Prevalence and Determinants of Intimate-Partner Violence among Pregnant Women Attending a City Health Centre IV, South western Uganda, during the COVID-19 Pandemic: A Cross-Sectional Study.

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Abstract

Background: Intimate Partner Violence (IPV) during pregnancy is a significant public health problem worldwide and its impact on new-born outcomes is largely documented. Although conditions resulting from the COVID-19 pandemic have provided a perfect environment for IPV to thrive, the magnitude of IPV among pregnant women remains unclear. This study aimed to determine the prevalence and determinants of IPV during the COVID-19 pandemic among pregnant women in south-western Uganda.

Methodology: This is a cross-sectional study of 345 pregnant women attending a large City Health Care facility consecutively enrolled. The validated WHO semi-structured women's health and domestic violence questionnaire was used to identify women who had experienced IPV.

Results: Of the 345 pregnant women, 67.5% experienced some form of IPV. The categories of IPV experienced by pregnant women included: controlling behaviours 188(80.6%), psychological 127(54.5%), sexual 84(36.1%), economic 99(42.5%), and physical violence at 33(9.6%). The most important predictor of all types of IPV experience was marital conflicts experience. Specifically, the predictors of psychological IPV experience were marital conflicts experience and emotional support from relatives. The strongest predictor of controlling behaviours IPV experience was marital conflicts experience. The strongest predictors of sexual violence IPV experience were decision-making, marital conflicts experience, pregnant women aged ≥35, and communicating with the family of origin. The predictors of economic IPV experience were decision-making, marital conflicts experience, financial support from relatives, and marriage duration.

Conclusion: The IPV burden during the COVID-19 pandemic is widespread among pregnant women in south-western Uganda. Pregnant women reporting marital conflicts were more likely to experience IPV. These findings point to the need for integration of IPV screening in the routine ANC activities for every pregnant woman.

Recommendations: [a]

Health care providers need to identify and manage IPV as a health issue, not just as societal matter if IPV is to be mitigated.

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1 Background:

Intimate Partner Violence (IPV) during pregnancy is a significant public health problem worldwide, even before the current COVID 19 pandemic. It was estimated that one in every three women experienced either physical or sexual violence or both types of Intimate Partner Violence (IPV) during their lifetime (WHO, 2013). Research evidence before the current COVID 19 pandemic also indicates that IPV was the commonest type of violence against pregnant women in sub-Saharan Africa (SSA) (Devries *et al.,* 2013). The proportion of pregnant women who experienced IPV in SSA ranged from 7 to 20% for physical IPV (Mahenge, Likindikoki, Stöckl, & Mbwambo, 2013, Stöckl, Watts, & Kilonzo Mbwambo, 2010), 9.7–18% for sexual IPV (Mahenge *et al.,* 2013Rurangirwa, Mogren, Ntaganira, & Krantz, 2017), and 17–29% for psychological IPV (Makayoto, Omolo, Kamweya, Harder, & Mutai, 2013, Rurangirwa *et al.,* 2017). Above all, the overall IPV prevalence during pregnancy in developing countries (27.7%) was reported to be higher than that of developed countries (13.3%) (Rose *et al.,* 2010). In East Africa, IPV prevalence during pregnancy was as high as 39% (WHO, 2013). In Uganda, although the Uganda Bureau of Statistics (UBOS) reported that 68% of ever-married women aged 15-49 years had experienced some form of violence inflicted by their spouses or intimate partners (UBOS, 2007), the magnitude of IPV among pregnant women across various settings remains unclear, even before the COVID 19 pandemic.

As measures to combat COVID 19 were put in place such as national lockdowns and closure of country boundaries (borders), the United Nations Population Fund estimated an increase in the number of new cases of IPV by 15 million, worldwide, as result of such measures (Hussein, 2020). In fact, the Uganda police received about 328 cases-connected to IPV in the initial two weeks of lockdown (Matovu, 2020). In the period that followed various countries in diverse regions also recorded an increase in IPV cases especially in China, USA, and several European countries (Boserup, McKenney, & Elkbuli, 2020; Bradley, DiPasquale, Dillabough, & Schneider, 2020; Mahase, 2020; Parveen & Grierson, 2020),Van Gelder *et al.,* 2020).

Measures to combat COVID 19 may have led to an increase in the episodes of IPV through several mechanisms such as an escalation in societies' distress and tension (Card & Dahl, 2011); probable alterations in the gender earnings gap (Aizer, 2011; Anderberg, Rainer, Wadsworth, & Wilson, 2016; Pronyk *et al.,* 2006); remaining at home for a long period; and a wide range of emotional effects (). In addition, quarantines regularly position more victims of violence to the perpetrators, increasing the IPV risk (Brooks *et al.,* 2020). This is even worse for women in unstable relationships as staying at home for such long periods creates an unsafe environment to live in (Van Gelder *et al*., 2020). For intimate partners with family conflicts staying together for long periods may increase episodes of IPV, since trivial matters may activate that violence (Graham-Harrison, Giuffrida, Smith, & Ford, 2020). Furthermore, the extraordinary tension and nervousness generated by the COVID-19 pandemic and the improbability of when it will end, together with the financial insecurity may have heightened the percentage of IPV in intimate relationships with prior IPV trends (A. M. Campbell, 2020).

In addition, pregnancy is a period that demands increased relationship commitment and resources, without which may increase the IPV risk. Studies have also reported other risk factors that may escalate IPV during pregnancy which include IPV experience before pregnancy, HIV infection, regular alcohol consumption (Olagbuji, Ezeanochie, Ande, & Ekaete, 2010), financial self-insufficiency, arguing with a spouse (Tu & Lou, 2017), having a history of maternal abuse during childhood, being in a polygamous relationship, being multiparous, and having a partner that consumes alcohol daily (Makayoto *et al.,* 2013). Also, being Old (women of ≥30), single, economically disadvantaged, and low levels of education, puts a pregnant woman at higher risk of IPV (Perales *et al.,* 2009).

IPV has adversative outcomes for women, ranging from poor psychological health to adverse reproductive health, such as poor birth outcomes (J. C. Campbell, 2002). Pregnant women who reported ever experiencing physical or sexual violence by spouses have been found to have higher odds of unintended or unwanted pregnancies (Ahinkorah, Dickson, & Seidu, 2018) and women in violent relationships are less likely to receive adequate prenatal care (WHO, 2013). The mother and foetus suffer adverse effects of IPV during pregnancy. For example, foetal IPV effects include: preterm delivery, low birth weight, and fetal death. Maternal IPV effects include physical injuries like bruises, abrasions, lac-

erations, broken bones, and teeth, and attempted strangulation (Krug, Mercy, Dahlberg, & Zwi, 2002), mental health problems, reduced maternal weight gain, increased likelihood of caesarean section delivery and maternal mortality (Sanjel, 2013).

Therefore, using concepts adapted from the ecological model, (Krug *et al.,* 2002), this study determined the prevalence and determinants of IPV experience during the COVID-19 pandemic among pregnant women attending a large primary health care facility in South western Uganda. It is envisioned that the findings of this study would help in the suppression of this deviant practice from our society.

2 Methods

Study design

This study employed a cross-sectional study type of design. The study took place during the month of May 2021.

Study setting

The study was conducted at Mbarara city health centre (HC) IV, south western Uganda. In the Ugandan public health services' delivery structure, a HCIV is located at a level of a constituency or county. Mbarara city health centre IV catchment population is estimated at over 400,000 people (). The majority of the pregnant women that attend antenatal care (ANC) clinic at that health facility are from the Mbarara district. Like elsewhere in Uganda, a HC IV is operated by one medical officer, five clinical officers, one laboratory technologist, four laboratory technicians, one laboratory assistant, one anaesthetic assistant, one dispenser, one public dental officer, one senior nursing officer, five registered nurses, two registered midwives, one enrolled nurse, eight enrolled midwives, two comprehensive enrolled nurses and ten support staff. The HC IV also has a surgical operating theatre or unit.

