

DHS WORKING PAPERS

Disability, Partner Behaviors, and the Risk of Intimate Partner Violence in Uganda: Further Analysis of the 2016 Demographic and Health Survey

Betty Kwagala Johnstone Galande Paul Musimami

2019 No. 150

DEMOGRAPHIC AND HEALTH SURVEYS

August 2019

This document was produced for review by the United States Agency for International Development.



DHS Working Paper No. 150

Disability, Partner Behaviors, and the Risk of Intimate Partner Violence in Uganda:

Further Analysis of the 2016 Demographic and Health Survey

Betty Kwagala¹ Johnstone Galande² Paul Musimami³

ICF Rockville, Maryland, USA

August 2019

¹ Department of Population Studies, School of Statistics and Planning, Makerere University

² Uganda Bureau of Statistics

³ Uganda Ministry of Health

Corresponding author: Betty Kwagala, Department of Population Studies, Makerere University; email: kkwagala@gmail.com









Acknowledgments: The authors are grateful to USAID for financial and technical support for this project. The valuable contributions of the workshop facilitators, Dr. Ann Mwangi, Dr. Jupiter Simbeye, and Julia Fleuret, and the comments and suggestions of our reviewers, Christina Juan, Dr. Wenjuan Wang, and Dr. Ann Mwangi, plus workshop participants, especially Olivia Nankinga and Dr. Patricia Ndugga, are highly appreciated. Special thanks to Bryant Robey for editing the paper.

Editor: Bryant Robey

Document Production: Joan Wardell

The DHS Working Papers series is a prepublication series of papers reporting on research in progress that is based on Demographic and Health Surveys (DHS) data. This study was carried out with support provided by the United States Agency for International Development (USAID) through The DHS Program (#AID-OAA-C-13-00095). The views expressed are those of the authors and do not necessarily reflect the views of USAID or the United States Government.

This study is a further analysis of the 2016 Uganda Demographic and Health Survey (2016 UDHS). The 2016 UDHS was implemented by the Uganda Bureau of Statistics (UBOS), with funding provided by the Government of Uganda, USAID, the United Nations Children's Fund (UNICEF), and the United Nations Population Fund (UNFPA). ICF provided technical assistance through The DHS Program, a USAID-funded project providing support and technical assistance in the implementation of population and health surveys in countries worldwide.

Additional information about the 2016 UDHS or other UDHS surveys may be obtained from the Directorate of Population and Social Statistics, Uganda Bureau of Statistics, Colville Street, P.O. Box 7186, Kampala, Uganda; telephone +256-414-706000; email: ubos@ubos.org; internet: www.ubos.org.

The DHS Program assists countries worldwide in the collection and use of data to monitor and evaluate population, health, and nutrition programs. For additional information about The DHS Program, contact: DHS Program, ICF, 530 Gaither Road, Suite 500, Rockville, MD 20850, USA; phone: +1 301-572-0950; fax: +1 301-572-0999 or +1 301-407-6501; email: reports@dhsprogram.com; internet: www.dhsprogram.com.

Recommended citation:

Kwagala, Betty, Johnstone Galande, and Paul Musimami. 2019. *Disability, Partner Behaviors, and the Risk of Intimate Partner Violence in Uganda: Further Analysis of the 2016 Demographic and Health Survey*. DHS Working Paper No. 150. Rockville, Maryland, USA: ICF.

CONTENTS

TABLI	ES AND	FIGURE	S	v
ABSTI	RACT			vii
ABBR	EVIATIO	ONS AND	ACRONYMS	ix
1	INTDC	DUCTIO	N	4
1	INTRO	роспо	N	1
2	METH	ODS		5
	2.1	Data		5
	2.2	Sample	Derivation	5
	2.3		es and Measurements	
		2.3.1	Measures of outcome variables	5
		2.3.2	Measures of explanatory variables	6
	2.4	Statistic	al Analyses	7
	2.5	Ethical	Considerations	7
3	RESU	LTS		9
	3.1	Descrip	tive and Bivariate Analyses	9
	3.2	Experie	nce of Intimate Partner Violence by Explanatory Factors	11
	3.3	Determi	inants of Intimate Partner Violence	13
		3.3.1	Adjusted associations between intimate partner violence and disability	
			status	13
		3.3.2	Determinants of intimate partner violence among women with and	
			without disabilities	14
4	DISCL	ISSION		17
5	CONC	LUSIONS	S	21
RFFFI	RENCES	3		23

TABLES AND FIGURES

Table 1	Percentage distribution of women's characteristics and intimate partner violence-related experience by disability status, 2016 UDHS	9
Table 2	Experience of emotional, physical, and sexual intimate partner violence by explanatory factors	11
Table 3	Logistic regression results of the various forms of intimate partner violence adjusting for disability status independently, together with women's characteristics, and all independent factors	13
Table 4	Logistic regression of forms of intimate partner violence adjusting for women's and spousal factors by disability status	16
Figure 1	Conceptual framework	3
Figure 2	Sample derivation flow diagram	5
Figure 3	Percent with experience of forms of intimate partner violence by disability status	11
Figure 4	Unadjusted odds of experiencing intimate partner violence by disability status	14

ABSTRACT

Women with disabilities are among the most marginalized and neglected groups of people in developing countries. This study examined the association between disability status and ever experiencing intimate partner violence (IPV) among women in Uganda, with disability status as a key explanatory variable. The determinants of emotional, physical, sexual, and any intimate partner violence were assessed among women with disabilities compared with women without disabilities. In both cases, we adjusted for women's characteristics and partners' behavioral factors.

