 ^a
Pushed me or shoved me or pulled my hair (%)	28.6	25.0	19.2 ^b
Hit me with his fist or with something else that could hurt me (%)	27.9	29.9	16.2
Kicked me, dragged me, or beat me up (%)	36.9	30.5	17.5
Choked or burnt me on purpose (%)	13.4	10.3	6.73 ^c
Threatened to use or actually used a gun, knife, or other weapon (%)	17.7	11.0	5.7
Sexual			
Physically forced me to have sexual intercourse when I did not want to (%)	30.3	36.6	21.4
I had sexual intercourse when I did not want to because I was afraid of what he might do (%)	38.9	34.9	5.2 ^d
Forced me to do something sexual that I found humiliating (%)	14.3	16.7	8.6 ^e

Some of the items were slightly different between our Study and DHS and are identified below:

^aSlapped her.

^bPushed her, shook her, or threw something at her.

^cTried to choke her or burn her on purpose.

^dForced her with threats or in any other way to perform sexual acts she did not want to.

^ePhysically forced her to perform any other sexual acts she did not want to.

Multivariable logistic regression was performed excluding cases with missing values on any of the independent variables leaving 350 women available for analysis (Table 8). There were 154 women who had experienced IPV in the past 12 months and 196 who had not experienced IPV in the last 12 months. Our logistic regression model was statistically significant, $\chi^2(7, N=350)=32.77, p < .001$, showing that the model was able to

Table 7. Attitudes and Behaviors of Rural and Urban Cohort Women Toward Intimate Partner Violence.

	Number of “Good Reasons” for a Man to Hit His Wife		Number of Controlling Behaviors by Partner		Number of Good Reasons to Refuse Sex With Her Partner		Attitudes to Aspects of Intimate Relationships	
	Market-place	Rural	Market-place	Rural	Market-place	Rural	Market-place	Rural
Mean	2.21	2.84	3.08	3.44	2.87	2.52	4.02	3.71
Standard deviation	1.64	1.55	1.97	2.06	1.17	1.18	1.35	1.27
Range	0–6		0–7		0–4		0–6	

Note. Statements asked of participants were: Woman’s agreement with “husband has a good reason to hit his wife,” max 6 (she does not complete her household work to his satisfaction, she disobeys him, she refuses to have sex with him, she asks him whether he has other girlfriends, he suspects that she is unfaithful, she is unfaithful). Number of controlling behaviors by partner, max 7 (tries to keep woman from seeing friends, tries to restrict contact with birth family, insists on knowing whereabouts, ignores her/ treats indifferently, gets angry if she speaks with another man, is often suspicious of unfaithfulness, expects to be asked permission to seek healthcare). Number of “good reasons” given by woman to refuse sex with partner, max 4 (if she does not want to have sex, if he is drunk, if she is sick, if he mistreats her). Woman’s attitude to aspects of intimate relationships, max 6 (a good wife always obeys her husband even if she disagrees, family problems should only be discussed with people in the family, it is important for a man to show his wife who is the boss, a woman should be able to choose her own friends even if her husband disapproves, it’s a wife’s obligation to have sex even if she doesn’t feel like it, if a man mistreats his wife, others outside of the family should intervene).

distinguish between participants who had and had not experienced IPV in the previous 12 months. Participant’s age was the only factor that had a statistically significant association with the risk of experiencing IPV in the last 12 months with an adjusted OR (aOR) of 0.95 (95% CI [0.93–0.98]) when other factors in the model were controlled for, indicating that for every additional year of age the odds of experiencing IPV in the previous 12 months decreased by 0.95 (Table 8). However, although statistically significant, the aOR for participant age was very close to 1 which indicates little effect on outcome. None of the other risk factors (partner being drunk daily, participant having knowledge that her partner had been involved in a physical fight with another man, partner’s controlling behaviors, participant’s parity, partner’s sexual relationships with other women while also having a sexual relationship with the respondent, and completion of primary level education) were found to be significantly associated with the risk of experiencing IPV in the previous 12 months as compared to the findings from the Rural Cohort.