The ANC clinic operates on an outpatient basis, offering services such as prenatal care, health education, routine HIV counselling and testing, and tetanus toxoid vaccination to the pregnant women. The health centre also admits on maternity ward pregnant women that are sick or in labour. In the financial year 2019/2020, the health facility database indicated that approximately 1000 pregnant women attended ANC monthly (new ANC cases and re-attendance) and these resided in and outside the town.

Study population

The study was conducted among pregnant women attending Mbarara City Health Centre IV in South western Uganda.

Sample size estimation

The sample size was determined following standard methods for an infinite population, $n = z^2pq/d^2$(Kish, 1965), where d is the margin of error (e=0.05), p is the prevalence of IPV experience, and z is the confidence interval that was set at 95%. The prevalence of pregnant women (p) who experienced IPV in Uganda was set at 27.8% (Epuitai, Udho, Auma, & Nabirye, 2019). Overall, a sample size of 309 participants was obtained. When we factored in a non-response rate of 10%, a final sample size of 345 participants was obtained.

Sampling procedure

The pregnant women that reported at the ANC clinic and met the eligibility criteria were consecutively enrolled in the study.

Inclusion criteria

The study recruited pregnant women aged 15 years or above, who wilfully gave informed consent to participate in the study.

Exclusion criteria

Pregnant women who were too sick to answer questions were excluded from the study.

Study variables

Dependent variable

The presence of IPV experience during the COVID-19 pandemic

Using the World Health Organization multi-country study survey questionnaire from García-Moreno *et al.* (2005), with item responses of yes or no, the presence of IPV was considered when a participant experienced any one of the five types of IPV. To assess the presence of psychological IPV pregnant women were requested to report if they experienced the following forms of abuses from their male counterparts, namely; being ignored and treated with indifference; insulted or made to feel bad about themselves, belittled or humiliated in front of other people, experienced events that intimidated them on purpose, and were threatened to be hurt by their intimate partners. In this study, controlling behaviours IPV experience meant pregnant women being restricted by their intimate partners from seeing their friends or family member of their birth, insisted on knowing where they were

all the time, got angry when they spoke with other men, and were often suspicious that they might be unfaithful. The presence of physical IPV experience was considered as being slapped or thrown objects that could hurt by their intimate partners, pushed, shoved or pulled by their hair, hit with fists or objects that could hurt, kicked, dragged or beat, choked or burnt on purpose and were threatened to use or actually used a gun, knife or other weapon against them. Sexual violence IPV experience meant being physically forced to have sexual intercourse by their intimate partners when they did intend to have it, were forced to engage in degrading or humiliating sexual acts and in sexual intercourse they did not want as result of the fear of their partners. Lastly, economic IPV experience by pregnant women meant their intimate partners taking their earnings or savings against their own will, refusing to give them money for household use, and making important financial decisions without consulting them.

Independent variables

Based on literature review, independent variables assessed in this study included age of a woman, intimate partner interest in the unplanned pregnancy (Ashenafi, Mengistie, Egata, & Berhane, 2020; Bifftu, Dachew, Tadesse Tiruneh, & Zewoldie, 2017), daily alcohol intake by the intimate partner (Auma et al., 2020; Clarke et al., 2019; Gubi, Nansubuga, & Wandera, 2020; Namugamba & Mangwi, 2018), witnessing IPV in childhood, marriage duration(Gubi *et al.,* 2020), family size or number of children(Makayoto *et al.,* 2013), decision making power (Adhena, Oljira, Dessie, & Hidru, 2020; Ahinkorah et al., 2018; Alam, Tareque, Peet, Rahman, & Mahmud, 2021; Auma *et al.*, 2020), marital conflicts experience, household monthly income (Epuitai *et al.,* 2019), emotional or financial support, communication to family of birth (Sigalla *et al.*, 2017), movement restriction (Bradbury-Jones & Isham, 2020), lack of transport, closure of schools, closure of businesses, and job loss (Delaney, 2020; Moreira & da Costa, 2020; Payne, Morgan, & Piquero, 2020), and insufficient income(Barnawi, 2017).

2.1 Data collection procedure

The researcher and assistants did self-introduction and all women attending the clinic on the day of data collection were briefed about the study. Those providing written informed consent to participate were enrolled. Data were collected using a pretested researcher administered semi-structured questionnaire. We interviewed participants in the native language (Runyankole) or English, depending on the language fluency of the respondent.

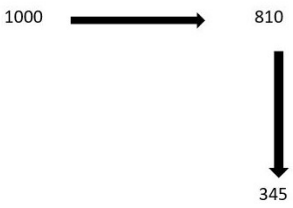
3 Data analysis

The principal investigator carefully entered the data in an Excel spread sheet and later transferred to SPSS (vs 20). Data were analysed using SPSS (vs 20). Univariate analyses were conducted to describe the background characteristics of the participants. Bivariate analyses using chi-square statistics were performed to determine the association between independent variables and IPV experience. The probability value (p-value) was set at the 0.05 level of significance. To identify the predictors of IPV experience, variables found statistically significant in the bivariate analyses were fitted into multivariate logistic regression model.

4 Results

The 2019/2020 health facility database indicated approximately 1000 pregnant women monthly attendance (new ANC cases and re-attendance) and they resided in and outside the City. According to the ANC clinic records the average attendance is 45 pregnant per day from Monday to Friday excluding Thursday which is reserved for pregnant women that are HIV positive so in agreement with the facility nurse In-charge, Thursday was eliminated since these women already had their own psychological issues. Twenty-two (22) working days minus four (4) Thursdays (HIV antenatal care Clinic) left us with 18 days (18 days X 45 women/day = 810 accessible population). Using consecutive sampling women that met the eligibility criteria and wilfully consented were enrolled and on average 19 women participated daily. Those who were sick were excluded, some declined to participate without giving a clear reason and others claimed it would waste their time despite explaining that it won't take more than 15minutes.

Flow diagram displaying the target population, accessible population and the sample.



Basis: designed by the authors

Socio-demographics of the study participants and their partners

Out of the 1000 pregnant women that attend ANC monthly at the Mbarara city health centre (HC) IV, the average accessible population of this study was 810 participants, out of which 345 participants were selected and responded to the study (100% response rate). The majority, 151 (43.8%) of the participants were aged 20–24, with a range of 17-41 years (See Table 1). Primigravidae were the majority, 150 (43.5%). The predominant numbers of the study participants were Anglican by religion 140 (46.0%). The majority, 274 (79.4%) were of the Banyankore tribe. Most pregnant women lived with their partners 329 (95.4%). Nearly, 41% of the participants were self-employed, 162 (47%) had obtained a secondary level of education. The average monthly family income of the majority of the pregnant women 252 (73.0%) was more than 62 dollars. The majority of their intimate partners had attained a secondary level of education164 (47.5%), and most of them 203 (58.8%) were self-employed.

Prevalence of IPV experienced during the COVID-19 pandemic

The prevalence of IPV experienced during the COVID-19 pandemic is presented in figure 1. Overall, two hundred and thirty-three participants, 233 (67.5%) had experienced at least one form of IPV**.**

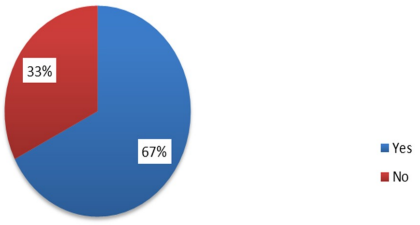


Fig. 1: IPV experience among pregnant women during the COVID-19 pandemic

Categories of IPV experienced by pregnant women during the COVID-19 pandemic

Among the study participants that experienced IPV (n=233), the majority 188(80.6%) had experienced the controlling behaviours type of IPV (Table 2). Fewer participants reported to have experienced physical IPV 33(14.2%).

Bivariate analysis of factors associated with the experience of at least one category of IPV by pregnant women during the COVID-19 pandemic

Factors associated with experience of at least one category of IPV among pregnant women during the COVID-19 pandemic are displayed in Table 3. Overall, factors associated with IPV were alcohol drinking by the participant (p=0.018), alcohol drinking by the intimate partner (P=0.001), marital conflicts experience (p=0.000), witnessing IPV as a child (p=0.039), planned pregnancy (p=0.003), decision-making (p=0.000), participant communicating with the family of their origin p=(0.009), participant communicating with the family of their intimate partner (p=0.003) and participant communicating to a family member whom emotional support was received (p=0.037).