The study, which was based on data from the 2016 Uganda Demographic Survey (UDHS), used a weighted sample of 6,879 cases of currently married and ever-married women selected for the survey's domestic violence module. We used chi-squared tests and multivariate logistic regressions to examine the determinants of IPV, with disability status as the main explanatory variable and, thereafter, determinants by disability status. Other key explanatory variables included witnessing parental violence and spousal behavioral factors.

Findings show that the unadjusted associations between emotional, physical, and sexual violence and disability status were statistically significant, in that women with disabilities had higher odds of experiencing the three forms of IPV compared with women without disabilities. The odds of IPV remained high and significant for emotional and sexual violence after adjusting for women's characteristics. Certain spousal behaviors, namely getting drunk and controlling their partners, had a stronger influence and consistently increased the odds of all three forms of IPV for women with or without disabilities. Women's witnessing parental violence and fearing their spouses also consistently increased the odds of emotional and sexual IPV both for women without disabilities and with disabilities. Additional risk factors for women with disabilities were urban residence, for emotional IPV; and Catholic religion, residence in Central region, and agricultural or manual work, for sexual IPV.

In the Ugandan context, key determinants of emotional, physical, and sexual intimate partner violence among women, with or without disabilities, are mainly associated with partners' behaviors and a history of exposure to parental IPV. Preventive measures against IPV should prioritize these factors. Apart from these, determinants of the different forms of intimate partner violence vary by women's disability status; therefore, each group should be considered separately. For women with disabilities, additional attention should be paid to emotional IPV among urban residents and to sexual IPV among women in agricultural and manual work, Catholics, and residents of Central region.

Key words: Disability status, spousal behavior, intimate partner violence (IPV), Uganda

ABBREVIATIONS AND ACRONYMS

AOR adjusted odds ratios

CI confidence interval

IPEV intimate partner emotional violence
IPPV intimate partner physical violence
IPSV intimate partner sexual violence

IPV intimate partner violence IRB institutional review board

OR odds ratio

SDG Sustainable Development Goal

SIDA Swedish International Development Cooperation Agency

UBOS Uganda Bureau of Statistics

UDHS Uganda Demographic and Health Survey

UNIFPA United Nations Population Fund UNICEF United Nations Children's Fund

USAID United States Agency for International Development

WWD women with disabilities
WHO World Health Organization

1 INTRODUCTION

According to the World Health Organization (WHO), 15% of the world's population lives with disabilities. Among persons age 15 and older, 2.2% (110 million people) have significant difficulties in functioning, while 3.8% (190 million people) have severe disabilities (WHO 2018a). Disability is defined as an umbrella term covering impairments (a problem in body function or structure), activity limitations (difficulty encountered by an individual in executing a task or action), and participation restrictions (a problem experienced by an individual in involvement in life situations) (WHO 2018a). In Africa, about 60-80 million people (an estimated 15.3%) live with disabilities (WHO 2011; SIDA 2015). In Uganda, 13.6% of all persons and 14.5% of females over age 5 live with disabilities (Uganda Bureau of Statistics (UBOS) and ICF 2018). Women with disabilities (WWD) experience several dimensions of marginalization on the basis of gender, disability, and often poverty (Brownridge 2006; Martin et al. 2006; Smith 2008).

Intimate Partner Violence (IPV) is among the most common forms of violence against women. It is defined as any behavior within an intimate relationship that causes physical, psychological, or sexual harm to those in the relationship. Such behaviors include physical, sexual, and emotional abuse and controlling behaviors by an intimate partner (WHO 2011). Globally, about one in three women (30%) who had ever been in a relationship have experienced IPV (WHO 2018b). In Uganda, the prevalence of intimate partner physical, emotional, and sexual violence for all women is 44%, 41%, and 25%, respectively (Uganda Bureau of Statistics (UBOS) and ICF 2018). Violence is not only a major public health problem but also a violation of human rights. Risks associated with gender-based violence can be grave. These include negative physical, mental, sexual, and reproductive health outcomes such as HIV and other STIs (WHO 2018b).

Disability has been associated with diverse forms of violence; WWD in particular are at higher risk compared with their nondisabled counterparts. Owing to physical impairments, they are considered easy targets since it is difficult for them to defend themselves against perpetrators (Barrett et al. 2009; Brownridge 2006; Jones et al. 2012; Martin et al. 2006; Smith 2008; Sobsey 2006; Young et al. 1997). For women in patriarchal settings, the high likelihood of experiencing IPV is also attributed to gender-based and other social marginalization (Barrett et al. 2009; Brownridge 2006; Martin et al. 2006; Smith 2008; Sobsey 2006; WHO 2012).

