

# **Intimate Partner Violence, Empowerment, and Modern Contraceptive Use among Women in Union in Uganda**

Betty Kwagala<sup>1\*</sup> and Stephen Ojiambo Wandera<sup>1</sup>

<sup>1</sup>Department of Population Studies, School of Statistics and Planning, College of Business and Management Sciences, Makerere University, Kampala, Uganda

\*Corresponding author: [kkwagala@gmail.com](mailto:kkwagala@gmail.com)

Email addresses:

BK: [kkwagala@gmail.com](mailto:kkwagala@gmail.com)

SOW: [swandera@gmail.com](mailto:swandera@gmail.com)

# **Abstract**

## **Background**

Uganda's persistent low prevalence of modern contraceptive use (MCU) calls for further assessment of associated determinants. This paper examined the relationship between intimate partner violence (IPV), women's empowerment and modern contraceptive use among women in union in Uganda.

## **Methods**

We used the 2011 Uganda Demographic and Health Survey data, selecting a weighted sample of 1,307 women in union who were selected for the domestic violence module. Cross tabulations (chi-square tests) and multivariate complementary log-log (clog-log) regressions were used to examine the relationship between IPV, empowerment and MCU controlling for partner's characteristics and behaviors and women's background characteristics.

## **Results**

A quarter (25%) of the women in union used modern contraceptive methods. IPV did not predict MCU in Uganda. Significant predictors of MCU were a woman's ability to ask the partner to use a condom, a form of empowerment in a sexual relationship, place of residence and wealth status. Women who were able to ask the partner to use a condom, urban residents, and women from wealthy households had increased odds of MCU.

## **Conclusion**

Women's experience of IPV and empowerment were not associated with MCU. Instead, ability to ask a partner to use a condom, urban residence and better wealth status, were significantly associated with MCU. Interventions to scale up MCU should target rural and poor women, emphasizing the need for more equitable gender relations and couple communication in union.

## **Key words:**

Intimate partner violence, Empowerment, partner's behaviors, Modern contraceptive use

## Introduction

Fertility regulation through modern contraception is essential in promoting maternal and child health and empowerment of women by freeing them to pursue education, career and other goals, that enhance their quality of life. At macro-level, contraception regulates unsustainable population growth [1]. Whereas contraceptive prevalence rate (CPR) has increased globally (57% in 2012), sub-Saharan Africa lags behind (24%) [1]. Uganda's modern contraceptive prevalence (26%) is among the lowest in the East African region [2].

Gender relations play a vital role in influencing reproductive health behavior including fertility regulation [3]. Inequities in gender and power relations are a hindrance to contraceptive use and safer sex [4]. Studies conducted in Botswana and South Africa, established that powerlessness and dependency compromised abused women's capacity to negotiate condom use [5]. The ICPD recognizes that men have significant power or influence in most spheres of women's lives. Improving communication between men and women in union on issues of sexual and reproductive health, and the understanding of their joint responsibilities is important if better health outcomes are to be attained [6]. A couple's discussion and approval of contraception increases likelihood of contraceptive use [7].

Women's empowerment, particularly with respect to realization of their basic human rights has been associated with improvement in their well-being, with benefits to their families and communities [8]. This is particularly the case with reference to reproductive health rights [9, 10]. Women's empowerment with respect to attitudes towards IPV and women's participation in household decision-making positively predicted contraceptive use. While women's negative attitudes towards IPV increased the odds of contraceptive use, economic empowerment reduced the odds of contraceptive use [11, 12]. In Ethiopia, women's empowerment with respect to household decision making, attitudes towards domestic violence, and asset ownership were significant determinants of contraceptive use [13]. This study considered both traditional and modern contraception. Empowerment associated with women's reproductive health rights is a significant determinant of contraceptive use in Uganda. However, indices of power over earnings, attitudes towards domestic violence did not predict women's contraceptive use [10].

