

## Research



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**Lifetime intra-pregnancy partner violence and screening practices among parous Ethiopian women: a cross-sectional study**

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## Abstract

**Introduction:** intimate partner violence (IPV) and even more so IPV during pregnancy, poses a unique global challenge. In pregnancy, IPV has a profound impact on the feto-maternal health profile, particularly if left unscreened and unmanaged. Although screening within the prenatal period has been observed to be irregular, the volume of information regarding the prevalence of lifetime intra-pregnancy IPV among Ethiopian women is rather scarce, with negligible data on screening practices. The objective was to assess the prevalence of lifetime intra-pregnancy IPV and screening rates among pregnant women attending Gandhi Memorial Hospital, Addis Ababa, Ethiopia. **Methods:** a facility-based, cross-sectional study was conducted, and data were collected via face-to-face interviews within the confines of COVID-19 guidelines, using a structured questionnaire. Data were entered and analyzed using SPSS version 26. Descriptive statistics was computed to summarize baseline participant characteristics. To identify determinants of lifetime intra-pregnancy IPV, a multivariable regression model was fitted, adjusted odds ratios with 95% confidence interval were computed, and a  $p$ -value  $<0.05$  was considered significant. **Results:** a total of 388 pregnant women whose age ranged from 20 to 41 with median (interquartile range) of 28 (24.25-32) years were included. The overall prevalence of lifetime IPV during pregnancy was 48.7% (95%CI: 43.7-53.7%), with psychological violence being the most common form (41.0%). Among all women, only 5.2% were screened for IPV during antenatal visit. Multiple regression analysis showed that partner's lower literacy level, partner's occupation (employed and self-employed), partner's substance use such as alcohol consumption and cigarette smoking, multigravidity, and male dominance were associated with IPV. **Conclusion:** intimate partner violence, in its various forms, is common during pregnancy. However, only very few women are screened for IPV during antenatal care visits. As such, the findings emphasize the need to include

*IPV counselling into the preconceptional care curriculum.*

## Introduction

Affecting millions of women globally, intimate partner violence (IPV) has emerged as a serious yet preventable public health issue, causing numerous short-term and long-term adverse effects for survivors. Violence by a husband or male intimate partner is the most commonly committed form of violence against women globally. It encompasses physical, sexual or psychological abusive acts. During pregnancy, the consequences of IPV can be particularly severe, jeopardizing birth outcomes and compromising maternal well-being. This, in turn, adds further strain to the already significant burden of feto-maternal morbidity and mortality [1,2]. Depending on the definition and the measurement used, the prevalence of IPV varies remarkably across settings. In 2018, Ethiopia was among the countries with the highest prevalence of physical and/or sexual IPV in the past 12 months, recorded at 27% in the global context, standing at 27% [2]. Additionally, along with other sub-Saharan nations, Ethiopia showed an alarming lifetime prevalence of violence (37%) among ever-married/partnered women of reproductive age [2]. The burden of women sustaining IPV during pregnancy even increased from 10.5% in the pre-COVID era to 15.1% during the COVID-19 pandemic, with uneven spatial distribution [3,4].

Pregnancy may present a unique opportunity for healthcare providers to identify and screen for women experiencing any form of violence and provide subsequent appropriate intervention [5]. Thus, routine screening for violence by healthcare professionals in the prenatal period has been recommended as a key strategy to mitigate adverse consequences and to enhance positive motherhood experience [6,7]. Further, screening for IPV in a variety of healthcare settings has been shown to be feasible and welcomed by clients in various contexts [8,9]. In fact, such a screening

culture to promote early detection of violence and hence provide timely intervention is particularly important in countries such as Ethiopia, where women are observed to be reluctant to disclose violence, and IPV has been associated with late initiation of antenatal care [10,11]. Yet, in spite of its proven net benefits, many prenatal care providers do not routinely inquire about IPV, due to multiple factors including time constraints, lack of training, and absence of compelling on-site recommendations for assessment [12,13]. Moreover, systematic studies aiming at assessing the screening pattern among pregnant women in patriarchal societies, such as Ethiopian setting, are rather scarce. Cognizant of these facts, this study wished to determine the lifetime intra-pregnancy prevalence of IPV and evaluate screening practices among women visiting an Ethiopian maternity center, namely Gandhi Memorial Hospital (GMH), Addis Ababa, Ethiopia.