In many contexts, people with physical disability are not well understood. Perceptions about people with disabilities are enmeshed in myths that are detrimental to their wellbeing. For instance, they are sometimes considered asexual or promiscuous, which can result in denial of relevant associated information (Chenoweth 1996; Smith 2008; Sobsey 2006), thus exacerbating their vulnerability to violence. The experiences of women with disabilities could vary with culture, since attitudes and treatment of persons with disabilities may be shaped by the relevant customs (Sobsey 2006). A high level of education tends to enhance social status and the general wellbeing of persons and can strengthen women's positions (WWD inclusive) in relationships. Owing to social marginalization, however, WWD tend to have low levels of education (Smith 2008). For women with disabilities, unemployment contributes to poverty and economic dependence, which often perpetuates IPV (Brownridge 2006; Martin et al. 2006; Smith 2008). Additionally, owing to marginalization and violation of their rights, WWD develop a sense of powerlessness, which can result in tolerance of violence (Howe 1999; Smith 2008).

Spousal behaviors—namely excessive alcohol consumption, controlling behaviors, and instilling fear in the partner—have been associated with increased odds of IPV among women in general (Antai 2011; McClintock, Trego, and Wang 2019; WHO 2012; Krug et al. 2002; Speizer 2010; Heise 2012; Kwagala et al. 2013; Wandera et al. 2015). With respect to spousal characteristics and relations, it has been observed that WWD could be targeted by men who want to be dominant and who assume that their spouses are easier to dominate through the use of violence. Partner-controlling behaviors or sexual possessiveness are strongly associated with IPV against women irrespective of disability status (Brownridge 2006). Examples of such behaviors that tend to elevate the risk of violence have been observed among partners of WWD (Brownridge 2006; Smith 2008). Perpetrator-related characteristics were found to be independently strong predictors of violence against WWD. Although alcohol or substance abuse significantly increases the odds of IPV among women, a study of partner violence against women found that partners of WWD did not have increased odds of alcohol abuse or perpetration of violence against them (Brownridge 2006).

Some of the determinants of IPV in the Ugandan context among women in general include residence, with rural residence being a risk factor for IPV (Karamagi et al. 2006; Speizer 2010), and also religion, where non-Christian women had lower odds of intimate partner physical violence (IPPV) (Tumwesigye et al. 2012). The Catholic faith in particular has been associated with excessive alcohol consumption and attitudes that are permissive of IPV (Speizer 2010; Tumwesigye et al. 2012; Westenberg 2017). Occupation and household wealth status have been found to be significantly associated with higher odds of IPPV among unemployed and poor women (Kwagala et al. 2013). Recent studies in Uganda found that a woman's fear of her partner, his controlling behaviors, and alcohol and substance abuse were strong determinants of IPPV and intimate partner sexual violence (IPSV) among all women in Uganda (Wandera et al. 2015; Kwagala et al. 2013; Wandera, Ntozi, and Kwagala 2010). Other factors found to increase the odds of IPPV for all women in Uganda include their number of children and having witnessed parental violence (Kwagala et al. 2013). Witnessing parental violence has been linked with perpetuation of IPV where social learning plays an important role in the intergenerational cycle of violence (Heise 2012; Speizer 2010; UNICEF 2006).

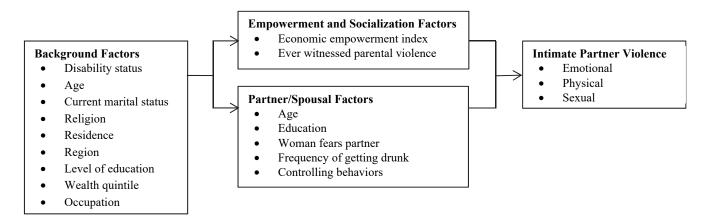
Descriptive results of the 2016 Uganda Demographic and Health Survey (UDHS) show that more women with disabilities experience physical and sexual violence compared with their counterparts without disabilities (Uganda Bureau of Statistics (UBOS) and ICF 2018). Although determinants of the various forms of IPV in Uganda have been assessed in a number of studies (Karamagi et al. 2006; Kwagala et al. 2013; Saulo, Walakira, and Darj 2012; Speizer 2010; Wandera, Ntozi, and Kwagala 2010; Zablotska et al. 2009), few studies of IPV have considered women's background characteristics as well as spousal behavioral factors among women with disabilities in Uganda, using a nationally representative sample. A recent study on IPV among WWD in Uganda (Valentine, Akobirshoev, and Mitra 2019) focused exclusively on women's background characteristics. With the numerous dimensions of marginalization, further victimization of WWD through IPV is detrimental to their wellbeing and exacerbates their disadvantaged position.

Our study is in line with the United Nations Sustainable Development Goal (SDG) on leaving no one behind by ensuring health and wellbeing for all, including marginalized groups (United Nations 2015). In order to understand the unique experiences of WWD, we examined determinants of emotional, physical, and sexual intimate partner violence among women with disabilities as well as women without disabilities.

The current study addresses the research questions:

- 1. Is disability a risk factor for intimate partner violence in Uganda?
- 2. Do the determinants of the various forms of IPV (emotional, physical, and sexual) vary among women with disabilities and women without disabilities?

Figure 1 Conceptual framework



The background factors and disability status of a woman are expected to operate through women's empowerment, socialization factors, and spousal behavioral factors to influence the various forms of IPV. The variables in the above frameworks relate to Heise's ecological framework of partner violence (Heise 2012).