A woman's experience of IPV could be a result of empowerment [14, 15] but could also be an indicator of disempowerment. Intimate partner violence is associated with disempowerment and poor reproductive health outcomes [16, 17]. Intimate partner violence could be both a cause and consequence of contraceptive use. Clandestine contraceptive use in contexts of male partners' disapproval for instance in Uganda and Bangladesh resulted in physical violence [14, 15, 18, 19]. In Botswana and South Africa, IPV was significantly associated with inability to negotiate condom use [5, 19]. On the contrary, elsewhere in sub-Saharan Africa (Cameroon, Kenya, Malawi, Rwanda, Uganda, and Zimbabwe) and in New Zealand, IPV increased the odds of female controlled modern contraceptive use [20]. Additionally, a

systematic review based on longitudinal studies of IPV and contraception found a significant relationship between IPV and contraceptive use [21]. Women in such contexts may not wish to have children in conditions that are not conducive. A study in the Democratic Republic of Congo established that intimate partner sexual violence (IPSV) predicted contraceptive use rather than the combination of intimate partner physical and sexual violence [22].

Concerning specific contraceptives, negotiation of male controlled contraceptives, particularly the male condom for women who experience IPV is a challenge; IPV has been associated with men's refusal to use protection and refusal of female controlled contraception by their partners [5, 20].

With respect to socio-demographic factors, age is a significant predictor of contraceptive use. The likelihood of contraceptive use was higher among younger women in Malawi [23] but not in Uganda [10]. With respect to the desire to attain the ideal family size, women who had more than two living children had increased odds of contraceptive use [12, 24]. Persons who desire to have another child are less likely to use contraceptives [19, 23]. A woman's level of education was significantly associated with contraceptive use in Malawi, Ghana, a small study in Ethiopia and Uganda with increased odds of contraceptive use among women with at least secondary level of education [10, 12, 23, 24]. However, a study in Ethiopia using a nationally representative sample found no significant association between education and MCU [13].

With respect to wealth status, the odds of contraceptive use were higher for women in better wealth status [10, 12, 24]. Likewise, employed women were more likely to use contraceptives than their non-employed counterparts [7, 24]. Regarding residence, urban women were more likely to use contraceptives than rural women were. Geographical regions, which usually reflect culture variations and levels of development, predicted contraceptive use in South Africa, Ghana, and Uganda [7, 12, 25]. Concerning religion, Muslims in Ethiopia and Ghana had reduced odds of using modern contraceptives [12, 24].

Despite the persistently poor maternal health indicators [26], Uganda's progress in contraceptive use has been slow (8% in 1995 to 26% in 2011) compared to Rwanda (whose prevalence improved from 13% in 1992 to 45% in 2010 [27]). Several studies have assessed contraceptive use in Uganda [10, 25, 28]. However, the association between IPV, women's empowerment, and modern contraceptive use has not been analyzed in Uganda. These findings are essential in contributing to more targeted responses towards enhancing modern contraceptive use in the country. This paper examined the relationship between IPV, women's empowerment and contraceptive use, controlling for partner's behaviors, women's and male partners' background factors.

## Methods

### Data source

We used the 2011 Uganda Demographic and Health Survey (UDHS) data, with permission from the Measure DHS Program website [29]. Data were collected using a cross-sectional nationally representative survey that employed a stratified two-stage cluster sampling design [2] based on the sampling frame from the 2002 population and housing census [census]. Details of the sampling procedure can be accessed in the 2011 UDHS report [2].

Among all women respondents, 2,056 ever-married women were selected for the domestic violence (DV) module. From this sample, we extracted a weighted sample of 1,307 women who were in a union (married or cohabiting with a partner) for analysis [2]. We used the domestic violence weighting variable (d005) found in the UDHS individual women's dataset and the Stata survey (svy) command to apply weights during the analyses. Survey weighting is necessary to account for the complex survey design [30].

The domestic violence module was based on a shortened and modified version of the Conflict Tactics Scale (CTS) [31]. The survey was executed according to the WHO ethical and safety recommendations for research on domestic violence [32].

### Measures of outcome variable

Modern contraceptive use (MCU) was generated out of variable V364 "contraceptive use and intention to use". It was recoded as a binary outcome (1 = "yes" or 0 = "no"). The first category "using modern method" was coded as 1 (Yes) while not using modern method was coded as 0 (No).

### Measures of explanatory variables

IPSV and women's empowerment indices were the main predictor variables. In order to analyze empowerment, three indices were developed namely; women's participation in household decision-making, attitudes justifying physical violence and partner's controlling behaviors.

Women's participation in household decision-making index included five measures. These are: who usually makes decisions concerning: a) how women's earnings are used; b) women's healthcare; c) large household purchases; d) visits to family or relatives; and e) what to do with the money the partner earns. Responses to these questions were recoded into two categories (1 = woman decides alone/jointly with partner, 0 = partner alone/others). The assumption was that women who made decisions either alone or jointly with their partners were more empowered than those in households where decisions were made by either their partners alone or other people [16, 33]. The Cronbach's alpha (0.63) indicated that the decision making index was a reliable representative of the individual indicators.

