

# Article title: Intimate partner violence and the association of pregnancy intendedness – A cross-sectional study in southeastern Norway

## Abstract

*Introduction:* Unintended pregnancy in the context of intimate partner violence (IPV) is a public health issue. It is associated with increased health risks for women and their children. Our objective was to investigate the association between unintended pregnancy and emotional, physical and sexual IPV in a multi-cultural population attending routine antenatal care.

*Study design:* A prospective cross-sectional study of 1788 pregnant women who filled out a questionnaire during pregnancy as part of a randomized controlled trial conducted in southeastern Norway.

*Main outcome measures:* Pregnancy intendedness was measured by asking women if their pregnancy was planned or not. The Abuse Assessment Screen and the Composite Abuse Scale R-SF, consisting of descriptive questions, were used to measure IPV. Chi-square tests, a Mann–Whitney U test, and binary logistic regression analysis were used.

*Results:* Almost one in five women (17.4 %) reported that their current pregnancy was unintended. Women with unintended pregnancy were significantly younger, had lower educational backgrounds, more limited economic resources and were more likely to be non-native Norwegian speakers. A total of 15.3 % of the women reported some experience of IPV in their lifetime. These women were significantly more likely to experience an unintended pregnancy than women who had not experienced IPV, after adjusting for confounding factors: AOR = 1.74 (95 % CI [1.23–2.47]).

*Conclusions:* Women who had experienced IPV were significantly more likely to have an unintended pregnancy than women who had not experienced IPV. It is of major importance to identify those women and offer appropriate services during pregnancy.

Keywords: unintended pregnancy, pregnancy intention, immigrant women, physical intimate partner violence, sexual intimate partner violence, emotional intimate partner violence.

## Introduction

### Background

Intimate partner violence (IPV) is a significant global public health issue and includes physical, sexual and emotional violence, stalking, and psychological harm by a current or former partner (1). Worldwide, one in three women experience physical or sexual IPV at some point during their lifetime (1).

Intimate partner violence is common in pregnancy, and pregnancy itself can trigger or exacerbate ongoing violence (2). Moreover, IPV during pregnancy is associated with poor health and adverse pregnancy complications and outcomes, such as preterm contractions, miscarriage, premature birth, still birth and low birth weight (3). Additionally, it may affect motherhood and the way mothers connect and interact with their babies (4).

According to previous research, the worldwide prevalence of IPV during pregnancy ranges from 3 % to 30 % (2, 5-7); however, the majority of studies report a prevalence of 3.9 % to 8.7 % (2). This range in prevalence is due to various settings, measurements, and definitions. In Norway, the prevalence of IPV during pregnancy ranges from 1 % to 5 % (8, 9). However, studies conducted in Norway did not focus on minority populations; therefore, a knowledge gap regarding IPV within different immigrant groups and cultural settings exists.

There is increasing evidence that IPV is associated with unintended pregnancy and childbirth (10-13). Globally, 44 % of all pregnancies and 23 % of all births are estimated to be unintended (10). The suggested mechanisms for the association between IPV and unintended pregnancy and childbirth are forced sex, fear of negotiating contraceptive use, birth control sabotage and partner interference with access to contraceptive care (11, 12).

An unintended pregnancy may be mistimed or unwanted, and the negative impact of an unwanted pregnancy is greater than a mistimed pregnancy (13). Unintended pregnancy, in the context of IPV, can have serious health, social and economic consequences for women and their children. It is associated with poor pregnancy outcomes, such as antenatal depression; continued risk behaviours, including alcohol consumption and smoking; failure to adapt health-improving behaviours, like taking folic acid; and failure to initiate early antenatal care (14-16). Additionally, unintended childbirth is associated with poor child health outcomes, such as low birth weight and preterm birth (17). Unintended pregnancy is more common among young and single women, multiparous women, women with low education and women from low- and middle-income countries (10, 11).

Ethnicity and immigration may also influence the prevalence of unintended pregnancy and birth (18, 19). The suggested reasons for this are ethnic and cultural norms and religious beliefs regarding the use of family planning and differences in women's willingness to terminate unintended pregnancies (18, 19). One in three women who gave birth in Southeastern Norway in 2019, were not born in Norway (20).

To the best of our knowledge, no studies from Norway or other high-income countries have investigated the association between unintended pregnancy and experiences of IPV in a multi-cultural population planning to give birth. Therefore, further knowledge is required to identify the risk factors for unintended pregnancy, including those related to IPV, in different ethnic and socio-cultural settings. The aim of this study was to investigate the association between unintended pregnancy and histories of emotional, physical, and sexual IPV in a multi-cultural population.