Multivariate analysis of factors associated with experience of at least one category of IPV by pregnant women during the COVID-19 pandemic

Multivariate analysis of factors associated with experience of at least one category of IPV among pregnant women during the COVID-19 pandemic is shown in Table 4. Direct logistic regression was performed to assess the determinants of IPV experience among pregnant women. The model contained nine (9) variables namely; participant (p=0.018) and partner alcohol intake (p=0.001), communicating with family members of their intimate partner (p=0.003), family of origin (p=0.009), or one who gave emotional support (p=0.037), decision-making (p=0.000), marital conflict experience (p=0.000), witness as a child (p=0.039) and planned pregnancy (p=0.003.

The model containing all the predictors was significant [x^2(d.f =9, n=290) =44.013, p=0.000] indicating that the model distinguished between respondents who had IPV and those who did not have it. The model explained between 14.1% and 19.6% of the variance in IPV experience and correctly classified 70.7% of the cases included in the analysis. As shown in Table 4, only one independent variable; marital conflicts experience was statistically significant [aOR: 6.332, [95%CI: 1.854-21.625, p=0.003]. This meant that respondents who experienced mar-

Table 1. Socio-demographics of the study participants and their partners

	Socio-demographics	n	%
A Participant			
Age in years	15-19	28	8.1
	20-24	151	43.8
	25-29	110	31.9
	30-34	43	12.5
	≥35	13	3.8
Gravidity	1	150	43.5
	2	94	27.2
	3	57	16.5
	4	28	8.1
	≥5	16	4.6
Religion	Catholic	129	37.4
	Anglican	140	40.6
	Muslim	39	11.3
	Pentecostal	34	9.9
	Others	3	0.9
Tribe	Munyankore	274	79.4
	Mukiga	30	8.7
	Muganda	21	6.1
	Others	20	5.8
Marital status	Single	10	2.9
	Living with partner	329	95.4
	Divorced/separated	6	1.7
Occupation	Salaried job	76	22
	Self-employed	141	40.9
	Housewife	124	35.9
	Others	4	1.2
Education level	No formal education	7	2.0
	Primary	81	23.5
	Secondary	162	47.0
	Tertiary	95	27.5
B Spouse			
Education level	No formal education	4	1.2
	Primary	62	18
	Secondary	164	47.5
	Tertiary	114	33.0
	Not sure	1	0.3
Occupation	Salaried job	137	39.7
	Self-employed	203	58.8
	Others	5	1.4
Average monthly income	<280000(62 dollars)	91	26.4
	>280000(62 dollars)	252	73.0
	Not sure/missing	2	0.6

Table 2. Categories of IPV experienced during the COVID-19 pandemic

Categories experienced	Yes n	%	No n	%
Psychological	127	54.5	106	45.5
Controlling	188	80.6	45	19.3
Physical	33	14.2	200	85.8
Sexual	84	36.1	149	63.9
Economical	99	42.5	134	57.5

Table 3. Bivariate analysis of factors associated with the experience of at least one category of IPV by pregnant women during the COVID-19 pandemic

Variable		Yes n (%)	No n (%)	X^2	p-value
Alcohol participant	Never	210(60.9)	109(31.6)	5.616	0.018*
	Drinks	23(6.7)	3(0.9)		
Alcohol partner	Never	162(47)	96(27.8)	10.509	0.001*
	Drinks	71(20.6)	16(4.6)		
Marital conflict	Yes	52(15.1)	3(0.9)	21.771	0.000*
	No	181(52.5)	109(31.6)		
Witness as a child	Yes	96(28.2)	59(17.4)	4.246	0.039*
	No	134(39.4)	51(15.0)		
Gravidity	Primigravidae	100(30.4)	50 (15.2%)	0.032	0.858
	Multigravida	121(36.8)	58(17.6)		
Planned pregnancy	Yes	188(54.5)	104(30.1)	8.617	0.003*
	No	45(13.0)	8(2.3)		
Decision making	Independently	67(19.4)	11(3.2)	15.498	0.000*
	Participant & partner	166(48.1)	101(29.3)		
Communication to the family of origin	< a week	195(56.5)	105(30.4)	6.748	0.009*
	≥ one month	38(11)	7(2)		
Communication to partner's family	< a week	141(40.9)	86(24.9)	8.898	0.003*
	≥ one month	118(34.2)	26(7.5)		
Emotional Support from who	Friends	53(18.2)	16(5.5)	4.360	0.037*
	Relatives	141(48.3)	82(28.1)		
Marriage duration	<2years	106(30.7)	48(13.9)	0.213	0.645
	≥2years	127(36.8)	64(18.6)		

Note.*Statistically significant

ital conflicts were 6.33 times more likely to experience IPV during pregnancy than those who did not have experience marital conflicts.

Multivariate analysis of factors associated with psychological, controlling, physical, sexual, and economic categories of IPV experience by pregnant women during the COVID-19 pandemic

Psychological IPV Experience

Multivariate analysis of factors associated with psychological, controlling, physical, sexual, and economic IPV among pregnant women during the COVID-19 pandemic. A model of ten (10) variables associated with psychological IPV during pregnancy that included; gravidity (p = 0.000), planned pregnancy (p = 0.003), marriage duration (p = 0.003), communicating with family members of their intimate partner (p=0.003), family of origin (p = 0.014), or one who gave emotional support (p = 0.000), marital conflicts experience (p = 0.000), alcohol intake by intimate partner (p = 0.005), monthly household income (p = 0.030) and decision making (p = 0.000) were entered in logistic regression.

The model containing all the predictors was statistically significant [x^2(d.f =10, n=277) = 54.553 p = 0.000] indicating that the model was able to

Table 4. Multivariate analysis of factors associated with experience of at least one category of IPV by pregnant women during the COVID-19 pandemic

variable	B	SE	P-value	aOR	95% CI
Alcohol drink participant	-0.758	0.696	0.276	0.469	0.120 – 1.833
Alcohol intake partner	-0.352	0.363	0.332	0.703	0.345 – 1.432
Decision making	-0.636	0.401	0.113	0.529	0.241 – 1.162
Communication to the family of origin	0.790	0.539	0.143	2.203	0.766- 6.337
Communication to the family of partner	0.405	0.308	0.187	1.500	0.821 – 2.741
Emotional support relatives	-0.346	0.346	0.317	0.707	0.359 -1.394
Planned pregnancy	-0.637	0.465	0.170	0.529	0.213 – 1.314
Marital conflicts experience	1.846	0.627	0.003*	6.332	1.854 -21.625
Witness as a child	-0.400	0.270	0.138	0.670	0.395 -1.137

Note. Variables with p <0.2 were considered, aOR=adjusted Odds Ratio, S.E= standard error, CI=confidence interval

distinguish between respondents who had experienced psychological IPV and those who did not. The model explained the variance of 17.9% and 24.5% in psychological IPV experience, and correctly classified 70.8% of the cases included in the analysis. As shown in table 5, two independent variables statistically significantly predicted psychological IPV experience (marital conflicts experience and emotional support). Marital conflicts experience recording an adjusted odds ratio (aOR) of 6.455 [95%CI: 2.772 – 15.035, p = 0.000] meant that respondents who experienced marital conflicts were 6.4 times more likely to experience psychological IPV than those who did not experience marital conflicts. In addition, pregnant women who received emotional support from relatives were 0.42 less likely to experience IPV than those who received emotional support from friends [aOR: 0.416 (95CI%: 0.218 – 0.792, p=0.008].