## Methods

**Study design and setting:** the present facility-based, cross-sectional study was conducted in GMH from May 1 to August 31, 2021. The hospital is a women and childcare-focused center situated at the center of Addis Ababa, the capital city of Ethiopia. In average, the hospital serves about 200,000 women annually, with a catchment population of more than 5 million women coming from urban and rural areas. In particular, about 1500 to 2000 pregnant mothers monthly attend the antenatal facility, among whom around 530 are new visitors.

**Participants:** the source population consisted of all pregnant women attending the antenatal care (ANC) facility at GMH, Addis Ababa, Ethiopia. The study population comprised a random selection of pregnant women attending the ANC facility at GMH, Addis Ababa, during the study period. The inclusion criteria were pregnant women attending the ANC facility who were randomly selected and willing to participate in an interview during data collection, regardless of their gestational age. The

exclusion criteria included pregnant women who were severely ill due to emergency conditions at the time of data collection, as well as those with significant communication difficulties or marked mental disorders.

**Variables:** the outcome variable in this study was lifetime intimate partner violence. The explanatory variables included demographic and socioeconomic factors such as age, residence, type of marriage, current marital status, choice of current partner, type of marriage ceremony, mode of living, maternal and partner's educational status, educational level, maternal occupation, partner's occupation, household monthly income, partner's mental health, partner's substance use, and the in-house decision maker. Intimate partner violence is defined as any behavior within an intimate relationship that causes physical, psychological, or sexual harm, or any combination thereof, to individuals in the relationship, irrespective of the relationship's legal status [14]. Screening for IPV was assessed through mother-reported screening status by health professionals during the mother's prenatal visit(s) for any pregnancy.

**Data collection tools and procedures:** data were collected directly from respondents using a structured, pre-tested interviewer-administered questionnaire. The instrument utilized was an English version of a cross-culturally validated tool, developed according to the standards set by the World Health Organization's (WHO) 2005 Multi-country Study on Women's Health and Domestic Violence Against Women [15]. This questionnaire was adapted for use in the study by translating it into Amharic, the national language of Ethiopia, from a previous similar study [16]. The data collection tool included six items related to psychological violence, six items related to physical violence, and five additional items addressing sexual violence. Two professional healthcare workers were recruited and trained on the data collection procedures to ensure consistency and accuracy. Interviews were conducted in private settings to make participants

feel comfortable sharing sensitive information without fear of judgment. Standardized and validated tools were employed for assessing IPV and screening practices to ensure consistency and reliability in responses.

**Sample size determination and sampling technique:** the sample size for this study was determined using the single population proportion formula. Based on a population proportion of 41.1% of mothers who experienced IPV during pregnancy, as reported in a previous study conducted in Northwest Ethiopia [16], the formula yielded a minimum sample size of 372. To account for potential nonresponse, this number was increased by 10%, resulting in a final sample size of 410. To establish the sampling frame, the total number of clients attending ANC services at GMH over the four months preceding data collection was reviewed from the ANC unit's visit registry. This allowed for the calculation of the average monthly attendance and provided an approximation for future sampling. During the study period, pregnant mothers attending the GMH antenatal care facility were selected using systematic random sampling. The first participant was chosen using a lottery method, and subsequently, every eighth mother was approached for an interview. Additionally, corresponding medical records were reviewed as needed to supplement the data.