## Method

### Study design

This cross-sectional study included baseline data from the Safe Pregnancy study (21). Safe Pregnancy is a randomized controlled trial to test the effectiveness of a tablet-based, culturally sensitive intervention aimed at reducing and preventing IPV among pregnant Norwegian, Somali, and Pakistani women (21). The rationale for choosing women with Somali and Pakistani background is that they are among the largest immigrant groups in Norway with high fertility rates (22) and have cultural norms that may permit IPV (23).

The baseline questionnaire (Q1) included questions about socio-demographic and socio-economic background and obstetric history and validated instruments measuring quality of life, physical and mental health, depression and IPV. The consent form and questionnaires were professionally translated into Norwegian, English, Urdu and Somali (21). In addition, Norwegian, Pakistani and Somali women, and skilled professionals working at crisis shelters provided linguistic and cultural feedback on the questionnaires and intervention (24).

#### Sample, setting and procedure

Of an estimated 5400 women attending routine antenatal care, 1818 women participated in the Safe Pregnancy study. The most common reason for women not to participate, was lack of interest or that the midwives did not have time or forgot to recruit the women. We excluded four women due to a lack of information regarding pregnancy intention and 26 women who did not answer any of the Abuse Assessment Screen (AAS) questions addressing fear, emotional, physical, and sexual IPV (25). The final sample consisted of 1788 women.

The study took place in 19 maternal and child health centres (MCHC) located in southeastern Norway between January 2018 and July 2019. Pregnant women, aged 18 and above, at any gestational age, attending routine antenatal check-ups alone, were screened for eligibility (21). Women who did not understand Norwegian, English, Urdu or Somali and

women who did not have the mental or physical capacity to answer the questionnaire were excluded (21). The participating women completed the self-administered questionnaire for the baseline data using a tablet. They were given privacy to fill it out.

## Variables

The main outcome variable, pregnancy intendedness, was collected from Q1. The women were asked if their current pregnancy was planned. The predefined answers were “yes” and “no.”

## The Abuse Assessment Screen

The AAS is a validated instrument that includes five descriptive questions measuring fear and emotional, physical, and sexual IPV among pregnant women (25): 1) Have you ever been afraid of your partner or someone else? Have you ever experienced that a partner or ex-partner has 2) done things to make you feel afraid of them? 3) Done things to try to intimidate you or to control your thoughts, feelings, or actions? 4) Hit, kicked, pulled you by your hair or otherwise physically hurt you? 5) Forced you to have sexual activities against your will?

Exposure to IPV was determined by a positive answer to at least one of the five questions.

The answer options were “never,” “yes, previously,” “yes, during the past 12 months before the pregnancy” and “yes since the start of the pregnancy.” The responses were classified as “no IPV,” “previous IPV,” “recent IPV” and “both previous and recent IPV.”

The first question, addressing the fear of a partner or someone else, was defined as not addressing IPV exclusively. As a result, we excluded the first question on the AAS. Women who reported having experienced fear of a partner or ex-partner were categorized as having experienced fear. Women who responded positively to the questions addressing emotional, physical, or sexual violence were classified as having experienced either emotional, physical, or sexual IPV. Finally, women who reported fear of partner or ex-partner and emotional,

physical, or sexual IPV were considered to have experienced any form of violence, thus categorized as having experienced some form of IPV in their lifetime.

#### The Composite Abuse Scale SF-R

Women with a positive response to any of the five AAS questions were asked to complete the Composite Abuse Scale SF-R (CAS) (26). This validated instrument contains 15 descriptive questions that capture emotional, physical, sexual, and overall IPV (26). Women were asked about different actions and had the option to answer, “Has this ever happened to you? Yes/No”; “If yes, how often did it happen in the last 12 months? Not in the past 12 months, once, a few times, monthly, weekly, daily.” The total score for the CAS SF-R, ranging from 0 to 75, was calculated by computing the mean of the frequency of abuse experiences in the past 12 months and multiplying it by 15, where there were responses for at least 11 of 15 items ( $\geq 70\%$ ). Subscale scores were similarly computed for items reflecting physical, sexual and emotional violence.