Controlling IPV Experience

Seven (6) variables that were associated with controlling behaviours IPV experience were entered into the logistic regression model, these included: communicating with their family of origin (p = 0.038) or that of their intimate partner(p = 0.015), marital conflicts experience (p = 0.000), alcohol intake by the study participant (p = 0.005), decision making (p = 0.001), and witnessing IPV as a child (p = 0.025).The model containing all the predictors was statistically significant [x^2(d.f =7, n=340) =47.275 p=0.000] indicating that the model was able to distinguish between respondents who had experienced controlling behaviours IPV and those who did not. The model explained the variance of 13% and 17.4% in controlling behaviours IPV experience, and correctly classified 61.5% of the cases included in the analysis. One independent variable made a unique statistically significant contribution to the model (marital conflicts experience recording an aOR of 4.897 [95%CI: 2.177 – 11.016, p=0.000]) displayed in table 5. This showed that respondents who had experienced marital conflicts were 4.8 times more likely to experience controlling behaviours type of IPV than those who did not experience marital conflicts.

Physical IPV Experience

Pregnant women communicating with the family of their origin (p = 0.045), marital conflicts experience (p = 0.001), alcohol intake by their intimate partner (p = 0.000), alcohol intake by the study participant (p = 0.002), decision making (p =0.000), and emotional support from relatives (p = 0.028) were the variables associated with physical IPV experience that were also entered into logistic regression.

The model containing all the predictors was statistically significant [x^2(d.f =6, n=292) =43.236, p=0.000] indicating that the model was able to distinguish between respondents who had experienced physical IPV and those who did not. The model explained the variance of 13.8% and 29.9% in physical IPV experience, and correctly classified 91.1% of the cases included in the analysis. Three independent variables made a unique statistically significant contribution to the model (decision making, marital conflicts experience and alcohol intake by the partner): Marital conflicts experience recording an aOR of 6.224 [95%CI: 2.384- 16.250, p=0.000] meant that respondents who had experienced marital conflicts were 6.2 times more likely to experience physical IPV than those who did not ex-

perience marital conflicts. Decision making with an aOR of 0.299 [95%CI: 0.120- 0.746, p=0.010] indicates that pregnant women who made decisions together with their partners were 0.299 times less likely to experience physical IPV than those who made decisions independently. Alcohol intake by their male partner with an aOR of 2.742 [95%CI: 1.050-7.162, p = 0.039] meant that pregnant women whose intimate partners were taking alcohol were 2.7 times more likely to experience physical IPV than those whose partners never consumed alcohol.

Sexual IPV Experience

Five (5) variables that were associated with sexual IPV experience were entered into the logistic regression model, these included: the participant communicating with their family of origin (p = 0.001) or that of their partner (p = 0.001), decision making (p = 0.000), marital conflicts experience (p = 0.001), and participant's age (p = 0.038).

The model containing all the predictors was statistically significant [x^2(d.f =6, n=345) =34.36, p = 0.000], indicating that the model was able to distinguish between respondents who had experienced sexual IPV and those who did not. The model explained the variance of 9.5% and 14.1% in sexual IPV experience, and correctly classified 77.4% of the cases included in the analysis. Four independent variables made a unique statistically significant contribution to the model (communicating with family of origin, marital conflicts experience, decision making, and participant's age: Decision making recording an aOR of 0.460 [95%CI: 0.256-0.824, p=0.009], indicated that pregnant women who made decisions together with their intimate partners were 0.46 times less likely to experience sexual IPV than those who made decisions independently. Marital conflicts experience with an aOR of 2.050 [95%CI: 1.065 – 3.945, p = 0.032] meant that women who had experienced marital conflicts were 2.050 times more likely to experience sexual IPV than those who had not experienced marital conflicts. Participants aged ≥35 with an aOR of 3.677 [95%CI: 1.104-12.246, p = 0.034] meant that pregnant women who were aged ≥35 were 3.677 times more likely to experience sexual IPV than those who were aged between 25 to 34 years. Communicating with the family of origin with an aOR of 2.037[95%CI: 1.012-4.103, p = 0.046] meant that women who were communicating to their family of origin frequently (in an interval of less than a week) were 2.037 times more likely to experience sexual IPV than those who did not communicate frequently.

Economic IPV Experience

Nine (9) variables that were associated with economic IPV experience were entered into the logistic regression model, these included: emotional support from relatives (p = 0.007), financial support from relatives (p = 0.007), communicating with the family of origin (p = 0.004) communicating with the family of the partner (p = 0.004), decision making (p = 0.000), marriage duration **(**p = 0.004), alcohol intake by intimate partner (p = 0.000), gravidity (p = 0.000) and marital conflicts experience (p = 0.000). The model containing all the predictors was statistically significant [x^2(d.f =11, n=210) = 68.57, p = 0.000], indicating that the model was able to distinguish between respondents who had experienced economic IPV and those who did not. The model explained the variance of 27.9% and 40.8% in economic IPV experience and correctly classified 80.5% of the cases included in the analysis. Four independent variables made a unique statistically significant contribution to the model namely; marriage duration, financial support from relatives, marital conflicts experience, and decision making: Decision making recording an aOR of 0.114 [95%CI: 0.256-0.824, p = 0.000] indicated that pregnant women who made decisions together with intimate partners (men) were 0.114 times less likely to experience economic IPV than those who made decisions independently, marital conflicts experience with an a OR of 7.005 [95%CI: 2.273– 21.583, p = 0.032] indicated that pregnant women who had experienced marital conflicts were 7.005 times more likely to experience economic IPV than those who had not experienced marital conflicts. Financial support from relatives with an aOR of 0.334 [95%CI: 0.139- 0.803, p = 0.014] meant that pregnant women who had received financial support from relatives were 0.334 times less likely to experience economic IPV than those who had received financial support from friends. Marriage duration with an aOR of 3.115 [95%CI:1.146- 8.466, p = 0.046] meant that women who were married for more than 2 years were 3.115 times more likely to experience economic IPV than those who had spent less than two years.

Table 5. Multivariate analysis of factors associated with Psychological, Controlling, Physical, Sexual and Economic violence among women during the COVID-19 pandemic

variable	B	SE	P-value	aOR	95% CI
Psychological IPV					
Emotional support relatives	-0.877	0.329	0.008*	0.416	0.218 – 0.792
Alcohol partner	0.028	0.329	0.932	1.029	0.539 – 1.962
Marriage duration	0 089	0.381	0.815	1.093	0.518 – 2.306
Decision making	-0.493	0.353	0.162	0.611	0.306 – 1.219
Communication with the family of origin	0.376	0.460	0.414	1.456	0.591 – 3.589
Communication with the family of the partner	0.224	0.306	0.464	1.251	0.687 – 2.280
Gravidity	0.292	0.376	0.438	1.339	0.640- 2.799
Average monthly family income	-0.546	0.310	0.078	0.579	0.315 – 1.063
Marital conflicts experience	1.865	0.431	0.000*	6.455	2.772 – 15.035
Planned pregnancy	-0.368	0.407	0.366	0.692	0.312 – 1.537
Controlling IPV					
Alcohol participant	1.006	0.556	0.071	2.734	0.919 – 8.137
Alcohol partner	0.360	0.302	0.233	1.434	0.793 – 2. 592
Decision making	-0.585	0.306	0.056	0.557	0.306 – 1.015
Communication with the family of origin	0.298	0.380	0.615	1.347	0.640- 2.834
Communication with the family of the partner	0.277	0.260	0.288	1.319	0.792 – 2.197
Marital conflicts experience	1.589	0.414	0.000*	4.897	2.177 – 11.016
Witness as a child	-0.430	0.235	0.067	0.650	0.411- 1.030
Physical IPV					
Emotional support relatives	-0.268	0.501	0.593	0.765	0.286-2.044
Communication with the family of origin	0.397	0.590	0.501	1.481	0.468 – 4.724
Decision making	-1.209	0.467	0.010*	0.299	0.120- 0.746
Alcohol participant	1.106	0.619	0.740	3.023	0.899- 10.168
Alcohol partner	1.009	0.490	0.039*	2.742	1.050-7.162
Marital conflicts experience	1.828	0.490	0.000*	6.224	2.384- 16.250
Sexual IPV					
Communication with the family of origin	0.712	0.357	0.046*	2.037	1.012- 4.103
Communication with the family of the partner	0.534	0.276	0.053	1.705	0.993-2.928
Decision making	-0.777	0.298	0.009*	0.460	0.256-0.824
Marital conflicts experience	0.718	0.334	0.032*	2.050	1.065 – 3.945
Age participant's ≥35	1.302	0.614	0.034*	3.677	1.104- 12.246
Economic IPV					
Emotional support relatives	-0.364	0.501	0.468	0.695	0.260-1.856
Financial support relatives	-1.098	0.448	0.014*	0.334	0.139- 0.803
Communication with the family of the partner	-0.52	0.439	0.117	2.950	0.761- 11.433
Decision making	-2.169	0.447	0.000*	0.114	0.048 – 0.274
Marriage duration	1.136	0.510	0.026*	3.115	1.146- 8.466
Alcohol drink partner	0.040	0.437	0.927	1.041	0.442 – 2.449
Gravidity	0.137	0.502	0.785	1.147	0.428- 3.070
Marital conflicts experience	1.947	0.574	0.001*	7.005	2.273– 21.583