**Statistical analysis:** data entry, coding, and cleaning were performed using Microsoft Excel (version 2016), while statistical analysis was conducted using IBM SPSS (version 26). To ensure accuracy, a trained data clerk entered the data twice. Following data entry, cleaning was performed using sorting, listing, frequencies, and cross-tabulations to identify missing values and outliers. Descriptive statistics, including mean  $\pm$  standard deviation and median + interquartile range for continuous variables as appropriate, and percentages and frequencies for discrete variables, were used to summarize participant characteristics and the magnitude of IPV. Binary and multiple logistic regression analyses were

employed to assess the association between dependent and independent variables. Variables with a significant association in binary regression ( $p$ -value  $< 0.25$ ) were included in the multiple regression model to calculate odds ratios with 95% confidence intervals. The Hosmer-Lemeshow goodness-of-fit test was performed to verify model fit, with significance set at  $p < 0.05$ .

**Ethical approval:** an ethical clearance letter was secured from the Ethical Review Committee of Family Medicine Department (Ref: CHS/MF/PG/895/2021), School of Medicine, Addis Ababa University, and it was then submitted to the medical director of GMH. Written informed consent was obtained from respondents, and each respondent was notified about the right to refuse or terminate at any point during the interview.

## Results

**Background characteristics:** a total of 410 pregnant women participated in the study, with a response rate of 94.6% (388 respondents). The respondents' ages ranged from 20 to 41 years, with a median of 28 years (interquartile range: 24.25 to 32). The majority (70.9%) were urban dwellers, and more than half (55.9%) identified as Orthodox Christians. Most participants (94.1%) were in intact marriages, with 73.7% describing their marriage as a love marriage (Table 1). In terms of education, 50.5% of the women had attended up to secondary school, while their partners' highest educational attainment was often a college diploma (44.1%). The majority (52.6%) of the women were housewives, and most households earned between 5001 and 10,000 ETB per month. Regarding household decision-making, 68.3% reported equal power, while 28.6% experienced husband dominance (Table 1.1). Only 6.4% of participants reported that their partners had been diagnosed with a mental illness. Alcohol consumption was observed in 37.4% of partners, with most consuming it once or twice a week. Cigarette smoking was reported by 9.3% of participants, with more than half being daily



smokers. Additionally, 14.2% of women engaged in chat chewing, with a quarter doing so daily and nearly half once or twice a week (Table 2).

**Reproductive history of the studied women:** regarding the age at which participants reported getting married, the majority (335; 86.3%) stated that they married after the age of 18, while 53 (13.7%) reported being married at 18 years or younger. Similarly, 362 (93.8%) women reported experiencing their first pregnancy after the age of 18, whereas 26 (6.2%) reported becoming pregnant before reaching the age of 19. Furthermore, approximately one-quarter (100; 25.8%) of all participants were primigravidas, and the remaining three-quarters (288) were multigravidas; 57 (14.7%) were grand multigravidas (Table 3). At the time of data collection, nearly one-third (122; 31.3%) of the women were childless, while slightly more than one-fifth (87; 22.4%) had experienced some form of early pregnancy loss prior to the index pregnancy. More than half (200; 51.5%) initiated their first antenatal care (ANC) visit during the second trimester, and most (363; 93.6%) were beyond their second trimester when approached for data collection. Concerning the desired status of the index gestation, the majority (354; 91.2%) of women classified their pregnancy as desired, while the corresponding figure for their male counterparts was 334 (86.1%), as shown in Table 3.

**Prevalence of lifetime intra-pregnancy IPV:** a total of 189 women (48.7%; 95% CI: 43.7-53.7%) reported experiencing at least one form of intimate partner abuse during their gestational life, affirming at least one of the seventeen violence-assessing questions (Table 3). Specifically, psychological violence (emotional abuse), which includes insults, belittling, constant humiliation, and intimidation, was the most prevalent form of violence (159; 41.0%). This was followed by physical violence (119; 30.9%), which manifested as slapping, hitting, kicking, and beating. The least common variant of violence was sexual abuse

(108; 27.8%), primarily described as forced sexual intercourse, as detailed in Table 3.