Women reported socio-demographic, socio-economic and obstetric status mainly by selecting predefined categories. For analytical purposes, predefined categories were merged, as shown in Table 1. Women reported their ethnicity (Norwegian, Pakistani, Somali, English or other) using mother tongue as a determine factor (27). This variable was labelled “Norwegian and others.” Questions about education were derived from five predefined categories and organized into three categories. The category “ $\leq 13$  years” included women who reported no education, primary school education and high school education. A question about occupation was derived from seven predefined categories and recoded as “employed” or “not employed.” Joint family income was derived from six predefined categories and organized into four categories. The questions addressing smoking and using snuff were combined and categorized as “tobacco use.” Finally, women’s feedback on alcohol use was

derived from five questions addressing problems related to alcohol consumption during the last year. A positive answer to any of the questions was categorized as “alcohol use.”

## Ethics

The Regional Committee for Medical and Health Research Ethics (REC) approved the study (ref.nr: 2017/358). Additionally, the study followed the Helsinki Protocol (28) and was conducted in accordance with ethical guidelines designated by the WHO, promoting safety recommendations for research on domestic violence against women (29). Participants received verbal and written information about the purpose of the study, and the recruiting midwives obtained written consent from all participants. All women, irrespective of IPV disclosure, received an appointment card featuring a list of phone numbers and websites for governmental and local resources promoting safe pregnancy as well as phone numbers for police and pre-hospital services. Data were anonymized before analysis.

## Statistical analysis

Descriptive data are presented as frequencies (counts) and proportions (percentages) for categorical variables. Continuous variables are described with median and range, as they do not follow normal distribution. Cross-tabulations and Pearson’s Chi-square tests were used to compare the prevalence of pregnancy intention based on categorical variables, such as socio-demographic, socio-economic and obstetric factors, and a history of IPV. The Mann–Whitney U Test was performed to evaluate possible associations between pregnancy intention and frequency of IPV experiences. We performed binary logistic regression analysis to calculate the crude odds ratio and adjusted odds ratio (AOR). There was a 95 % confidence interval (CI) when examining the level of association between pregnancy intention and the different forms of IPV.

Based on the literature, the following covariates were entered in the model (11, 13): maternal age, civil status, education, occupation, ethnicity, joint family income, parity, tobacco use and alcohol use. As the missing data rate was low, no measures were taken regarding the imputation of missing values. The level of significance was set at  $p < .05$ . All tests were two-sided. The study was considered exploratory, so no correction for multiple testing was done.

All analyses were performed in IBM SPSS Statistics V.26.0 and V.27.0 (IBM SPSS Statistics for Windows, IBM Corp., Armonk, New York, USA).

## Results

Approximately one of five (17.4 %) women reported that their current pregnancy was unintended (Table 1). Their mean age was 31.9 years. Unintended pregnancy was significantly more common among women younger than 25 years. A total of 74.1 % of the women were native Norwegian speakers, and 25.9 % were non-native Norwegian speakers (Somali 1.0 %, Pakistani 4.2 %, English 0.8 % and others 20.8 % [not in tables]). Non-native Norwegian-speaking women were significantly more likely to report an unintended pregnancy. Unintended pregnancy was significantly more common among women who were living without their partner, those who had less than 13 years of education, those who did not work outside their home and those who reported limited economic resources or did not know joint family income. Approximately half of the women were multiparous (51.8 %). Multiparous women were significantly more likely to report an unintended pregnancy.

A total of 15.3 % of the women reported experiencing some form of IPV in their lifetime. The majority reported previous experiences of IPV rather than recent experiences. Women who reported having experienced some form of IPV in their lifetime were significantly more likely to have an unintended pregnancy than women who had not



experienced IPV (24.5 % and 13.4 %, respectively) (Table 2). Women with an unintended pregnancy were more likely to report some form of IPV measured by the AAS, with fear and emotional IPV being the most common types of violence. Among women who reported recent experiences of IPV, measured by CAS R-SF, those with an unintended pregnancy scored higher on the overall CAS R-SF scale and on the items reflecting emotional violence than women who had a planned pregnancy (Table 3).

In the univariate logistic regression analysis, experience of any IPV, fear, emotional IPV and physical IPV were significantly associated with unintended pregnancy. In the multivariate analysis, the association was attenuated but remained statistically significant. AOR: experience of any IPV = 1.74 (95 % CI [1.23–2.47]), fear = 1.69 (95 % CI [1.13–2.52]), emotional IPV = 1.63 (95 % CI [1.11–2.38]) and physical IPV = 1.72 (95 % [1.01–2.93]) (Table 4). Other covariates that were significantly associated with an unintended pregnancy in the multivariate analysis were age, civil status, education, occupation, income, parity, and tobacco use (not in tables). Ethnicity was not significantly associated with IPV and pregnancy intention in the fully adjusted analysis; the association was attenuated and no longer statistically significant when socio-economic covariates (family income and occupation) were entered into the multivariate model (not in tables). Sexual IPV was not associated with an unintended pregnancy.