The index of women's attitudes justifying physical violence included questions concerning whether they justified wife beating for the following issues: a) goes out without telling partner; b) neglects children; c) argues with her partner and d) refuses to have sex with her partner. Responses to these variables were dichotomous (1 = "yes" or 0 = "no"). Responses were coded into two categories (1=woman does not justify wife beaten for any reason, 0=woman justifies wife beating for one or more reasons). The Cronbach's alpha (0.78) for the index of attitudes justifying physical violence showed that it was a reliable representative of the individual indicators.

In assessing sexual empowerment, we were interested in including variables that are closer to women's behaviors. Each variable (namely whether a woman could ask the partner to use a condom and whether she can refuse to have sex with her partner if she does not want to) was coded as yes and no (0 = no and 1 = yes). Sex being a sensitive issue in the Ugandan context, for each of the variables "non-response / missing cases" and "Don't know" was coded as "No". Ownership of a house (either alone or jointly = 1, by partner alone = 0) was used as an indicator for economic empowerment.

The partners' controlling behavior index consisted of responses to the questions: whether women's partners: a) were jealous if respondents talked with other men; b) accused them of unfaithfulness; c) did not permit them to meet female friends; d) tried to limit respondents' contact with family and e) insisted on knowing where they were. Variable d102, which provides data on the number of control issues (ranging from 0 to 5) was recoded to generate the index. Responses were coded into two categories (0=woman was controlled by partner on one or more issues and 1=woman was not controlled by partner on any issue). The Cronbach's alpha (0.72) for the index of partners' controlling behavior showed that it was reliable.

Intimate partner violence was therefore assessed using sexual violence within 12 months prior to the survey. IPSV is sexual activity that presents the possibility of conception. IPSV was coded as dichotomous (1 = "yes" or 0 = "no"). Missing values for IPSV were recoded as 0 (No).

Women's socio-demographic factors included age, region of residence, number of living children, place of residence, education level, wealth status, current marital status (married or cohabiting), occupation, and religion. In addition, women's partners' characteristics included were age and level of education.

## **Statistical analyses**

We used frequency distributions to describe the characteristics of the women. This was followed by cross-tabulations with Pearson's chi-squared ( $\chi^2$ ) tests which examined the associations between modern contraceptive use and women's empowerment (household decision-making

autonomy, and attitudes justifying physical violence), sexual empowerment measured by ability to ask for a condom and refuse sex, intimate partner violence, partners' controlling behaviors, and women's socio-demographic factors. The level of statistical significance using p-values was set at  $p < 0.05$ .

Finally, multivariable complementary log-log (cloglog) regression analyses were used to examine the association between modern contraceptive use and the main predictor variables controlling for women's and their partners' socio-demographic characteristics. The main predictor variables were included in the models although they were not significantly associated with MCU owing to their importance to the study. Other explanatory variables whose p-values were less than 0.05 at bivariate analysis were included in the models.

The results are presented in the form of Odds Ratios (OR) and their 95% confidence intervals with level of statistical significance for p-values set at  $p < 0.05$ . We estimated three models during the multivariable analysis. In the first step, MCU was modeled with the main predictor variables namely women's empowerment with respect to decision making autonomy, attitude towards wife beating, ability to ask for a condom, refuse sex, intimate partner violence and partner controlling behaviors. In the second model, we added women's socio demographic factors and in the final model, we added partners' characteristics. All the analyses were weighted to account for the complex survey design, clustering and stratification [30].

## Results

### Descriptive characteristics of the women

Table I shows that a quarter (25%) of the women used modern contraceptives. Seven in ten (70%) of the respondents were below 35 years. Eighty percent had two or more children. Over half (55%) were married and Christians by religion (Catholics 40% and Protestants 28.5%). Geographical regions were proportionately represented ranging from 19% for Northern to 28% for central Uganda. The majority of respondents (84%) were rural residents, had primary or no formal education (78%), and engaged in agriculture (53%). With respect to wealth status, 42% could be categorized as rich.