2 METHODS

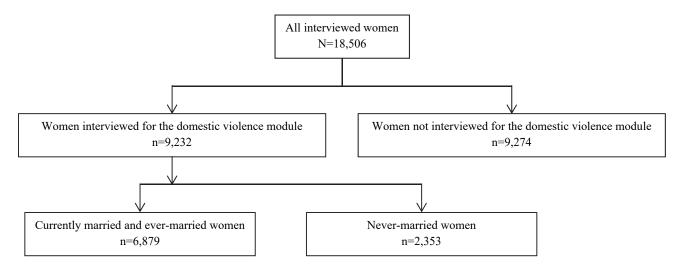
2.1 Data

Data used for this study were obtained with permission from The DHS Program website. We analyzed data from the 2016 UDHS. This is a cross-sectional nationally representative survey that used a stratified two-stage cluster sampling design. For details please refer to the Uganda Demographic and Health Survey report (UBOS and ICF 2018). Among the diversity of important issues addressed by the survey were intimate partner violence, partner behavioral factors, and levels and types of disabilities (UBOS and ICF 2018).

2.2 Sample Derivation

This study focused on ever-married and currently married women age 15-49 selected for the domestic violence module in the 2016 UDHS. In two-thirds of households, one woman age 15-49 (one per household, in line with WHO ethical recommendations) was randomly selected to participate in the domestic violence module as part of her individual interview. For the current study, a total of 6,879 women were included in the final analysis. Figure 2 shows the sample derivation.

Figure 2 Sample derivation flow diagram



2.3 Variables and Measurements

2.3.1 Measures of outcome variables

Intimate partner violence in the UDHS considered emotional, physical, and sexual forms of violence. This study considered all three forms of violence ever perpetrated by a current or former partner. Intimate partner emotional violence was assessed using the variable addressing whether the respondent experienced any emotional violence. The variable was generated by combining responses to whether the women had been humiliated, threatened with harm, insulted, or made to feel bad by a husband or partner. The variable was renamed "Intimate Partner Emotional Violence" (IPEV), with two categories: 0 no; 1 yes. A variable

"Intimate Partner Physical Violence" (IPPV) was generated by merging responses to whether a current or former partner pushed, shook, or threw something at the woman; slapped, punched with fist, or hit her with something harmful; strangled or burnt her; or threatened her with a knife, gun, or other weapon. Generating this variable entailed merging UDHS variables addressing whether the respondent experienced less severe or severe intimate partner physical violence. The IPPV variable was coded into two categories: 0 no; 1 yes. To assess sexual violence by an intimate partner, we used a dichotomous variable on whether the respondent experienced any sexual violence. The variable was renamed "Intimate Partner Sexual Violence" (IPSV) and coded into: 0 no; 1 yes. This variable merges responses to whether the woman had experienced less severe, severe, or any sexual violence by a current or former partner.

2.3.2 Measures of explanatory variables

The main explanatory variable of interest is disability status of the woman. Generation of the variable was based on the WHO definition, where disability means experiencing a lot of difficulty or not functioning in the domains of sight, hearing, speech, memory, walking, and personal care (WHO 2011). In the 2016 UDHS, respondents were asked if they had "no difficulty", "some difficulty", "a lot of difficulty", or "cannot function at all" in the specified domains. There was also a provision for "don't know"; the nine cases of "don't know" responses were dropped from the analysis. Disability status was recoded into a dichotomous variable, "disability status": 0 no, for no disability of any form; 1 yes, for one or more disabilities.

Other explanatory variables examined included current marital status; woman's age, with the two oldest age groups (40-44, 45-49) recoded into a single group, 40+; woman's level of education, with the highest two levels recoded into one: secondary and above; religion, with the smaller groups recoded as Pentecostal and others for the multivariate analysis. Region was recoded into the original four categories because of the anticipated small numbers of WWD. For wealth index, the richer and richest quintiles were merged into a single category due the few observations in the richest category; and the number of living children was recoded into three categories: none; 1-4; and 5+. Occupation was recoded into five categories: not working; domestic work; professional or formal work; sales and services; and agriculture and manual work. At the multivariate level of analysis, the two categories, not working, and domestic work, were merged into a single category, not working.

Generating a variable for economic empowerment entailed combining responses to questions on whether the respondent owns a house, owns land, the forms of earnings, and participation in decision-making concerning large household purchases. All responses that indicated any or a combination of the following: land or house ownership (individually or jointly), cash earnings, and participation in decision-making were coded as: 1 yes, meaning any of the items. Women who did not own property, earn cash, or participate in decision-making were coded as: 0 no.

Respondents were asked whether their fathers ever beat their mothers. This variable was renamed "ever witnessed parental violence" and retained the codes: 0 no; 1 yes; and 2 don't know. For the partner characteristics, we included a variable on whether women were afraid of their partners. Other variables associated with partners that were considered were: partner's age and education, recorded in a similar fashion to women's age and education; frequency of getting drunk; and a control issues index, derived using the variable on number of control issues. Issues considered for the control issues index were whether the partner was jealous if the respondent talked with other men, accused her of unfaithfulness, did not permit

her to meet female friends, tried to limit her contact with family, or insisted on knowing where she was. The index was coded into: 0, for no control issues; 1-2 control issues; and 3-5 control issues.