## Discussion

Of the women attending routine antenatal care in southeastern Norway who agreed to participate in this study, approximately one in five had not intended to become pregnant. Further, 15.3 % of the women had experienced some form of IPV in their lifetime. Women who reported that their pregnancy was unintended were significantly more likely to have experienced some form of IPV in their lifetime than women who had not. The association was

strongest for women who reported previous IPV. The association was significant for all forms of IPV, except for sexual violence. In this study, one of four women was a non-native Norwegian speaker. These women were significantly more likely than Norwegian speakers to report that their pregnancy was unintended.

The prevalence of an unintended pregnancy in our study is concordant with results from a European multi-country study that investigated the association between pregnancy intendedness and histories of physical, sexual and emotional IPV and found that one in five women reported their pregnancy was unintended (30). In a WHO multi-country study on women's health and domestic violence, conducted in low, middle and high-income settings, a mean of 38 % (range 13–68 %) of the women reported their pregnancy was unwanted or mistimed (11). However, the prevalence of unintended pregnancies in these studies and in the present study is likely underestimated because pregnancies ending in induced abortion or miscarriage are not included. Research shows a link between IPV and induced abortion (11). Since this study investigated the association between a history of IPV and the occurrence of unintended pregnancy among women planning to give birth, it may underestimate the strengths of the association between IPV and unintended pregnancy.

A significant association between emotional IPV and pregnancy intendedness was found in our study. Substantially more women reported experiences of emotional IPV than physical or sexual IPV, and most reported previous experiences rather than recent experiences. This result is in accordance with findings in a Norwegian cohort study investigating the prevalence of physical, sexual, and emotional violence among pregnant women, suggesting it is probably easier to disclose emotional IPV than severe physical or sexual IPV, especially around the time of pregnancy (9). Although most previous studies have investigated the association between physical or sexual IPV and pregnancy intendedness (11, 13), recent studies have found a strong association between emotional IPV and pregnancy

intendedness (6, 30, 31). Threats of harm, such as intimidation, degradation, humiliation, belittling and restriction of freedom, can result in women's inability to prevent pregnancy or to negotiate contraceptive methods, leading to unintended pregnancy.

In our study, the likelihood of an unintended pregnancy was associated with recent emotional IPV but not with recent experiences of physical or sexual IPV. This is supported by a Spanish population-based study that investigated unintended pregnancy and IPV among 779 women around the time of pregnancy (26). However, in contrast, Lukasse et al. (30) found a strong association between unintended pregnancy and recent experiences of IPV in a large multi-country study of 7102 women. A lower prevalence of recent experiences of IPV was found in our study compared to other studies (2, 6, 7, 9). While pregnancy can trigger and exacerbate ongoing IPV (2, 10), women may not necessarily admit high levels of IPV during pregnancy; thus, the prevalence of violence is most likely underreported in our study.

Qualitative studies have found that women would like midwives to ask about IPV, even though they may not be ready to disclose it due to cultural norms and barriers, such as shame, confidentiality, judgmental responses, and a tendency to consider abuse a family matter (32, 33). Norwegian guidelines for antenatal care strongly recommend health professionals to routinely ask all pregnant women about experiences of IPV (34). Ideally, we would have asked the women several times about their experiences of IPV because it is likely this would have increased the identification of IPV (35).

Previous research has documented a strong association between risk factors for IPV and unintended pregnancy for women who do not work outside the house and live in cultural settings with high levels of patriarchal control, low levels of education, limited household resources and a high fertility rate (6, 11, 13). Immigrant women are likely to be overrepresented in these groups and thus more likely to be exposed to IPV and unintended pregnancy (36). Non-native Norwegian women in our study came from all parts of the world,

representing many cultures. Even though the non-native Norwegian-speaking women in our study may originate from other high-income countries, as well as low- and middle-income countries, they may still have a cultural and linguistic barrier when they communicate with Norwegian health professionals about sensitive topics (33). We tried to tailor the intervention specifically to women born in Somalia and Pakistan, translation of the consent form and questionnaires as well as the qualitative user-involvement study (24), but it was not sufficient to recruit more women from our target groups.