Note. Variables with p <0.2 were considered, aOR=adjusted Odds Ratio, S.E= standard error, CI=confidence interval

5 Discussion:

Intimate partner violence during pregnancy is a grave category of violence that negatively affects the health of women and their foetuses. The current study was conducted during the COVID-19 pandemic, to determine the prevalence of intimate partner violence and its determinants among pregnant women attending an ANC clinic at a high-volume public health facility in South western Uganda. This study found the prevalence of IPV among pregnant women to be high, with the controlling behaviours IPV being the highest reported type of IPV. In addition, the most important predictor of all categories of IPV experience was marital conflicts experience. Because there is little accessible data about IPV among pregnant women during the COVID-19 pandemic, we largely compare those findings and many more with studies done before the current COVID 19 pandemic.

Prevalence of IPV experienced during the COVID-19 pandemic

The findings of this study indicate that a huge percentage of pregnant women in Uganda suffered IPV during the current COVID-19 pandemic. The overall prevalence of IPV of 67.5% reported in this setting (south western) was far higher than that reported in the eastern part of Uganda, at 27.8% (Epuitai *et al.,* 2019) and 48% (Namugamba & Mangwi, 2018). Similarly, earlier studies in some African countries reported lower IPV prevalence among pregnant women, such as 41.1% (Azene, Yeshita, & Mekonnen, 2019), 59% (Lencha, Ameya, Baresa, Minda, & Ganfure, 2019), and 37.5% (Adhena *et al.,* 2020) in Ethiopia, 30.3% in Tanzania (Sigalla *et al.,* 2017), 61.8% (Idoko, Ogbe, Jallow, & Ocheke, 2015) and 42.7% in Gambia (Lasong *et al.*, 2020). This study's IPV prevalence is also much higher than the results reported in the Iranian study (35.2%) among pregnant women during the COVID-19 pandemic (Naghizadeh, Mirghafourvand, & Mohammadirad, 2021), and one study conducted in Bangladesh among women in general (45.29%) (Rayhan & Akter, 2021). The difference in IPV prevalence between the current and specifically the Iranian study may be because of the variation in the study tools used in either study. Like in many African countries, the high prevalence of IPV in the current study may be also as a result of the presence of traditional gender norms that support wife-beating, as noted in a previous study (Bifftu *et al.,* 2017).

On the other hand, our study findings are comparable to a recent study that reported 67% IPV experience among pregnant women in Iran (Bahrami-Vazir, Mohammad-Alizadeh-Charandabi, Ghelichkhani, Mohammadi, & Mirghafourvand, 2020). In addition, some studies conducted in Africa reported a high IPV prevalence of 63.1% in Zimbabwe (Shamu, Abrahams, Zarowsky, Shefer, & Temmerman, 2013) and 66.9% in Kenya. Therefore, our findings call for evidence based interventions to mitigate the current upsurge in IPV prevalence in order to save pregnant women from preventable yet fatal consequences of IPV such as miscarriages, stillbirth, fetal injury, and multiple adverse physical, mental, sexual, and reproductive health effects (Devries *et al.,* 2010; García-Moreno, Jansen, Ellsberg, Heise, & Watts, 2005; Shamu, Abrahams, Temmerman, Musekiwa, & Zarowsky, 2011).

Categories of IPV experienced during the COVID-19 pandemic

We also found the most prevalent category of IPV to be the controlling behaviours IPV. This is contrary to the study done in Kenya before the COVID-19 pandemic where psychological IPV (55.8%) was the most experienced type of IPV (Owaka, Nyanchoka, & Atieli, 2017). Perhaps, controlling behaviours could have increased because male partners did not want their wives to contract the COVID -19 virus, hence the inquisitiveness to know where their pregnant women were all the time. On the other hand, the high prevalence of IPV controlling behaviours in this study may be because of the possible isolation of pregnant women from their other relatives and friends, as a way of preventing IPV disclosure (Gharacheh, Azadi, Mohammadi, Montazeri, & Khalajinia, 2016; Sarayloo, Mirzaei Najmabadi, Ranjbar, & Behboodi Moghadam, 2017; Tavoli, Tavoli, Amirpour, Hosseini, & Montazeri, 2016). It is also important to note that the most prevalent type of IPV experienced by pregnant women varies across countries. For example, in Nigeria the physical type of IPV (21.4%) and psychological IPV (60.3%) were found to be higher than those reported in this current study (14.2%), although, sexual IPV(23.7%) was much lower than sexual IPV (36.1%) reported in the current study (Ayodapo, Sekoni, & Asuzu, 2017). In Iran, emotional (32.8 %), sexual (12.4 %) and physical (4.8 %) IPV (Naghizadeh *et al.,* 2021) and in Bangladesh, emotional (44.12%), physical (15.29%), sexual violence (10.59%) (Rayhan & Akter, 2021)

were the commonest forms of IPV experienced by pregnant women.

Determinants of IPV among women during the COVID-19 pandemic

In line with a previous study conducted in Uganda, we found the most important predictor of all types of IPV experience to be marital conflicts experience (Epuitai *et al.,* 2019). Marital conflicts experience was associated with the experience of all categories IPV. A possible explanation to this finding is that marital conflicts as a result of extramarital affairs may lead to resentment and poor communication among married couples consequently triggering all categories of IPV. In fact, failure to interconnect or communicate may make it problematic to resolve economic and psychological problems that may arise as conflicts (Tembe, 2010).

In line with the study done in Tanzania, we found that emotional support from relatives significantly influenced psychological IPV experience (Sigalla *et al.,* 2017). It is possible that women experiencing such kind of violence would communicate frequently to their relatives in search for counselling which gives them courage to stay in the violent relationship as they are encouraged to be patient and pray for their partners to change since in African culture divorce due to violence perpetrated by the male partner is not always an option. A previous study affirms that in African culture relatives occasionally communicate with the woman to provide counselling in case of intimate partner disputes with an intent of sustaining the marriage unless the wife is guilty of adultery and witchcraft which trigger divorce(Makwanise & Masuku, 2016).

In this study, experience of physical violence was significantly influenced by the partner drinking alcohol. Pregnant women whose male partners took alcohol were 2.74 times more likely to experience physical IPV than those whose intimate partners did not take alcohol. This finding is also reported in studies conducted in Uganda (Namugamba & Mangwi, 2018), Kenya (Owaka *et al.,* 2017) and Ethiopia (Fekadu *et al.*, 2018; Gebrewahd, Gebremeskel, & Tadesse, 2020; Gebrezgi, Badi, Cherkose, & Weldehaweria, 2017; Yimer, Gobena, Egata, & Mellie, 2014), and this may be because alcohol increases hostility which may in the end escalate the risk of physical assault by the intimate partner. In addition, some individuals purposely use alcohol as a cover up for engaging in anti-social behaviours like IPV (Ntaganira *et al.,* 2008). Alcohol consumption may also heighten the chances of engaging in risky behaviours that may induce physical IPV like having multiple sexual partners and returning home late.

Similar to the studies conducted in Sub-Saharan Africa where women with independent decision-making capacity were more likely to experience violence than their counterparts (Ahinkorah *et al.,* 2018 Cools & Kotsadam, 2017) and in Bangladesh (Alam *et al.,* 2021), we found that joint decision making was associated with lower physical IPV experience compared with independent decision making. This could be because of the fact that women with independent decision-making capacity may fight for their rights and may not allow men to decide for them and this may result into physical IPV. It is also possible that couples who do not make decisions together could already be having misunderstandings and this makes it difficult for them to settle any personal conflicts together, hence inducing physical IPV.