One aspect of our Urban Cohort survey that was not included in the Rural Cohort survey was a section of questions on economic initiatives (Table 9). Most women were either market stall business owners or employees,

Table 8. Adjusted Odds Ratio With 95% Confidence Interval (CI) for Factors Associated With Intimate Partner Violence in Previous 12 Months.

	Rural Cohort		Urban Cohort		Wald Test Chi-sq	p-value
	aOR*	95% CI	aOR*	95% CI		
Partner drunk most days in last 12 months	2.22	1.33–3.73	1.22	0.91–1.65	.002	.182
Partner has been in a physical fight with another man	1.90	1.12–3.23	0.95	0.84–1.08	.017	.428
Controlling behaviors by partner	1.21	1.08–1.36	1.06	0.68–1.67	.001	.786
Partner sexual relationship with other women concurrently	1.29	0.81–2.06	1.67	0.94–2.97	.279	.079
Women's parity	1.15	1.14–1.35	1.10	0.97–1.25	.041	.126
Woman's age	0.95	0.92–0.98	0.95	0.93–0.97	<.001	<.001
Woman completed primary school	0.97	0.48–1.95	1.45	0.91–2.31	.932	.121
Constant		1.55		2.34		0.061

Note. aOR = adjusted OR.

*Adjusted for all variables in table.

Table 9. Economic Characteristics of Women Who Have and Have Not Experienced IPV in the Past Year.

	Total participants (N=447)	Experience of IPV in past year (N=202)	No experience of IPV in past year (N=245)	p-Value*
Business owners (n, %)	373 (83.4)	162 (80.2)	211 (86.1)	.614
Employees (n, %)	74 (16.6)	40 (19.8)	34 (13.9)	.157
Percentage of household income (n, %)				
0–20	61 (13.6)	33 (16.3)	28 (11.4)	.132
21–40	109 (24.4)	46 (22.8)	63 (25.7)	.471
41–60	95 (21.6)	47 (23.3)	48 (19.6)	.344
61–80	67 (15.0)	31 (15.3)	36 (14.7)	.847
81–100	99 (22.1)	39 (19.3)	60 (24.5)	.189
Don't know	15 (3.4)	6 (3.0)	9 (3.7)	.681
Decision maker on regular items (n, %)				
Myself	309 (69.1)	131 (64.9)	178 (72.7)	.076
Husband/partner	44 (9.8)	19 (9.4)	23 (9.4)	.995
Both	71 (15.9)	38 (18.8)	33 (13.5)	.124
Other/don't know	25 (5.6)	14 (6.9)	11 (4.5)	.264
Decision maker on large household items (n, %)				
Myself	235 (52.6)	90 (44.6)	145 (59.2)	.002
Husband/partner	82 (18.3)	44 (21.8)	38 (15.5)	.088
Both	96 (21.5)	51 (25.2)	45 (18.4)	.078
Other/don't know	34 (7.6)	17 (8.4)	17 (6.9)	.558
Has savings (n, %)				
Yes	168 (37.6)	75 (37.1)	93 (38.0)	.857
No	275 (61.5)	125 (61.9)	150 (61.2)	.887
Don't know	4 (0.9)	2 (1.0)	2 (0.8)	.846
Has mobile phone (n, %)				
Yes	75 (16.8)	25 (12.4)	50 (20.4)	.024
No	366 (81.9)	175 (86.6)	191 (78.0)	.018
Don't know	6 (1.3)	2 (1.0)	4 (1.6)	.557

Note. IPV = intimate partner violence.