#### Methodological strengths and limitations

A major strength of this study was the large sample of multi-cultural women who were attending antenatal care at the 19 MCHCs in southeastern Norway. Another strength was that the study posed questions about violence that addressed fear and emotional IPV, in addition to physical and sexual IPV. This provided a broader picture of the violence in this population compared to other studies that only addressed physical or sexual violence (11, 13). The questions about IPV also investigated recent (during pregnancy) experiences, in addition to previous experiences. Thus, the AAS and the CAS SF-R represent important validated and standardized tools for the obstetric population (25, 26).

A cross-sectional study design does not provide information about causal relationships. It can only identify and describe possible associations between selected variables (37). The participants' feedback about IPV and pregnancy intendedness was based on self-reported retrospective information collected via a questionnaire; thus, it may be influenced by recall bias. Another limitation may be that we assessed pregnancy intendedness using a single question, as the concept is a complex one: a pregnancy may be wanted at the time it occurs, it may be mistimed or unwanted at any time (13). We did not have any information about whether the woman's partner intended the pregnancy, which could have

given us more information about the association between IPV and pregnancy intendedness (12, 13).

Previous research indicates that posing questions about sensitive topics, such as IPV and pregnancy intendedness, can result in underreporting and a bias toward a weaker association than actually exists (11). In the present study, steps were taken to facilitate a safe and supportive environment for disclosure: The questionnaires were linguistically translated by professionals and tested in a qualitative user-involvement study for the target groups (24). Women were only recruited when they met the midwife alone. They were given privacy to fill out the questionnaire and were reminded several times in the different sections of the questionnaire that their answers were anonymous (21).

The study population was based on pregnant women in southeastern Norway. The results may be generalized to pregnant women with similar socio-cultural backgrounds attending routine antenatal care in urban and rural areas in Norway and other countries.

#### Conclusion and implications for practice

Our findings suggest that women who experience some form of IPV in their lifetime are more likely to experience an unintended pregnancy. The most common form of IPV was emotional IPV. Women who have experienced IPV within the last 12 months and during pregnancy are also more likely to have an unintended pregnancy. Additionally, non-native Norwegian speakers are more likely to have an unintended pregnancy. Women who have experienced any form of previous or recent IPV are especially vulnerable. Even though Norwegian guidelines for antenatal care instruct midwives to routinely ask all women about experiences of IPV, more knowledge about how to communicate about sensitive topics, including culture-sensitive communication among culturally diverse pregnant women, is needed.

Further studies are required to confirm and elaborate on our findings. These studies should include women from different socio-demographic, socio-economic, cultural, and ethnic backgrounds.

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**Table 1.** Participant characteristics by pregnancy intention among women in the Safe Pregnancy study. *N* = 1788

Characteristic	Unintended pregnancy <i>n</i> = 312		Intended pregnancy <i>n</i> = 1476		<i>P</i> -value
	<i>n</i>	(%)	<i>n</i>	(%)	
<b>Age</b>					< .001
< 25	42	(13.5)	53	(3.6)	
25–30	110	(35.5)	587	(40.1)	
31–35	94	(30.3)	562	(38.4)	
> 35	64	(20.6)	262	(17.9)	
Missing	2		12		
<b>Civil status</b>					< .001
Married/living with partner	264	(86.8)	1408	(98.0)	
Other	40	(13.2)	29	(2.0)	
Missing	8		39		
<b>Education</b>					< .001
High school ≤ 13 years	137	(44.2)	328	(22.3)	
College/university less than 4 years	91	(29.4)	492	(33.4)	
College/university more than 4 years	82	(26.5)	654	(44.4)	
Missing	2		2		
<b>Occupation</b>					< .001
Employed or self-employed	204	(66.0)	1255	(85.1)	
Not employed	105	(34.0)	219	(14.9)	
Missing	3		2		
<b>Joint family income last year</b>					< .001
< 599.000 NOK	95	(30.6)	194	(13.2)	
600–999.000 NOK	91	(29.4)	710	(48.3)	
> 1000.000 NOK	61	(19.7)	462	(31.4)	
Do not know	63	(20.3)	103	(7.0)	
Missing	2		7		
<b>Ethnicity</b>					< .001
Norwegian	201	(65.0)	1120	(76.0)	
Other	108	(35.0)	354	(24.0)	
Missing	3		2		
<b>Parity</b>					< .001
P0	144	(46.6)	713	(48.6)	
P1	87	(28.2)	616	(42.0)	
> P1	78	(25.2)	139	(9.5)	
Missing	2		9		
<b>Tobacco use</b>					< .001
Yes	22	(7.1)	41	(2.8)	
Missing	0		0		
<b>Alcohol use</b>					.043
Yes	51	(16.3)	179	(12.1)	
Missing	0		0		