The study findings show that sexual IPV experience was statistically significantly influenced by decision-making, marital conflict, Participants aged ≥35, Communication with family of origin. Participants who were aged 35 years or above were 3.3 times more likely to experience sexual IPV than those aged below 25 to 34 years. Previous studies agree that sexual activity in women reduces with increasing age (Hayes et al., 2007Huang et al., 2009). This reduction in sexual urge or activity may induce sexual IPV. Consistent with a previous study done in Tanzania (Sigalla *et al.,* 2017), we also found that pregnant women who communicated at least once in a week with their family of origin were more likely to experience sexual IPV than those who communicated once in more than a month. Possibly this may mean that in problems involving sex women in Africa tend to communicate frequently to members of their family of origin, most especially their mothers or aunts' for purposes of receiving counselling.

Similar to physical IPV experience, pregnant women in this study who made decisions together with their intimate partners were less likely to experience economic IPV than their counterparts who made decisions independently. The possible explanation for this could be that those who made decisions as a couple understand each other and are more likely to form a middle ground in cases of

disagreements related to finances, thus preventing economic IPV.

Recommendations

These findings point to the need for health care providers to routinely screen for IPV during antenatal care more so in pandemics if IPV experience is to be mitigated. Given the huge workload of health workers, policy makers may need to allocate funds for the recruitment of at least one clinical psychologist or counsellor in large volume health facilities to manage victims of IPV.

6 Limitation of the study

Like other studies, this study has limitations. First and foremost, data collected and analysed in this study was self-reported (could not be verified). Second, a non-probability sampling technique was used to obtain the study participants making our findings liable to bias. Third, although we validated the study tools, the WHO IPV tool and others tools used in this study may not have captured all the issues related to IPV in our local setting. Further vigorous and systematic work needs to be done soon to appreciate the real impact of the diverse factors and diminish the possible bias introduced by this approach.

Interpretation of results

The study findings show that the prevalence of IPV during the COVID-19 pandemic is high. This confirms the previous assumption that IPV tends to increase during epidemics. Controlling behaviours IPV was the most common form of IPV experienced. Marital conflicts experience was the strongest predictor of IPV experience.

Generalizability of the results

The study was conducted in one city health facility hence findings of study may not be generalized to the pregnant women attending health facilities in purely rural setting.

7 Conclusion

The IPV burden during the current COVID-19 pandemic is high and widespread among pregnant women in south western Uganda, especially the controlling behaviours IPV category. Pregnant women reporting marital conflicts were more likely to experience IPV than those who did not experience marital conflicts. Therefore, there is need to routinely screen and manage IPV during ANC, especially for pregnant women who report marital conflicts.

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A References:

1) Adhena, G., Oljira, L., Dessie, Y., & Hidru, H. D. (2020). Magnitude of intimate partner violence and associated factors among pregnant women in Ethiopia. Advances in Public Health, 2020. https://doi.org/10.1155/2020/1682847

2) Ahinkorah, B. O., Dickson, K. S., & Seidu, A.-A. (2018). Women decision-making capacity and intimate partner violence among women in sub-Saharan Africa. Archives of Public Health, 76(1), 1-10. https://doi.org/10.1186/s13690-018-0253-9 PMid:29423218 PMCid:PMC5787915

3) Aizer, A. J. J. o. H. r. (2011). Poverty, violence, and health the impact of domestic violence during pregnancy on newborn health. 46(3), 518-538. https://doi.org/10.1353/jhr.2011.0024 PMid:24839303 PMCid:PMC4019993

4) Alam, M. S., Tareque, M. I., Peet, E. D., Rahman, M. M., & Mahmud, T. (2021). Female participation in household decision making and the justification of wife beating in Bangladesh. Journal of interpersonal violence, 36(7-8), 2986-3005. https://doi.org/10.1177/0886260518772111 PMid:29695218

5) Anderberg, D., Rainer, H., Wadsworth, J., & Wilson, T. J. T. E. J. (2016). Unemployment and domestic violence: Theory and evidence. 126(597), 1947-1979. https://doi.org/10.1111/ecoj.12246

6) Ashenafi, W., Mengistie, B., Egata, G., & Berhane, Y. (2020). Prevalence and associated factors of intimate partner violence during pregnancy in Eastern Ethiopia. International journal of women's health, 12, 339. https://doi.org/10.2147/IJWH.S246499 PMid:32440229 PMCid:PMC7221416

7) Auma, A. G., Ayebare, E., Olwit, C., Ndeezi, G., Nankabirwa, V., & Tumwine, J. K. (2020). Intimate partner violence among pregnant teenagers in Lira district, northern Uganda: a cross-sectional study. African Journal of Midwifery and Women's Health, 14(4), 1-11. https://doi.org/10.12968/ajmw.2020.0011

8) Ayodapo, A. O., Sekoni, O. O., & Asuzu, M. C. (2017). Pattern of intimate partner violence disclo-

sure among pregnant women attending ante-natal clinic in Oyo East Local Government, Nigeria. South African Family Practice, 59(2), 67-71. https://doi.org/10.1080/20786190.2016.1272245 https://doi.org/10.4102/safp.v59i2.4523

9) Azene, Z. N., Yeshita, H. Y., & Mekonnen, F. A. (2019). Intimate partner violence and associated factors among pregnant women attending antenatal care service in Debre Markos town health facilities, Northwest Ethiopia. PloS one, 14(7), e0218722. https://doi.org/10.1371/journal.pone.0218722 PMid:31260469 PMCid:PMC6602189

10) Bahrami-Vazir, E., Mohammad-Alizadeh-Charandabi, S., Ghelichkhani, F., Mohammadi, A., & Mirghafourvand, M. (2020). Intimate partner abuse among couples during pregnancy and its predictors as reported by pregnant women visiting governmental health care centres in Tabriz, Iran. Journal of biosocial science, 52(3), 400-411. https://doi.org/10.1017/S002193201900052X PMid:31434585

11) Barnawi, F. H. (2017). Prevalence and risk factors of domestic violence against women attending a primary care center in Riyadh, Saudi Arabia. Journal of interpersonal violence, 32(8), 1171-1186. https://doi.org/10.1177/0886260515587669 PMid:26021859

12) Bifftu, B. B., Dachew, B. A., Tadesse Tiruneh, B., & Zewoldie, A. Z. J. A. i. P. H. (2017). Domestic violence among pregnant mothers in Northwest Ethiopia: prevalence and associated factors. 2017. https://doi.org/10.1155/2017/6506231

13) Boserup, B., McKenney, M., & Elkbuli, A. J. T. A. J. o. E. M. (2020). Alarming trends in US domestic violence during the COVID-19 pandemic. https://doi.org/10.1016/j.ajem.2020.04.077 PMid:32402499 PMCid:PMC7195322

14) Bradbury-Jones, C., & Isham, L. J. J. o. c. n. (2020). The pandemic paradox: The consequences of COVID-19 on domestic violence. https://doi.org/10.1111/jocn.15296 PMid:32281158 PMCid:PMC7262164

15) Bradley, N. L., DiPasquale, A. M., Dillabough, K., & Schneider, P. S. J. C. (2020). Health care practitioners' responsibility to address intimate partner violence related to the COVID-19 pandemic. 192(22), E609-E610. https://doi.org/10.1503/cmaj.200634 PMid:32357996 PMCid:PMC7272198

16) Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. J. T. L. (2020). The psychological impact of quarantine and how to reduce it: rapid review of the evidence. https://doi.org/10.2139/ssrn.3532534

17) Campbell, A. M. (2020). An increasing risk of family violence during the Covid-19 pandemic: Strengthening community collaborations to save lives. Forensic science international: reports, 2, 100089. https://doi.org/10.1016/j.fsir.2020.100089 PMCid:PMC7152912

18) Campbell, J. C. (2002). Health consequences of intimate partner violence. The lancet, 359(9314), 1331-1336. https://doi.org/10.1016/S0140-6736(02)08336-8

19) Card, D., & Dahl, G. B. (2011). Family violence and football: The effect of unexpected emotional cues on violent behavior. The quarterly journal of economics, 126(1), 103-143. https://doi.org/10.1093/qje/qjr001 PMid:21853617 PMCid:PMC3712874

20) Clarke, S., Richmond, R., Black, E., Fry, H., Obol, J. H., & Worth, H. (2019). Intimate partner violence in pregnancy: a cross-sectional study from post-conflict northern Uganda. BMJ open, 9(11), e027541. https://doi.org/10.1136/bmjopen-2018-027541 PMid:31772080 PMCid:PMC6887065

21) Cools, S., & Kotsadam, A. (2017). Resources and intimate partner violence in Sub-Saharan Africa. World Development, 95, 211-230. https://doi.org/10.1016/j.worlddev.2017.02.027

22) Delaney, B. (2020). Drinking in coronavirus isolation: experts warn Australians to monitor their intake. The Guardian, 6.