Over half (57%) of the women either individually or jointly owned houses with their partners. With respect to household decision-making, about 89% did not participate in all household decisions either independently or together with their partners. Aspects assessed included spending the woman's income, spending the partner's income, woman's health care, household purchases, and visits to the family. Forty percent of the women did not justify wife beating on any issue. Issues considered included if a woman goes out without telling her husband, neglects children, argues with husband, refuses sex with husband and if she burns food. With respect to sexual empowerment, 84% of the women indicated that they can refuse to have sex with the

partner and 75% could ask a partner to use a condom. Twenty seven percent of the women reported experiencing intimate partner sexual violence 12 months prior to the survey.

Table 2 shows that over half (55%) of women's partners were above 34 years. Only 36% of the partners had secondary or higher education. Only 26% of the women reported that their partners did not control them on any issue.

### **Association between contraceptive use and the independent factors**

Table 1, shows that among all the variables considered, those that had significant associations with contraceptive use were: woman's region ( $p=0.024$ ), residence ( $p=0.000$ ), women's level of education ( $p=0.000$ ), wealth status ( $p=0.000$ ), and whether the respondent could ask the partner to use a condom ( $p=0.000$ ). Woman's age was marginally not significant ( $p=0.051$ ).

Contraceptive use was higher among older women (35 years and above – 30%), the central region (30%), in urban areas (39%), among women with secondary or higher education (37%), the rich (32%), and women who could ask their partners to use condoms (29%).

Empowerment indices were not significantly associated with modern contraceptive use ( $p=0.342$  for household decision-making and  $p=0.488$  for justification of domestic violence). The number of living children, current marital status, occupation, religion, whether the respondent can refuse sex, and experience of IPSV were not significantly associated with MCU (see Table 1).

Results in Table 2 show that partner's age ( $p=0.028$ ), and partner's level of education ( $p=0.014$ ) were significantly associated with MCU, whereas partner's controlling behaviors was not ( $p=0.649$ ). Higher proportions of women with older partners (23%), and partners with higher education (33%) used modern contraceptives.

### **Multivariable results**

Table 3 shows the results of clog-log regression of MCU on selected explanatory variables. The models included the main predictor variables namely empowerment indices, intimate partner violence, and other factors that were significant at the bivariate level of analysis. Model I included the main predictor variables, model II added women's background characteristics and the final model included all the designated variables.

Significant determinants of modern contraceptive use were whether a respondent can ask a partner to use a condom, place of residence and wealth status. The odds of modern contraceptive use were higher among women who could ask their partners to use condoms compared to those that could not (OR= 1.74; CI: 1.18-2.56) and among the middle wealth quintile compared to the poor (OR=1.88; CI: 1.21-2.93). Rural residents had reduced odds of MCU compared to urban residents (OR=0.69, CI: 0.47-0.97).



Women's empowerment indices with respect household decision-making, attitudes towards wife beating and the partner control behavior index were not significant even when considered independently. The odds ratios of these indices further reduced after adjusting for background characteristics. Intimate partner sexual violence did not predict modern contraceptive use. Among the background variables, region, women and partners' education and partner's age did not predict modern contraceptive use.

## Discussion

Modern contraceptive use prevalence among women in union who were selected for the domestic violence module which stands at 25% is still low even by East African standards [34]. It is just slightly above the sub-Saharan average of 24% [1].

Respondents' reported ability to ask a partner to use a condom, an indicator of sexual empowerment closely linked to MCU, was the only key independent variable that significantly predicted MCU. This finding is in agreement with Kibira and colleagues' [10] where women's reproductive health rights measured by a woman's ability to ask her partner to use a condom and to refuse sex predicted MCU.

A woman's experience of IPV could be a result of empowerment [14, 15] but could also be an indicator of disempowerment [16, 17]. Although IPV in general [5, 18, 20, 21] and IPSV in particular [22] have been associated with MCU, after adjusting for women's empowerment, partner's control behaviors, women and their partners background characteristics, IPSV did not predict MCU.

Whereas gender relations have been associated with contraceptive use where inequities in power relations are a hindrance [1, 4, 5] and women's empowerment a facilitator of contraceptive use [13], in this case women's empowerment with respect to household decision making and attitudes towards violence did not predict modern contraceptive use. These findings are in agreement with Kibira and colleagues' findings where economic empowerment and attitudes towards domestic violence were not significant predictors of women's contraceptive use [10]. Woman's occupation, which could be a proxy for economic empowerment, was not associated with MCU at bivariate level of analysis. The findings are however contrary to the findings of Do and Kurimoto [11] and Nketiah-Amponsah [12] where women's participation on household decision making and attitude towards domestic violence increased the odds of contraceptive use.