*T-test for quantitative and χ^2 for categorical data, testing difference between women who have experienced IPV in the past year.

resulting in a degree of economic empowerment including varying levels of contributions by the women to household income and the majority of the women being decision makers on spending on household items ($n=309$, 69.1%) and big items ($n=235$, 52.6%). Over a third (37.6%) of women reported having savings and there were no statistically significant differences between participants who had and had not experienced IPV in the previous 12 months (37.1% vs. 38.0%, $p = .857$). Women who had experienced IPV in

the last 12 months reported being less likely to be the decision maker on large household items (44.6% vs. 59.2%, $p = .002$) and less likely to own a mobile phone (12.4% vs. 20.4%, $p = .024$) compared with women who had not experienced IPV in the last 12 months.

Discussion

The prevalence of IPV was extremely high in our study population. In the Urban Cohort, over 80% of women had experienced at least one type of IPV during their lifetime, and 45% of women within the past year. In the Rural Cohort, 78.5% had experienced at least one type of IPV in their lifetime and 55.7% within the past year. This is similar to previous studies in conflict affected northern Uganda that also reported high IPV prevalence rates of close to 80% (Black et al., 2019; Saile et al., 2013), and is in stark contrast to the lower rates of 15% to 30% previously reported in other Ugandan regions (Kouyoumdjian et al., 2013; Uganda Bureau of Statistics & IICF International Inc., 2012; Uganda Bureau of Statistics & Inner City Fund, 2017).

When compared with the 2016 Uganda DHS (Uganda Bureau of Statistics & Inner City Fund, 2017), our Study found markedly higher levels of IPV of all types. The DHS found a lifetime prevalence of IPV among women in the Acholi region of 59.9% compared with 78.5% to 80.5% among women in our study. Sexual IPV rates were substantially lower in the DHS survey in Acholi, which found a lifetime prevalence of 8.8% and 12-month prevalence of 6.3%, compared with 43.8% to 46.9% and 21.3% to 28.1% respectively among the women in our study. Prevalence of lifetime emotional abuse in our study (61.8%–62.8%) was also nearly 50% higher compared to those reported by the DHS in the same region of Acholi (41.1%). One possible explanation for the higher prevalence of IPV in our study is the inclusion of the conflict affected Acholi subregion that was excluded in the Uganda DHS during its sample selection citing land disputes (Uganda Bureau of Statistics & Inner City Fund, 2017). This may have led to under-reporting in the DHS for the Acholi district since conflict is well recognized as a risk factor for IPV (Muluneh et al., 2020; Saile et al., 2013).

There were similar levels of literacy between the Acholi women surveyed in the DHS and the women in our study with approximately 45% of women in both cohorts reporting ability to read and write. However, there is a notable difference in literacy levels between women in our Urban and Rural Cohorts (Table 1) which was not captured in the DHS. Education levels were higher among women in our Urban Cohort and in the DHS survey when compared to the Rural Cohort. Over two-fifths of women in our Urban Cohort had completed primary education or above compared to a third of Acholi-region

women in the DHS but less than 15% of women in the Rural Cohort (Black et al., 2019). This may reflect the focus on provision of education in urban areas by international non-government organizations and the United Nations (Nabaggala et al., 2021). However, in contrast to previous studies in SSA and Uganda which reported higher rates of IPV among women with lower levels of education (Izugbara et al., 2020; Nabaggala et al., 2021; Wado et al., 2021; Yakubovich et al., 2018), this was not found to be a significant predictor of IPV in the logistic regression analysis in our study.

Another significant risk factor for IPV in previous studies is alcohol abuse among men which we found in our Rural Cohort (Black et al., 2019; Memiah et al., 2021; Shamu et al., 2011; Wado et al., 2021). Although the proportion of women who reported that their husbands were drunk every day or almost every day was similar in both cohorts (Table 1), a significantly higher proportion of partners of women who reported experiencing IPV in the past year in the Rural Cohort drank alcohol daily compared to women in the Urban Cohort (40.8% vs. 25.2%) and there was no statistically significant association with IPV rates in women in the Urban Cohort found in logistic regression analysis of risk factors. This is in contrast with other studies that have reported an association between alcohol abuse and IPV (Black et al., 2019; Saile et al., 2013; Shamu et al., 2011; Wado et al., 2021), suggesting that further research into levels of alcohol consumption and its association in northern Uganda is needed.