**Screening practices among ANC attendees:** in this study, the vast majority of women (368; 94.8%) were not screened for IPV by health professionals during their prenatal visit. All the women who were screened for IPV claimed that the time allotted for screening was inadequate (Table 3).

**Factors associated with IPV:** controlling for demographic, behavioral, and reproductive health-related variables, this study identified factors that independently contribute to lifetime intra-pregnancy IPV. Compared to women whose partners were college graduates, those with partners having a secondary-school academic level or less were more than four times as likely to experience IPV (adjusted odds' ratio (AOR) = 4.82, 95% confidence interval (CI): 2.42, 9.57, and AOR = 4.13, 95% CI: 1.49, respectively). Additionally, in comparison to those with unemployed partners, women with employed or self-employed spouses were more likely to experience lifetime IPV during pregnancy (AOR = 14.86, 95% CI: 4.33, 50.99, and AOR = 5.92, 95% CI: 1.84, 19.04, respectively) (Table 4). Similarly, women with a dominating partner in domestic decisions had higher odds of experiencing IPV during gestation than those with a comparable in-house power balance (AOR = 9.17, 95% CI: 4.66, 18.05]. Furthermore, women whose partners consume alcohol had a higher likelihood of sustaining IPV (AOR = 1.87, 95% CI: 1.00, 3.49) compared to those with non-alcoholic partners. Additionally, when compared to women who were unsure of their partners' smoking behavior, women whose partners were smokers had higher odds of experiencing spousal violence (AOR = 9.07, 95% CI: 2.02, 40.76). Finally, multigravid women showed a higher likelihood of being victims of IPV than their primigravid counterparts (Table 4). However, chi-square analysis revealed no statistically significant association between gestational trimester and the occurrence of IPV in the index pregnancy ( $\chi^2 = 0.005$ ,  $p = 0.941$ ).

## Discussion

Screening for IPV in regions where a culture of silence prevails, particularly in the context of high prevalence patterns and patriarchal societies, is of paramount importance. It facilitates the development of strategies aimed at preventing further trauma. This study revealed a notably low screening rate for IPV among pregnant women during ANC visits. The composite prevalence rate for all forms of IPV against pregnant women was alarmingly high in this vulnerable population, with psychological abuse being the predominant type, accompanied by specific predisposing factors. Almost half (48.7%) of the studied women sustained some form of IPV at least once during the antenatal period, which was close to the finding in Jimma, Ethiopia (44%) [11]. However, it was lower than the finding (64.6%) reported in rural part of Ethiopia [17], Gambia (67%) [18] and higher than the observation in Northwest Nigeria (33%) [19]. A possible justification for the observed disparity may lie in differences in the socio-cultural composition of the studied populations, as well as variations in methodology, including the instruments used to measure IPV and the reproductive histories of the women studied. Notably, IPV has been 'normalized' in certain social contexts, with a significant proportion of women rationalizing the violence they endure [16,20]. The highest prevalence rates of IPV that were observed in this study were emotional, followed by physical and sexual violence, retweeting the pattern in the independent works of Muluneh *et al.* [21], Ayodapo *et al.* [22], and Jatta *et al.* [18].

The current study also found that partner's occupational status was significantly associated with IPV. Employed partners were more likely to violate their women than unemployed ones. In part, the heightened risk can be related to the occupational stress, and it can also be attributed to COVID-19 crisis which impacted the business sector severely [23,24]. In agreement with other studies on the associated factors of IPV [14,16,18],

the current study showed that partner's substance use such as alcohol use and cigarette smoking was a risk factor for occurrence of IPV ever during pregnancy. This is supported by fact that substances such as tobacco and alcohol can disturb human physiology, leading to aggressive behaviours [25,26]. Also, the present study demonstrated that multigravidity is a risk factor for prenatal IPV regardless of gestational age. It means that violence against women increases as the number of conceptions increase. This finding corroborates with the existing literature, confirming that pregnancy increases women's vulnerability to different forms of violence [27]. Of subtle interest is the lack of any statistically significant association between gestational age and violence during pregnancy, suggesting the need to screen for IPV at any gestational age, preferably at the time of conception. Besides, the study also reaffirmed that male dominance in domestic affairs increases chances of lifetime IPV during pregnancy. This can be attributed to the fact that complex gender inequality reinforces violence against women [28].