As established elsewhere [10, 12, 24] household wealth status predicted MCU with increased odds of MCU among wealthier groups. Rural residents had reduced odds of MCU compared to urban residents [7, 12, 25].

However, contrary to other findings, region of residence [7, 12, 25] and religion [12, 24] did not predict MCU. Women's level of education was not a significant predictor of MCU. Our findings were in agreement with a DHS based study of Ethiopia [13] but contrary to other studies [10-12, 23]. Although Kibira and colleagues' [10] study was based in the 2011 UDHS data, IPSV, partner's background characteristics and behaviours were not considered in the analysis. Male background characteristics namely partners' level of education and age did not predict MCU. Our findings were in consonance with the findings of Kibira and colleagues [10] where age of the women did not predict MCU.

The analysis is limited by the cross sectional nature of the UDHS dataset where processes such as women's empowerment and causal relations between the main predictor variables and the outcome may not be adequately assessed.

## **Conclusions**

A woman's reported ability to ask a partner to use a condom was the only empowerment-associated factor that predicted MCU. In addition, MCU was associated with urban residence and middle wealth status. Neither intimate partner sexual violence, nor women's empowerment (with respect to household decision making, attitude towards domestic violence, partner's controlling behaviors) predicted MCU.

Interventions addressing MCU need to raise awareness and promote women's reproductive health rights among both men and women, and target poor communities in rural areas for promotion of MCU.

### **Competing interests**

The authors declare that they have no competing interests.

### **Authors' contributions**

BK conceptualized and designed the study, wrote the background section, wrote results and discussion sections and proofread and reviewed the manuscript

SOW conceptualized and designed the study, wrote the methods section and analyzed data, wrote results and discussion sections and proofread and reviewed the manuscript.

### **Authors' information**

BK is a senior lecturer and a former chair of the Department of Population Studies, School of Statistics and Planning, College of Business and Management Sciences. BK holds a PhD in Sociology and a Masters in Development Studies (Women and Development). Her research interests are in health systems, sexual and reproductive health.

SOW is an Assistant Lecturer at the Department of Population Studies and a PhD student at Makerere University. His research interests are in access to healthcare for older persons and sexual and gender-based violence in Uganda. He holds a Master of Science in Population and Reproductive Health and a Bachelor of Science in Population Studies.

## Tables

**Table 1 Percentage distribution of married women by socio-demographics and current modern contraceptive use (MCU) in Uganda (DHS 2011)**

	Number	% of women	% using	P-value
<b>Age group</b>				<b>0.05</b>
15-24	388	29.7	18.8	
25-34	531	40.6	27.0	
35+	388	29.7	29.6	
<b>Region</b>				<b>0.02</b>
Central	366	28.0	30.2	
Eastern	344	26.3	26.5	
Northern	251	19.2	15.7	
Western	346	26.4	26.0	
<b>Number of living children</b>				<b>0.06</b>
0-1	262	20.1	14.8	
2-4	576	44.1	27.9	
5+	469	35.9	28.0	
<b>Residence</b>				<b>&lt;0.001</b>
Urban	214	16.4	39.4	
Rural	1093	83.6	22.6	
<b>Women's education level</b>				<b>&lt;0.001</b>
No education	222	17.0	15.6	
Primary	785	60.1	23.7	
Secondary and above	299	22.9	36.8	
<b>Wealth status</b>				<b>&lt;0.001</b>
Poor	503	38.5	15.3	
Middle	262	20.1	30.3	
Rich	542	41.5	32.2	
<b>Current marital status</b>				<b>0.38</b>
Married	723	55.3	26.7	
Cohabiting	584	44.7	23.7	
<b>Women's occupation</b>				<b>0.26</b>
Not working	310	23.7	25.4	
Professional/technical/managerial	52	4.0	38.0	
Agriculture	698	53.4	23.2	
Sales	247	18.9	28.7	
<b>Religion</b>				<b>0.09</b>
Catholic	528	40.4	23.3	
Protestant	373	28.5	26.8	
Muslim	176	13.4	33.9	
Pentecostal	231	17.7	20.9	