2.4 Statistical Analyses

Data were analyzed using Stata 15. At the univariate level of analysis, we used frequency distributions to describe the characteristics of the respondents by disability status. In order to assess associations between the various forms of IPV and the explanatory variables, we used cross-tabulations and Pearson's chi-squared (χ^2) tests. The level of statistical significance was set at p <0.05.

At the multivariate level of analysis, independent variables that were significantly associated with the various forms of IPV at the bivariate level were considered for inclusion in the models. The variables were tested for multicollinearity. Where two variables had a high correlation, one of them was excluded from the models. In such cases, variables that are important determinants according to the literature were retained. Multivariable logistic regression analyses assessed the relationship between outcome variables and the explanatory factors, with special interest in disability status. In the first stage, sequential models analyzed disability and each of the three outcomes, followed by models adjusting for disability and other women-related explanatory factors, and finally, all explanatory factors. Thereafter, we fit models for each outcome variable (IPEV, IPPV, and IPSV) by disability status (WWD and women without disabilities), adjusting for the same explanatory variables.

2.5 Ethical Considerations

The ICF Institutional Review Board (IRB) reviewed and approved the 2016 UDHS. ORC MACRO, ICF Macro, and the ICF IRBs complied with the United States Department of Health and Human Services regulations for the protection of human research subjects (45 CFR 46). The survey was also approved by the Government of Uganda. The World Health Organization's ethical and safety recommendations for research on domestic violence were observed. Informed consent was obtained from all respondents. Participation was on a voluntary basis and anonymity was maintained by exclusion of participants' identifiers from the dataset (UBOS and ICF 2018).

3 RESULTS

3.1 Descriptive and Bivariate Analyses

Over half of the respondents were age 30 and older. The large majority of women were married, at 82% of women without disabilities, but lower among women with disabilities, at 76% (see Table 1). The majority of women were Christians, with a higher representation of Catholics, at 41%. About three-quarters of women in the sample were rural, higher for WWD, at 81%. Regions were proportionately represented. However, Western region had a higher representation of WWD, at 34% compared with 21% for the Northern region. Only 14% of WWD had attained secondary or higher level of education compared with 27% of women without disabilities. The majority of women, especially WWD, were engaged in agriculture or manual work, at 70% of WWD compared with 59% of women without disabilities.

WWD had a higher proportion of those that had five or more children at 48% compared with 33% among women without disabilities; having ever witnessed parental violence at 43% compared with 36% among women without disabilities; and being afraid of their partners most of the time at 26% compared to 14% among women without disabilities. WWD also had a higher proportion of partners who got drunk often, at 53%, compared with 38% among women without disabilities, and a higher proportion of partners who controlled them, at 81% for WWD compared with 71% among women without disabilities.

Table 1 Percentage distribution of women's characteristics and intimate partner violencerelated experience by disability status, 2016 UDHS

	Disabili	Disability status	
	No	Yes	N
Age			
15-19	7.6	2.6	505
20-24	21.5	10.7	1,445
25-29	19.5	12.1	1,320
30-34	17.8	17.9	1,225
35-39	14.4	18.2	1,005
40+	19.2	38.4	1,379
Marital status			
Married or cohabiting	82.3	76.0	5,642
Ever married	17.7	24.0	1,237
Religion			
Anglican	31.3	29.1	2,149
Catholic	40.2	47.3	2,785
Muslim	12.9	8.0	871
Pentecostal/born again	13.0	13.5	894
Others	2.7	2.0	180
Type of place of residence			
Urban	23.8	18.7	1,620
Rural	76.2	81.3	5,259
Region			
Central	28.3	22.7	1,928
Eastern	26.8	23.1	1,833
Northern	20.1	20.5	1,384
Western	24.8	33.7	1,734
Education			
No education	12.6	20.0	891
Primary	59.7	66.4	4,125
Secondary and above	27.7	13.6	1,864

Continued...

Table 1—Continued

	Disabil	ity status		
	No	Yes	N	
Wealth index				
Poorest	19.4	19.7	1.334	
Poorer	20.2	23.7	1,400	
Middle	19.4	25.1	1,349	
Rich	41.1	31.5	2,796	
Occupation				
Not working	15.2	10.7	1,047	
Domestic work	1.2	1.6	83	
Professional or formal work	8.9	6.2	607	
Sales and services	15.2	11.1	1,033	
Agriculture and manual work	59.2	70.4	4,106	
Economic empowerment				
No	82.8	79.1	5,687	
Yes	17.2	20.9	1,192	
Ever witnessed parental violence				
No	59.2	52.1	4,049	
Yes	35.7	43.0	2,476	
Don't know	5.2	4.8	353	
Respondent afraid of partner				
Never afraid	54.0	46.4	3,695	
Sometimes	32.2	28.0	2,200	
Most of the time	13.8	25.6	984	
Number of living children				
None	6.5	4.1	443	
1-4	60.3	47.8	4,109	
5+	33.2	48.1	2,327	
Partner's age				
15-29	23.3	11.4	1,566	
30-39	28.4	23.3	1,942	
40+	30.6	41.2	2,134	
No partner	17.7	24.0	1,237	
Partner's education				
None/don't know	7.4	6.4	1,740	
Primary	43.3	47.8	2,990	
Secondary and above	31.7	21.7	2,149	
No partner	17.7	24.1	2,149	
Partner's frequency of being drunk (with alcohol)				
Never	4.7	4.5	325	
Sometimes	22.5	28.7	1,569	
Often	15.3	24.7	1,079	
No partner	57.4	42.0	3,906	
Partner's control issues index				
None	29.0	19.5	1,965	
1-2 issues	34.6	34.4	2,381	
3-5 issues	36.4	46.1	2,533	
Total	100	100	6,879	