23) Devries, K. M., Kishor, S., Johnson, H., Stöckl, H., Bacchus, L. J., Garcia-Moreno, C., & Watts, C. J. R. h. m. (2010). Intimate partner violence during pregnancy: analysis of prevalence data from 19 countries. 18(36), 158-170. https://doi.org/10.1016/S0968-8080(10)36533-5

24) Devries, K. M., Mak, J. Y., Garcia-Moreno, C., Petzold, M., Child, J. C., Falder, G., . . . Rosenfeld, L. J. S. (2013). The global prevalence of intimate partner violence against women. 340(6140), 1527-1528. https://doi.org/10.1126/science.1240937 PMid:23788730

25) Epuitai, J., Udho, S., Auma, A. G., & Nabirye, R. C. (2019). Intimate partner violence among pregnant women in Uganda. African Journal of Midwifery and Women's Health, 13(2), 1-5. https://doi.org/10.12968/AJMW.2018.0027

26) Fekadu, E., Yigzaw, G., Gelaye, K. A., Ayele, T. A., Minwuye, T., Geneta, T., & Teshome, D. F. J. B. w. s. h. (2018). Prevalence of domestic violence and associated factors among preg-

nant women attending antenatal care service at University of Gondar Referral Hospital, Northwest Ethiopia. 18(1), 138. https://doi.org/10.1186/s12905-018-0632-y PMid:30107793 PMCid:PMC6092801

27) García-Moreno, C., Jansen, H. A., Ellsberg, M., Heise, L., & Watts, C. (2005). WHO multi-country study on women's health and domestic violence against women: World Health Organization. https://doi.org/10.1126/science.1121400 PMid:16311321

28) Gebrewahd, G. T., Gebremeskel, G. G., & Tadesse, D. B. (2020). Intimate partner violence against reproductive age women during COVID-19 pandemic in northern Ethiopia 2020: a community-based cross-sectional study. Reproductive health, 17(1), 1-8. https://doi.org/10.1186/s12978-020-01002-w PMid:33028424 PMCid:PMC7539282

29) Gebrezgi, B. H., Badi, M. B., Cherkose, E. A., & Weldehaweria, N. B. J. R. h. (2017). Factors associated with intimate partner physical violence among women attending antenatal care in Shire Endaselassie town, Tigray, northern Ethiopia: a cross-sectional study, July 2015. 14(1), 76. https://doi.org/10.1186/s12978-017-0337-y PMid:28646921 PMCid:PMC5483282

30) Gharacheh, M., Azadi, S., Mohammadi, N., Montazeri, S., & Khalajinia, Z. (2016). Domestic violence during pregnancy and women's health-related quality of life. Global journal of health science, 8(2), 27. https://doi.org/10.5539/gjhs.v8n2p27 PMid:26383205 PMCid:PMC4803975

31) Graham-Harrison, E., Giuffrida, A., Smith, H., & Ford, L. J. T. G. (2020). Lockdowns around the world bring rise in domestic violence.

32) Gubi, D., Nansubuga, E., & Wandera, S. O. (2020). Correlates of intimate partner violence among married women in Uganda: a cross-sectional survey. BMC public health, 20(1), 1-11. https://doi.org/10.1186/s12889-020-09123-4 PMid:32586297 PMCid:PMC7318470

33) Hayes, R. D., Dennerstein, L., Bennett, C. M., Koochaki, P. E., Leiblum, S. R., & Graziottin, A. (2007). Relationship between hypoactive sexual desire disorder and aging. Fertility and sterility, 87(1), 107-112. https://doi.org/10.1016/j.fertnstert.2006.05.071 PMid:17081522

34) Huang, A. J., Subak, L. L., Thom, D. H., Van Den Eeden, S. K., Ragins, A. I., Kuppermann, M., . . . Brown, J. S. (2009). Sexual function and aging in racially and ethnically diverse women. Journal of the American Geriatrics Society, 57(8), 1362-1368. https://doi.org/10.1111/j.1532-5415.2009.02353.x PMid:19558473 PMCid:PMC2749599

35) Hussein, J. (2020). COVID-19: What implications for sexual and reproductive health and rights globally? : Taylor & Francis. https://doi.org/10.1080/26410397.2020.1746065 PMid:32191167 PMCid:PMC7887905

36) Idoko, P., Ogbe, E., Jallow, O., & Ocheke, A. J. R. h. (2015). Burden of intimate partner violence in The Gambia-a cross sectional study of pregnant women. 12(1), 1-6. https://doi.org/10.1186/s12978-015-0023-x PMid:25895955 PMCid:PMC4405825

37) Kish, L. (1965). Some issues of inference from survey data. Survey sampling. New York: John Wiley and Sons, Inc, 574-597.

38) Krug, E. G., Mercy, J. A., Dahlberg, L. L., & Zwi, A. B. (2002). The world report on violence and health. The lancet, 360(9339), 1083-1088. https://doi.org/10.1016/S0140-6736(02)11133-0

39) Lasong, J., Zhang, Y., Muyayalo, K. P., Njiri, O. A., Gebremedhin, S. A., Abaidoo, C. S., . . . Zhao, K. (2020). Domestic violence among married women of reproductive age in Zimbabwe: a cross sectional study. BMC public health, 20(1), 1-11. https://doi.org/10.1186/s12889-020-8447-9 PMid:32183756 PMCid:PMC7079366

40) Lencha, B., Ameya, G., Baresa, G., Minda, Z., & Ganfure, G. J. P. o. (2019). Intimate partner violence and its associated factors among pregnant women in Bale Zone, Southeast Ethiopia: A cross-sectional study. 14(5), e0214962. https://doi.org/10.1371/journal.pone.0214962 https://doi.org/10.1371/journal.pone.0221442 PMid:31415667 PMCid:PMC6695128

41) Mahase, E. (2020). Coronavirus: covid-19 has killed more people than SARS and MERS combined, despite lower case fatality rate: British Medical Journal Publishing Group. https://doi.org/10.1136/bmj.m641 PMid:32071063

42) Mahenge, B., Likindikoki, S., Stöckl, H., & Mbwambo, J. (2013). Intimate partner violence during pregnancy and associated mental health symptoms among pregnant women in T anzania: a cross-sectional study. BJOG: An International Journal of Obstetrics & Gynaecology, 120(8), 940-947. https://doi.org/10.1111/1471-0528.12185 PMid:23464524

43) Makayoto, L. A., Omolo, J., Kamweya, A. M., Harder, V. S., & Mutai, J. (2013). Prevalence and associated factors of intimate partner violence among pregnant women attending Kisumu District Hospital, Kenya. Maternal and child health journal,

17(3), 441-447. https://doi.org/10.1007/s10995-012-1015-x PMid:22569943 PMCid:PMC3574621

44) Makwanise, N., & Masuku, M. (2016). African traditional views on divorce: a case of the Ndebele in the Vukuzenzele Ward at Esikhoveni, Esigodini. Oral History Journal of South Africa, 4(1), 1-14. https://doi.org/10.25159/2309-5792/624

45) Matovu, M. J. N. P. (2020). 328 cases of domestic violence reported during the Covid-19 lockdown so far.