Finally, this study confirmed that almost all of the pregnant women were not screened for violence during their ANC visits. This is more or less similar to the Kenyan report that showed screening practice among pregnant women for IPV is low (16%), with almost all (98%) of the caregivers not utilizing any standard tool for screening [13]. The screening rate obtained in this study was far low in reference to the finding (26%) in Nigeria [29] and 50% in Sweden [30]. This could be partly explained by the relatively immature healthcare systems in the developing countries which are yet to embrace the benefits of IPV screening [31]. Further, this could also be attributed to the lack of a customized guideline and consensus on the frequency of screening [32].

**Strengths and limitations:** the main strengths of this study include that it was conducted in one of the largest maternity centers in the country, where women of diverse backgrounds are represented, and its use of the validated

instrument from the WHO multi-country study on violence against women. However, some limitations of this study should be acknowledged. First, the data used in this study were collected via self-reported experiences, making it prone to social desirability bias, with resultant underreporting of IPV in general and sexual violence in particular. Next, the study's findings could be affected by a recall bias as respondents, particularly multigravida women, were required to remember and recount past events. Moreover, establishing causal relationship would be challenging as the study implemented a cross-sectional design. Hence, the findings of this study should be interpreted in light of the aforementioned limitations.

## Conclusion

Intimate partner violence is a common occurrence during pregnancy, manifesting in various forms. However, only a small proportion of women are screened for IPV during ANC visits. Certain factors have been identified as predictors of its prevalence, although IPV can occur at any gestational age. The findings highlight the importance of incorporating counseling about IPV into preconception care curricula to reduce its incidence during pregnancy. Opportunistic screening should be targeted at vulnerable groups of women with higher risk profiles. Future studies should investigate the barriers to screening pregnant women for IPV and explore mechanisms to optimize ANC services.

### *What is known about this topic*

- *In resource-constrained settings, such as Ethiopia, women often hesitate to disclose intimate partner violence, which has been linked to delayed initiation of antenatal care;*
- *Screening for IPV among pregnant women is crucial to mitigate its potential adverse effects on both the fetus and the mother.*

### *What this study adds*

- *Approximately half (48.7%) of pregnant women reported experiencing lifetime IPV during pregnancy;*
- *IPV was significantly associated with factors including partners' lower literacy levels, employment status, substance use, multigravidity, and male dominance;*
- *Only 5.2% of women were screened for IPV during antenatal care visits, indicating a substantial gap in routine screening practices.*

## Competing interests

The author declares no competing interests.

## Authors' contributions

The author conducted all research, data analysis, and manuscript preparation.

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## Tables

**Table 1:** distribution by socio-demographic characteristics of pregnant women attending antenatal care unit from May 1 to August 31, 2021 in Gandhi Memorial Hospital, Addis Ababa, Ethiopia

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**Table 2:** mental health and substance use characteristics of pregnant women attending antenatal care unit from May 1 to August 31, 2021 in Gandhi Memorial Hospital, Addis Ababa, Ethiopia

**Table 3:** gynecological, obstetric and violence-related characteristics of pregnant women attending antenatal care unit from May 1 to August 31, 2021 in Gandhi Memorial Hospital, Addis Ababa, Ethiopia

**Table 4:** factors affecting IPV during pregnancy among women attending the antenatal care unit of Gandhi Memorial Hospital, Addis Ababa, Ethiopia