WWD had a higher proportion experiencing each of the three forms of IPV—for IPEV, 54% of WWD compared with 41% of women without disabilities; for IPPV, 52% compared with 40%; and for IPSV, 33% compared with 22% (Figure 3).

100 90 80 70 60 ■ No disability 50 ■ Has disability 40 30 20 10 0 **IPEV IPPV IPSV**

Figure 3 Percent with experience of forms of intimate partner violence by disability status

Note: IPEV = intimate partner emotional violence; IPPV = intimate partner physical violence; IPSV = intimate partner sexual violence

3.2 **Experience of Intimate Partner Violence by Explanatory Factors**

As Table 2 shows, the association between all explanatory factors and the types of violence was consistently significant, with the exception of religion and economic empowerment. Reports of experiencing the various forms of violence generally increased with women's age. Ever-married women consistently had higher proportions of all forms of IPV. With respect to religion, Christians, especially Catholics, had higher proportions of women reporting IPEV and IPPV. Rural women had higher proportions of all three forms of IPV. The following regions had the highest proportions of the various types of IPV: Northern region, IPPV; Eastern region, IPSV; and Western region, IPEV. Higher proportions of IPV were observed among the following groups: women with primary or no education (IPEV, IPPV, and IPSV); the poor (IPEV and IPPV); and women engaged in domestic work (IPEV and IPPV). For all three forms of IPV, the proportions of women with experience of IPV were higher among women who had five or more children, ever witnessed parental violence, and feared their partners most of the time. Higher proportions of the three forms of IPV also were observed among women whose partners were older, had little education, often got drunk, and controlled them on three or more issues.

Table 2 Experience of emotional, physical, and sexual intimate partner violence by explanatory

(***) 27.9 37.2	(***) 27.4	(***) 13.8
37.2		13 8
		10.0
	35.7	19.0
39.2	36.5	19.7
42.2	40.4	21.7
47.4	46.1	22.2
46.1	48.4	21.1
(***)	(***)	(***)
38.0	37.2	19.7
54.9	53.5	27.7
(*)	(***)	ns
41.9	39.3	21.7
42.2	45.4	20.5
37.2	31.0	17.6
41.8	37.7	21.1
29.2	26.4	12.0
	47.4 46.1 (***) 38.0 54.9 (*) 41.9 42.2 37.2 41.8	42.2 40.4 47.4 46.1 46.1 48.4 (***) (***) 38.0 37.2 54.9 53.5 (*) (***) 41.9 39.3 42.2 45.4 37.2 31.0 41.8 37.7

Table 2—Continued

	Intimate Partner Emotional Violence	Intimate Partner Physical Violence	Intimate Partner Sexual Violence
Type of place of residence	(**)	(***)	(***)
Urban	36.9	33.3	15.8
Rural	42.3	42.3	22.6
Region	(***)	(***)	(***)
Central	32.3	31.2	16.0
Eastern	39.6	41.4	25.5
Northern	44.5	49.2	15.7
Western	49.6	41.5	22.9
Education	/***\	/***\	/***\
Education No education	(***) 47.3	(***) 47.6	(***) 18.2
Primary	44.3	44.5	24.1
Secondary and above	30.9	27.0	15.0
•			
Wealth index	(***)	(***)	(**)
Poorest	47.6	52.3	20.7
Poorer	42.5	44.9	23.3
Middle	44.4	41.3	22.3
Rich	35.6	31.4	17.9
Occupation	(***)	(***)	(**)
Not working	30.8	33.4	17.3
Domestic work	60.6	47.2	24.0
Professional or formal work	32.3	28.2	18.6
Sales and services	39.0	34.8	23.1
Agriculture and manual work	45.1	44.8	24.9
Number of living children	(***)	(***)	(***)
None	25.0	20.5	12.3
1-4	39.7	37.9	20.0
5+	46.4	47.8	24.1
Economic empowerment	(***)	ns	ns
No Yes	40.2 45.1	39.6 42.8	21.2 20.6
Ever witnessed parental violence	(***)	(***)	(***)
No	35.0	33.5	16.5
Yes	51.6	51.2	28.5
Don't know	36.4	38.6	17.2
Respondent afraid of partner	(***)	(***)	(***)
Never afraid	26.6	24.1	14.3
Sometimes	49.6	50.6	20.6
Most of the time	76.4	77.2	45.4
Partner's age	(***)	(***)	(***)
15-29	31.6	30.7	15.5
30-39	38.1	36.8	20.0
40+	42.6	42.4	20.7
No partner	54.9	53.5	27.7
·	(***)	(***)	(***)
Partner's education			
None/don't know	42.3 42.3	40.5 43.5	18.9 24.4
Primary Secondary and above	42.3 31.1	43.5 27.8	17.2
No partner	54.9	53.5	30.8
Partner's frequency of being drunk	(***)	(***)	(***)
Never	30.2	29.0	12.3
Sometimes	46.4	45.7	22.5
Often	70.4	74.5	34.2
No partner	31.7	29.3	16.7
Partner's control issues index	(***)	(***)	(***)
None	16.4	19.6	6.4
1-2 issues	36.8	37.7	17.3
3-5 issues	64.2	58.4	35.6