46) Moreira, D. N., & da Costa, M. P. (2020). The impact of the Covid-19 pandemic in the precipitation of intimate partner violence. International journal of law and psychiatry, 71, 101606. https://doi.org/10.1016/j.ijlp.2020.101606 PMid:32768122 PMCid:PMC7318988

47) Naghizadeh, S., Mirghafourvand, M., & Mohammadirad, R. (2021). Domestic violence and its relationship with quality of life in pregnant women during the outbreak of COVID-19 disease. BMC pregnancy and childbirth, 21(1), 1-10. https://doi.org/10.1186/s12884-021-03579-x PMid:33509103 PMCid:PMC7840794

48) Namugamba, A., & Mangwi, R. (2018). Prevalence and factors associated with domestic violence during pregnancy in Arua district, Uganda, 2015. Iproceedings, 4(1), e10556. https://doi.org/10.2196/10556

49) Ntaganira, J., Muula, A. S., Masaisa, F., Dusabeyezu, F., Siziya, S., & Rudatsikira, E. (2008). Intimate partner violence among pregnant women in Rwanda. BMC women's health, 8(1), 1-7. https://doi.org/10.1186/1472-6874-8-17 PMid:18847476 PMCid:PMC2570659

50) Olagbuji, B., Ezeanochie, M., Ande, A., & Ekaete, E. (2010). Trends and determinants of pregnancy-related domestic violence in a referral center in southern Nigeria. International Journal of Gynecology & Obstetrics, 108(2), 101-103. https://doi.org/10.1016/j.ijgo.2009.09.024 PMid:19939379

51) Owaka, I. O., Nyanchoka, M. K., & Atieli, H. E. (2017). Intimate partner violence in pregnancy among antenatal attendees at health facilities in West Pokot county, Kenya. Pan African Medical Journal, 28(1). https://doi.org/10.11604/pamj.2017.28.229.8840 PMid:29629015 PMCid:PMC5882208

52) Parveen, N., & Grierson, J. J. T. G. (2020). Warning over rise in UK domestic abuse cases linked to coronavirus. 26, 03-20.

53) Payne, J. L., Morgan, A., & Piquero, A. R. (2020). COVID-19 and social distancing measures in Queensland, Australia, are associated with short-term decreases in recorded violent crime. Journal of Experimental Criminology, 1-25. https://doi.org/10.31235/osf.io/z4m8t

54) Perales, M. T., Cripe, S. M., Lam, N., Sanchez, S. E., Sanchez, E., & Williams, M. A. (2009). Prevalence, types, and pattern of intimate partner violence among pregnant women in Lima, Peru. Violence against women, 15(2), 224-250. https://doi.org/10.1177/1077801208329387 PMid:19126836

55) Pronyk, P. M., Hargreaves, J. R., Kim, J. C., Morison, L. A., Phetla, G., Watts, C., . . . Porter, J. D. J. T. l. (2006). Effect of a structural intervention for the prevention of intimate-partner violence and HIV in rural South Africa: a cluster randomised trial. 368(9551), 1973-1983. https://doi.org/10.1016/S0140-6736(06)69744-4

56) Rayhan, I., & Akter, K. (2021). Prevalence and associated factors of intimate partner violence (IPV) against women in Bangladesh amid COVID-19 pandemic. Heliyon, 7(3), e06619. https://doi.org/10.1016/j.heliyon.2021.e06619 PMid:33869852 PMCid:PMC8035506

57) Rose, L., Alhusen, J., Bhandari, S., Soeken, K., Marcantonio, K., Bullock, L., & Sharps, P. (2010). Impact of intimate partner violence on pregnant women's mental health: Mental distress and mental strength. Issues in mental health nursing, 31(2), 103-111. https://doi.org/10.3109/01612840903254834 PMid:20070224 PMCid:PMC3027203

58) Rurangirwa, A. A., Mogren, I., Ntaganira, J., & Krantz, G. (2017). Intimate partner violence among pregnant women in Rwanda, its associated risk factors and relationship to ANC services attendance: a population-based study. BMJ open, 7(2), e013155. https://doi.org/10.1136/bmjopen-2016-013155 PMid:28399509 PMCid:PMC5337709

59) Sanjel, S. (2013). Gender-based violence: a crucial challenge for public health. Kathmandu University medical journal, 11(2), 179-184. https://doi.org/10.3126/kumj.v11i2.12499 PMid:24096231

60) Sarayloo, K., Mirzaei Najmabadi, K., Ranjbar, F., & Behboodi Moghadam, Z. (2017). Prevalence and risk factors for domestic violence against pregnant women. Iran Journal of Nursing, 29(104), 28-35. https://doi.org/10.29252/ijn.29.104.28

61) Shamu, S., Abrahams, N., Temmerman, M., Musekiwa, A., & Zarowsky, C. (2011). A systematic review of African studies on intimate partner violence against pregnant women: prevalence and risk factors. PloS one, 6(3), e17591.https://doi.or

g/10.1371/journal.pone.0017591 PMid:21408120 PMCid:PMC3050907

62) Shamu, S., Abrahams, N., Zarowsky, C., Shefer, T., & Temmerman, M. (2013). Intimate partner violence during pregnancy in Z imbabwe: a cross-sectional study of prevalence, predictors and associations with HIV. Tropical Medicine & International Health, 18(6), 696-711. https://doi.org/10.1111/tmi.12078 PMid:23414103

63) Sigalla, G. N., Rasch, V., Gammeltoft, T., Meyrowitsch, D. W., Rogathi, J., Manongi, R., & Mushi, D. J. B. p. h. (2017). Social support and intimate partner violence during pregnancy among women attending antenatal care in Moshi Municipality, Northern Tanzania. 17(1), 240. https://doi.org/10.1186/s12889-017-4157-3 PMid:28274220 PMCid:PMC5343555

64) Stöckl, H., Watts, C., & Kilonzo Mbwambo, J. K. (2010). Physical violence by a partner during pregnancy in Tanzania: prevalence and risk factors. Reproductive health matters, 18(36), 171-180. https://doi.org/10.1016/S0968-8080(10)36525-6

65) Tavoli, Z., Tavoli, A., Amirpour, R., Hosseini, R., & Montazeri, A. (2016). Quality of life in women who were exposed to domestic violence during pregnancy. BMC pregnancy and childbirth, 16(1), 1-7. https://doi.org/10.1186/s12884-016-0810-6 PMid:26813894 PMCid:PMC4729045

66) Tembe, M. M. (2010). An investigation into the causes of divorce amongst the evangelical church members in Namakgale Township. Unpublished Master's Thesis. South African Theological Seminary (SATS).

67) Tu, X., & Lou, C. (2017). Risk factors associated with current intimate partner violence at individual and relationship levels: a cross-sectional study among married rural migrant women in Shanghai, China. BMJ open, 7(4), e012264. https://doi.org/10.1136/bmjopen-2016-012264 PMid:28385911 PMCid:PMC5719654

68) UBOS. (2007). Uganda Demographic and Health Survey, 2006: Uganda Bureau of Statistics.

69) UBOS. (2016). Uganda Bureau of Statistics 2016, The National Population and Housing Census 2014 - Main Report, Kampala, Uganda.

71) Van Gelder, N., Peterman, A., Potts, A., O'Donnell, M., Thompson, K., Shah, N., & Oertelt-Prigione, S. (2020). COVID-19: Reducing the risk of infection might increase the risk of intimate partner violence. EClinicalMedicine, 21. https://doi.org/10.1016/j.eclinm.2020.100348 PMid:32292900 PMCid:PMC7151425

72) WHO. (2013). Global and regional estimates of violence against women: prevalence and health effects of intimate partner violence and non-partner sexual violence: World Health Organization.

73) Yimer, T., Gobena, T., Egata, G., & Mellie, H. (2014). Magnitude of domestic violence and associated factors among pregnant women in Hulet Ejju Enessie District, Northwest Ethiopia. Advances in public health, 2014. https://doi.org/10.1155/2014/484897