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**Table 1:** distribution by socio-demographic characteristics of pregnant women attending antenatal care unit from May 1 to August 31, 2021, in Gandhi Memorial Hospital, Addis Ababa, Ethiopia

Variable	Frequency	Percent (%)
<b>Age group</b>		
≤24 years	97	25
25–29 years	127	32.7
30–34 years	136	35.1
≥35 years	28	7.2
<b>Partner's age</b>		
20–29 years	62	16
30–39 years	269	69.3
≥40 years	57	14.3
<b>Residence</b>		
Rural	113	29.1
Urban	275	70.9
<b>Religion</b>		
Orthodox	217	55.9
Muslim	103	26.5
Protestant	40	10.3
Other	28	7.2
<b>Current marital status</b>		
Single	2	0.5
Married	365	94.1
Divorced	9	2.3
Widowed	3	0.8
Separated	9	2.3
<b>Choice of current partner</b>		
Love marriage	286	73.7
Arranged marriage	85	21.9
Other	17	4.4
<b>Type of marriage ceremony</b>		
No marriage ceremony	48	12.4
Civil marriage	106	27.3
Religious marriage	150	38.7
Customary marriage	84	21.6
<b>Mode of living</b>		
With partner	330	85.1
Apart from partner	58	14.9
<b>Maternal educational status</b>		
No formal education	7	1.8
Primary education	58	14.9
Secondary education	196	50.5
College diploma +	127	32.7

**Table 1.1:** distribution by socio-demographic characteristics of pregnant women attending antenatal care unit from May 1 to August 31, 2021 in Gandhi Memorial Hospital, Addis Ababa, Ethiopia

<b>Partner's educational status</b>		
No formal education	2	0.5
Primary education	67	17.3
Secondary education	148	38.1
College diploma +	171	44.1
<b>Maternal occupation</b>		
Employed	42	10.8
Self-employed	122	31.4
Housewife	204	52.6
Student	20	5.2
<b>Partner's occupation</b>		
Employed	88	22.7
Self-employed	271	69.8
Unemployed	29	7.5
<b>Household monthly income</b>		
<2500 ETB	22	5.7
2500 to 5000 ETB	118	30.4
5001 to 10000 ETB	228	58.8
>10,000 ETB	20	5.2
<b>In-house decision maker</b>		
Husband	111	28.6
Wife	12	3.1
Equally	265	68.3
ETB: Ethiopian Birr		



**Table 2:** mental health and substance use characteristics of pregnant women attending antenatal care unit from May 1 to August 31, 2021 in Gandhi Memorial Hospital, Addis Ababa, Ethiopia

Variable	Frequency	Percent (%)
<b>Partner's psychological problem</b>		
Yes	25	6.4
No	363	93.6
<b>Partner's alcohol use</b>		
Yes	145	37.4
No	244	62.6
<b>Partner's alcohol use frequency (n=145)</b>		
Daily	6	4.1
1 to 2 times a week	87	60.0
1 to 3 times a month	28	19.3
< once a month	24	16.6
<b>Partner's smoking behavior</b>		
Yes	36	9.3
No	324	83.5
I don't know	28	7.2
<b>Partner's smoking frequency (n=36)</b>		
Daily	19	52.8
1 to 2 times a week	15	41.7
1 to 3 times a month	2	5.6
<b>Chat chewing behavior</b>		
Yes	55	14.2
No	287	74.0
I don't know	46	11.9
<b>Chat chewing frequency (n=55)</b>		
Daily	14	25.5
1 to 2 times a week	26	47.3
1 to 3 times a month	8	14.5
< once a month	7	12.7

**Table 3:** gynecological, obstetric and violence-related characteristics of pregnant women attending antenatal care unit from May 1 to August 31, 2021 in Gandhi Memorial Hospital, Addis Ababa, Ethiopia