Likewise, other risk behaviors associated with IPV in the Rural Cohort such as controlling behaviors exhibited by partners, partner previously being in a physical fight with another man, and woman's parity (Black et al., 2019) were not associated with IPV in the Urban Cohort. Possible explanations for this finding include moderators such as higher socioeconomic status (Ekpenyong & Tawari, 2021; Greene et al., 2017) and urban residence (Ekpenyong & Tawari, 2021), and other moderators not recorded in our study such as drinking norms and overall prevalence of alcohol use (Greene et al., 2017). However, these variables have been shown to have different moderating effects in SSA countries (Ekpenyong & Tawari, 2021) and require further research into their effects in northern Uganda.

Other factors that might explain the differences between our Urban Cohort and the Rural Cohort are attitudes and behaviors around IPV. A high level of IPV acceptance is common in Uganda (Black et al., 2019; Koenig et al., 2003; Speizer, 2010) and other SSA countries (Chilanga et al., 2020; Izugbara et al., 2020; Memiah et al., 2021; Muluneh et al., 2020; Wado et al., 2021). A previous study in central Uganda found that up to 90% of women reported that IPV is justified in some situations, for example if the woman refused to have sex with her partner or sought to use contraception without his

permission (Koenig et al., 2003). Similarly, women in both our Urban and Rural Cohorts (Black et al., 2019) reported a high level of acceptance of IPV. A key implication is that there are longstanding and entrenched societal attitudes and behaviors that justify and maintain IPV in the communities we surveyed. However, the level of acceptance of IPV in the Urban Cohort was lower than in the Rural Cohort, and attitudes toward aspects of intimate relationships suggest a higher level of gender equality in the Urban Cohort. Although acceptance of IPV was not found to be associated with a significant increased risk of IPV in either cohort, the lower levels of acceptance of IPV in the Urban Cohort may provide a protective effect against IPV. This is in keeping with previous studies showing that attitudes toward IPV can either increase IPV risk if acceptance is high (Memiah et al., 2021) or confer a protective effect if women had negative attitudes toward IPV (Wado et al., 2021). Further research into this phenomenon is warranted to inform future interventions targeting IPV in SSA, specifically to support a change in attitudes and behaviors around IPV such as community-supported programs that support education and open discussion around taboo topics such as IPV and HIV (McCloskey et al., 2016).

One aspect of our Urban Cohort that was not measured in the Rural Cohort is women's economic empowerment. The increased autonomy of women in our Urban Cohort was reflected in the higher proportion of women who reported being the decision maker on large household items and owning a mobile phone. This may also be a protective factor for IPV. Previous studies in SSA have shown that economic empowerment is associated with lower IPV prevalence (Izugbara et al., 2020; Memiah et al., 2021), and that interventions targeting gender wealth inequality can decrease IPV by reducing poverty-related stressors and household conflict (Ellsberg et al., 2015) and improving women's household status (Farmer & Tiefenthaler, 1997). However, there have also been concerns that altering economic and power gender dynamics may increase the risk of IPV by inciting men to violence in order to gain control of financial resources and reassert their dominance in the relationship (Buller et al., 2018; Eswaran & Malhotra, 2011). Ownership of mobile phones can also provide access to mobile applications (such as emergency, education, reporting and evidence-building, support, and avoidance apps) that can be beneficial to address IPV (Eisenhut et al., 2020). However, the low proportions of women who owned a mobile phone in our study and the relative paucity of such apps in SSA calls for further research on their benefits, safety, efficacy, and sustainability (Eisenhut et al., 2020).

Strengths and Limitations

A strength of our study is the analysis of factors associated with IPV in northern Uganda including the effects of rural–urban residence and economic empowerment compared to the Uganda DHS which did not analyze the data using logistic regression to extract independently associated factors. The generalizability of our results is higher than the Uganda DHS due to the inclusion of all women in our study as compared to the Uganda DHS which included only ever-married women. Our study has shed light on the differing experiences of IPV among diverse populations of women within northern Uganda.