**Table 2.** Unintended pregnancy by history of intimate partner violence (IPV) measured by the Abuse Assessment Scale.

AAS	Total N = 1788		Unintended pregnancy n = 312			Intended pregnancy n = 1476		P-value
	n	(%)	n	(%)	n	(%)		
<b>Any lifetime IPV</b>								
No	1511	(84.5)	234	(75.5)	1277	(86.6)	< .001	
Yes	274	(15.3)	76	(24.5)	198	(13.4)		
Missing	3	(0.2)	2		1			
<b>Any emotional, physical or sexual IPV (without fear)</b>								
No	1543	(86.3)	244	(78.7)	1299	(88.1)	< .001	
Previously	224	(12.5)	57	(18.4)	167	(11.3)		
Recent	7	(0.4)	2	(0.6)	5	(0.3)		
Previous and recent	11	(0.6)	7	(2.3)	4	(0.3)		
Missing	3	(0.2)	2		1			
<b>Fear</b>								
No	1596	(89.3)	257	(82.6)	1339	(90.8)	< .001	
Previously	175	(9.8)	47	(15.1)	128	(8.7)		
Recent	11	(0.6)	6	(1.9)	5	(0.3)		
Previous and recent	3	(0.2)	1	(0.3)	2	(0.1)		
Missing	3	(0.2)	1		2			
<b>Emotional IPV</b>								
No	1568	(87.7)	248	(80.0)	1320	(89.5)	< .001	
Previous	199	(11.1)	53	(17.1)	146	(9.9)		
Recent	8	(0.4)	2	(0.6)	6	(0.4)		
Previous and recent	10	(0.6)	7	(2.3)	3	(0.2)		
Missing	3	(0.2)	2		1			
<b>Physical IPV</b>								
No	1692	(94.6)	280	(90.0)	1412	(95.7)	< .001	
Previous	86	(4.8)	25	(8.0)	61	(4.1)		
Recent	4	(0.2)	4	(1.3)	0	(0.0)		
Previous and recent	4	(0.2)	2	(0.6)	2	(0.1)		
Missing	2	(0.1)	1		1			
<b>Sexual IPV</b>								
No	1729	(96.7)	297	(95.5)	1432	(97.1)	.047	
Previous	56	(3.1)	13	(4.2)	43	(2.9)		
Recent	1	(0.1)	1	(0.3)	0	(0.0)		
Missing	2	(0.1)	1		1			

**Table 3.** Unintended pregnancy by history of recent intimate partner violence (IPV) measured by the Composite Abuse Scale SF-R. *N* = 124

CAS R-SF	Unintended pregnancy					Intended pregnancy			<i>P</i> -value
	<i>n</i>	%	<i>n</i>	Median	min-max	<i>n</i>	Median	min-max	
Score									
00.00–75.00									
Any IPV	124	7.1	29	18.75	00.00-60.00	95	00.00	00.00-60.00	.027
Emotional IPV	105	6.0	25	30.00	00.00-60.00	80	3.75	00.00-60.00	.016
Physical IPV	40	2.3	12	15.00	00.00-22.50	28	00.00	00.00-30-00	.138
Sexual IPV	22	1.3	4	7.50	00.00-30.00	18	00.00	00.00-30-00	.076

**Table 4.** Crude and adjusted odds ratio (OR) for unintended pregnancy by history of intimate partner violence (IPV). *N* = 1788

AAS	<i>n</i>	(% )	Unintended pregnancy			
			OR	(95% CI)	OR	(95% CI)
			Unadjusted		Adjusted	
No IPV	1511	(84.5)	1.0		1.0	
Any IPV	274	(15.3)	2.10	(1.55-2.83)	1.74	(1.23-2.47)
Fear	189	(10.6)	2.08	(1.48-2.94)	1.69	(1.13-2.52)
Emotional IPV	217	(12.1)	2.13	(1.54-2.94)	1.63	(1.11-2.38)
Physical IPV	94	(5.3)	2.48	(1.58-3.89)	1.72	(1.01-2.93)
Sexual IPV	57	(3.2)	1.57	(0.85-2.91)	1.19	(0.57-2.48)

*Note.* Adjusted for a priori variables from the literature: age, civil status, education, occupation, family income, ethnicity, parity, tobacco use and alcohol use.