Variable	Frequency	Percent (%)
<b>Marital age</b>		
≤18 years	53	13.7
>18 years	335	86.3
<b>Age at first pregnancy</b>		
≤18 years	26	6.2
>18 years	362	93.8
<b>Gravidity</b>		
1	100	25.8
2	128	33.0
3	103	26.5
≥4	57	14.7
<b>Parity</b>		
Nulliparous	122	31.3
Multiparous	266	68.7
<b>History of abortion</b>		
Yes	87	22.4
No	301	77.6
<b>First ANC initiation</b>		
First trimester	184	47.4
Second trimester	200	51.5
Third trimester	4	1.1
<b>Current gestational age</b>		
Second trimester	25	6.4
Third trimester	212	54.7
Term	151	38.9
<b>Pregnancy intendedness by woman</b>		
Yes	354	91.2
No	34	8.8
<b>Pregnancy intendedness by partner</b>		
Yes	334	86.1
No	54	13.9
<b>History of lifetime IPV</b>		
Yes	189	48.7
No	199	51.3
<b>Forms of lifetime IPV</b>		
Psychological	159	41.0
Physical	119	30.7
Sexual	108	27.8
<b>History of being screened</b>		
Yes	20	5.2
No	366	94.8

IPV: Intimate partner violence, ANC: antenatal care

**Table 4:** factors affecting IPV during pregnancy among women attending antenatal care unit of Gandhi Memorial Hospital, Addis Ababa, Ethiopia

Variable	Intimate partner violence		COR (95%CI)	AOR (95%CI)
	Yes (%)	No (%)		
<b>Partner's academic status</b>				
≤ Primary education	42 (60.9)	27 (39.1)	3.19 (1.79,5.70)	4.13 (1.49,12.42)*
Secondary education	91 (61.5)	57 (38.5)	3.28 (2.07,5.19)	4.82 (2.42,9.57)**
College diploma +	56 (32.7)	115 (67.3)	1+	1+
<b>Partner's occupation</b>				
Employed	72 (81.8)	16 (18.2)	11.81 (4.44,31.41)	14.86 (4.33,50.99)**
Self-employed	109 (40.2)	162 (59.8)	1.77 (0.76,4.13)	5.92 (1.84,19.04)*
Unemployed	8 (27.6)	21 (72.4)	1+	1+
<b>In-house decision maker</b>				
Husband	86 (77.5)	25 (22.5)	5.77 (3.46,9.61)	9.17 (4.66,18.05)**
Wife	4 (33.3)	8 (66.7)	0.84 (0.25,2.86)	1.63 (0.38,7.03)
Equally	99 (37.4)	166 (62.6)	1+	1+
<b>Partner's alcohol use</b>				
Yes	89 (61.4)	56 (38.6)	2.27 (1.49,3.46)	1.87 (1.00,3.49)*
No	100 (41.2)	143 (58.8)	1+	1+
<b>Partner's cigarette use</b>				
Yes	25 (69.4)	11 (30.6)	1.47 (0.52,4.15)	9.07 (2.02,40.76)*
No	147 (45.4)	177 (54.6)	0.54 (0.24,1.18)	2.10 (0.63,7.02)
Not sure	17 (60.9)	11 (39.1)	1+	1+
<b>Gravidity</b>				
1	27 (27)	73 (73)	1+	1+
2	59 (46.1)	69 (63.9)	2.31 (1.32,4.06)	3.20 (1.44,7.10)*
3	61 (59.2)	42 (40.8)	3.93 (2.17,7.09)	3.37 (1.47,7.73)*
≥4	42 (62.7)	15 (37.3)	7.57 (3.62,15.81)	7.73 (2.79,21.40)**

Note: Only factors with a p-value < 0.05 in the multiple regression analysis are shown. COR = crude odds ratio; AOR = adjusted odds ratio; CI = confidence interval; IPV = intimate partner violence; 1+ = Reference category. \*P value < 0.05; \*\*P value < 0.001