One limitation of our study was that, despite being conducted in heavily conflict affected regions in northern Uganda, we did not measure the degree of exposure to conflict in our participants. Another important limitation of this study was that our study cohorts comprised mainly women living close to the urban marketplace in the township of Gulu and two health clinics in northern Uganda. It may not reflect the general population in northern Uganda. Further, there is a possibility of under-reporting of experiences by our participants in the Urban cohort reflected in the number of missing values on logistic regression analysis of the independent variables as compared to the Rural Cohort. We had envisioned that a majority of participants would be able to answer the survey independently on the tablets to ensure privacy and confidentiality, but a significant proportion of women in the Rural Cohort were illiterate. All participants in the Rural Cohort and a majority (383/448, 85.5%) of participants in the Urban Cohort required the survey to be administered by an interviewer. Despite the efforts to ensure privacy, there remains a possibility that participants were not comfortable to disclose their experiences of IPV to an interviewer, thus resulting in under-reporting.

Conclusion

This study shows that IPV rates among women in urban, conflict affected regions of northern Uganda are extremely high and comparable to those in rural regions, but these rates are not captured in national surveys. IPV in these regions, and more broadly in SSA, is reinforced by attitudes and behaviors that normalize and justify IPV, which in turn may discourage women who experience IPV from speaking out or seeking help. Younger women are at higher risk for IPV despite having higher education than older women. Similar to other studies, urban residence, economic empowerment in women, and a more equitable gender wealth balance were shown to confer a protective effect. The results of our study suggest that interventions to financially empower women and that target gender wealth inequality are likely to effect

important changes in decreasing the levels of IPV. Further research is needed into economic interventions to reduce gender imbalances and IPV in northern Uganda, as well as to better assess the effects of conflict and other structural risk factors on IPV to develop a more comprehensive approach to reduce IPV.

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Agnesh Awor, MPH: Research Assistant. Research interests in social determinants of health in Sub-Saharan Africa, and prevalence of domestic and family violence in different populations.

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Phiona Ayero, MPH: Research Assistant. Research interests in social determinants of health in Sub-Saharan Africa, and prevalence of domestic and family violence in different populations.

Ruth Ayeerwot, MPH: Research Assistant. Research interests in social determinants of health in Sub-Saharan Africa, and prevalence of domestic and family violence in different populations.

Rutuja Dandgaval, MPH: Early Career Researcher. Experienced working with vulnerable populations and supporting community health projects. Research interests in social inequity.

Emma Bence, MPH: Early Career Researcher. Research interests in the rise of non-communicable diseases, risk factor prevalence, and hypertension in sub-Saharan Africa.

Eleanor Black, MPH: Early Career Researcher. Public Health Physician, experienced clinical practitioner. Research interest in health in sub-Saharan Africa, cervical and breast cancer detection and treatment in low-income countries, violence, medication use, and pain management.

Susan Clarke, PhD: Early Career Researcher. Family Physician, experienced clinical practitioner. Research interests in Chronic Suppurative Otitis Media in vulnerable populations and low- and middle-income countries, health of women in sub-Saharan Africa, cervical and breast cancer, violence in diverse populations.

Helen Fry, MPH: Early Career Researcher. Public Health Physician, experienced clinical practitioner. Research interests in rural and remote medicine, women's health in sub-Saharan Africa, cervical and breast cancer detection and treatment in low-income countries, violence, public health response to COVID-19.

Heather Worth, PhD: Professor. Research interest and significant experience in education and public health research internationally, specifically social and behavioral research in Asia and the Pacific, with a focus on gender, sexuality and global HIV, vulnerable populations in Sri Lanka, Papua New Guinea, the Pacific, Indonesia, Timor Leste, Kenya, and Uganda.