^{*} p < 0.05, ** p < 0.01, *** p < 0.001; ns = Not significant

3.3 Determinants of Intimate Partner Violence

3.3.1 Adjusted associations between intimate partner violence and disability status

Analyses commenced with examining whether disability status was significantly associated with the various forms of IPV, independently and after adjusting for the different sets of explanatory factors, followed by assessment of determinants of IPV for WWD and women without disabilities. All variables that were significantly associated with the outcomes were tested for multicollinearity before inclusion in the model. Variables that were excluded include number of living children, partner's age, and partner's education.

Table 3 Logistic regression results of the various forms of intimate partner violence adjusting for disability status independently, together with women's characteristics, and all independent factors

	Disability s	Model 1 Model 2 Disability status¹ and IPV independently Adjusting for disability status and women's characteristics		or disability status	Model 3 Adjusting for disability status, women's characteristics, and spousal characteristics	
Type of IPV	OR	CI	AOR	CI	AOR	CI
IPEV	1.72***	[1.30 - 2.27]	1.34*	[1.01 - 1.77]	1.12	[0.81 - 1.54]
IPPV	1.68***	[1.27 - 2.23]	1.26	[0.95 - 1.68]	1.07	[0.79 - 1.45]
IPSV	1.70***	[1.25 - 2.23]	1.48*	[1.08 - 2.05]	1.31	[0.94 - 1.82]

IPV = intimate partner violence

OR = odds ratio; CI = confidence interval; AOR = adjusted odds ratio

IPEV = intimate partner emotional violence; IPPV = intimate partner physical violence; IPSV = intimate partner sexual violence

Table 3 presents the results of analysis of the relationship between the various forms of IPV and disability status independently and adjusting for women's and spousal characteristics. Disability status was significantly associated with IPEV (OR=1.72; 95% CI: 1.30 - 2.27), IPPV (OR=1.68; 95% CI: 1.27 - 2.23), and IPSV (OR=1.70; 95% CI: 1.25 - 2.23) independently in Model 1 and as shown in Figure 4.

^{*} p < 0.05, ** p < 0.01, *** p < 0.001

¹ "No" is the reference category for disability status.

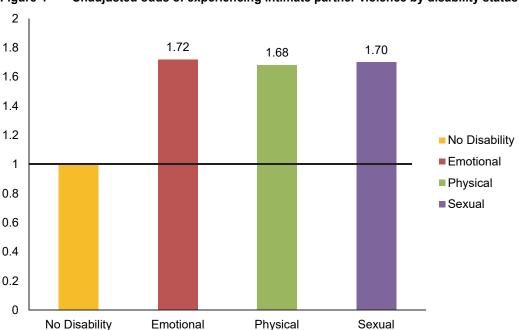


Figure 4 Unadjusted odds of experiencing intimate partner violence by disability status

Results in Table 3 show that the association was also significant after adjusting for women's characteristics in Model 2 for IPEV and IPSV (AOR=1.34; 95% CI: 1.01 - 1.77 for IPEV; and AOR=1.48; 95% CI: 1.08 - 2.05 for IPSV)—WWD had higher odds of experiencing IPEV and IPSV compared with women without disabilities. In Model 3, the influence of spousal behavioral factors had a stronger influence on the three forms of IPV compared with women's disability status.

3.3.2 Determinants of intimate partner violence among women with and without disabilities

Table 4 presents results of the association between the three forms of IPV—emotional, physical, and sexual—and explanatory factors (women's characteristics and spousal factors) by disability status. For IPEV, witnessing parental violence and partners' behavioral factors—namely women's fear of the partner, frequency of partner getting drunk, and partner's controlling behavior—were significantly associated with IPEV, irrespective of disability status. Compared with women who had never witnessed parental violence, the odds of IPEV was over twice as high for WWD, and nearly twice as high for women without disabilities, among those who witnessed parental violence (AOR=2.21; 95% CI: 1.11 - 4.39 for WWD and AOR=1.78; 95% CI: 1.53 - 2.06 respectively). Women who feared their partners had increased odds of IPEV—six times the odds (AOR=6.05; 95% CI: 2.82 - 13.00 for WWD) and nearly three times (AOR=2.72; 95% CI: 2.36 - 3.13) for women with no disability)—compared with women who did not fear their partners. Women whose partners were often drunk had higher odds of IPEV for both groups compared with women whose partners who did not get drunk (AOR=4.99; 95% CI: 1.0 - 23.91 for WWD and AOR=2.91; 95% CI: 2.03 - 4.16 for women with no disability).