**Table 1 continued**

	Number	% of	% using MCU	P-value
<b>Woman owns house alone or jointly</b>				<b>0.46</b>
	558	42.7	24.0	
	749	57.3	26.3	
<b>Woman decides alone or with partner on all issues</b>				<b>0.34</b>
	1160	88.8	24.9	
	147	11.2	29.0	
<b>Woman did not justify wife beating on all issues</b>				<b>0.49</b>
	782	59.9	24.4	
	525	40.1	26.7	
<b>Respondent can refuse sex</b>				<b>0.45</b>
No	215	16.4	22.6	
Yes	1093	83.6	25.9	
<b>Respondent can ask partner to use a condom</b>				<b>&lt;0.001</b>
No	327	25.0	15.1	
Yes	980	75.0	28.7	
<b>Experienced intimate partner sexual violence in last 12 months</b>				<b>0.95</b>
No	960	73.5	25.4	
Yes	347	26.5	25.2	
<b>Total</b>	<b>1307</b>	<b>100</b>	<b>25.3</b>	

**Table 2 Percentage distribution of married women by male partners' related factors, controlling behaviours and MCU in Uganda (DHS 2011)**

	Number	% of women	% using	P-value
<b>Partners' age group</b>				<b>0.03</b>
15-24	130	9.9	21.8	
25-34	458	35.0	19.1	
35-44	416	31.8	35.0	
45+	303	23.2	22.9	
<b>Partner's education level</b>				<b>0.01</b>
No education	132	10.1	16.0	
Primary	706	54.0	22.9	
Secondary	360	27.5	31.0	
Higher	109	8.4	33.3	
<b>Woman did not report partner's control on any issues</b>				<b>0.65</b>
No	962	73.6	25.7	
Yes	345	26.4	24.2	
<b>Total</b>	<b>1307</b>	<b>100.0</b>	<b>25.3</b>	

**Table 3 Adjusted odds ratios from complementary log-log regression of MCU on empowerment indicators, controlling for women's and their partners' socio-demographic factors in Uganda**

	Model (1)		Model (2)		Model (3)	
Variables	Odds ratios (OR)	95% CI	OR	95% CI	OR	95% CI
Woman decides alone or with partner on all issues (ref=no)	1.15	[0.79-1.67]	1.15	[0.78-1.69]	1.06	[0.71-1.57]
Woman did not justify wife beating on any issue (ref=no)	1.13	[0.82-1.56]	1.10	[0.81-1.48]	1.06	[0.78-1.45]
Woman did not report partner's control on any issue (ref=no)	0.98	[0.70-1.39]	0.98	[0.69-1.39]	0.95	[0.67-1.34]
Respondent can ask partner to use a condom (ref=no)	<b>2.07***</b>	[1.43-3.01]	<b>1.75**</b>	[1.18-2.59]	<b>1.74**</b>	[1.18-2.56]
Experienced intimate partner sexual violence in last 12 months (ref=no)	1.00	[0.72-1.37]	1.07	[0.78-1.46]	1.03	[0.76-1.39]
<b>Region (ref=central)</b>						
Eastern			1.20	[0.83-1.73]	1.16	[0.81-1.68]
Northern			0.82	[0.54-1.25]	0.84	[0.54-1.29]
Western			1.16	[0.76-1.76]	1.13	[0.73-1.74]
<b>Place of residence (ref= urban)</b>						
Rural			<b>0.69*</b>	[0.48-0.99]	<b>0.67*</b>	[0.47-0.97]
<b>Women's education level (ref=no education)</b>						
Primary			1.17	[0.69-1.99]	1.24	[0.71-2.14]
Secondary			1.54	[0.79-2.98]	1.73	[0.89-3.36]
<b>Women's wealth status (ref=poor)</b>						
Middle			<b>1.91**</b>	[1.23-2.95]	<b>1.88**</b>	[1.21-2.93]
Rich			<b>1.63*</b>	[1.08-2.46]	1.47	[0.98-2.23]
<b>Partners' age group (ref= 15-24)</b>						
25-34					0.81	[0.35-1.89]
35-44					1.75	[0.78-3.90]
45+					1.13	[0.49-2.64]
<b>Partner's education level (ref= no education)</b>						
Primary					1.17	[0.65-2.12]
Secondary					1.20	[0.65-2.22]
Higher					1.25	[0.62-2.52]
Observations	1447		1447		1447	
CI =Confidence Intervals; * $p < 0.05$ - ** $p < 0.01$ - *** $p < 0.001$ ; ref = reference category						

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