Residence was associated with IPEV for WWD, with lower odds of IPEV in rural areas (AOR=0.39; 95% CI: 0.16 - 0.93) compared with urban areas. For women without disabilities, marital status, religion, region, and occupation were also associated with IPEV. The odds of IPEV were higher among women over age 24,

especially age 35-39 (AOR=1.52; 95% CI: 1.22 - 1.89) compared with women age 15-24; higher among ever-married women compared with currently married women (AOR=1.49; 95% CI: 1.23 - 1.81); higher among Muslims compared with Anglicans (AOR=1.27; 95% CI: 1.00 - 1.61); higher in Western region compared with Central region (AOR=2.28; 95% CI: 1.82 - 2.87); and higher among women engaged in agriculture or manual work compared with domestic work or not working (AOR=1.46; 95% CI: 1.20 - 1.77).

For IPPV, Table 4 shows a significant association with partners' controlling behaviors, partners' frequency of getting drunk, and women's fear of their partners for both women without disabilities and WWD (although statistics should be interpreted with caution). Compared with women who were never afraid of their partners, whose partners did not drink or got drunk sometimes, and were controlled on one or two issues or none, the adjusted odds of IPPV increased among women who were afraid of their partners (AOR=11.04; 95% CI: 5.21 - 23.38 for WWD and AOR=3.10; 95% CI: 2.70 - 3.55 for women with no disability); women whose partners got drunk often (AOR=10.59; 95% CI: 2.01 - 55.71 for WWD and AOR=3.42; 95% CI: 2.37 - 4.95 for women with no disability); and women whose partners controlled them on 3-5 issues (AOR=2.64; 95% CI: 1.38 - 5.05 for WWD and AOR=2.86; 95% CI: 2.48 - 3.30 for women with no disability). For women without disabilities, age, marital status, religion, and region were also associated with IPPV. The odds of IPPV increased with women's age among ever-married women compared with currently married women (AOR=1.39; 95% CI: 1.15 - 1.68), Catholics compared with Anglicans (AOR=1.22; 95% CI: 1.03 - 1.44), and Western region compared with Central region (AOR=1.26; 95% CI: 1.02 - 1.55).

For IPSV, common determinants for both women without disabilities and WWD were region, ever witnessing parental violence, partner's frequency of getting drunk, and partner's controlling behavior. For both groups, the odds of IPSV were lower among women in Northern region compared with Central region (AOR=0.29; 95% CI: 0.08 - 0.99 for WWD and AOR=0.73; 95% CI: 0.54 - 0.98 for women with no disability) but were higher for Eastern and Western regions for women without disabilities, women having ever witnessed parental violence (AOR=2.62; 95% CI: 1.33 - 5.16 for WWD and AOR=1.68; 95% CI: 1.44 - 1.96 for women with no disability), women whose partners often got drunk for WWD (AOR=66.54; 95% CI: 24.81 - 921.44) and AOR=1.74; 95% CI: 1.17 - 2.59 for women with no disability), and women whose partners controlled them on numerous issues (AOR=3.29; 95% CI: 1.75 - 6.20 for WWD and AOR=3.20; 95% CI: 2.75 - 3.73 for women with no disabilities). In addition, for WWD religion and occupation were significantly associated with IPSV, with higher odds of IPSV among Catholics compared with Anglicans (AOR=1.25; 95% CI: 11.01 - 1.53), and for women engaged in agriculture and manual work compared with the unemployed (AOR=5.31; 95% CI: 1.62 - 17.45). For women without disabilities, other significant determinants were age, marital status, education, and being afraid of the partner, with higher odds of IPSV among women age 30-34 compared with age 15-24 years (AOR=1.39; 95% CI: 1.14 - 1.68), ever-married women compared with currently married women (AOR=1.39; 95% CI: 1.14 - 1.68), women with primary education compared with no education, and women who were afraid of their partners compared with those who were never afraid of their partners (AOR=1.69; 95% CI: 1.43 - 2.00).

Logistic regression of forms of intimate partner violence adjusting for women's and spousal factors by disability status Table 4

		IPEV	≥:			VAdI	>			IPSV	25	
. !		WWD	No dis	lisability	_	WWD	No d	disability		WWD	Nod	disability
Independent factors	AOR	ច	AOR	5	AOR	5	AOR	5	AOR	5	AOR	5
Age (rc=15-24)												
25-29	0.95	[0.23 - 3.83]	1.19	[1.00 - 1.43]	0.75	[0.21 - 2.64]	1.15	[0.96 - 1.38]	69.0	[0.16 - 3.05]	1.12	[0.92 - 1.35]
30-34	2.04	[0.57 - 7.25]	1.27*	[1.04 - 1.56]	2.04	[0.61 - 6.81]	1.28*	[1.05 - 1.56]	0.87	[0.22 - 3.47]	1.25*	[1.01 - 1.53]
35-39	2.76	[0.72 - 10.56]	1.52***	[1.22 - 1.89]	2.47		1.55***	[1.23 - 1.95]	2.27	[0.55 - 9.46]	1.19	[0.93 - 1.53]
40+	2.13	[0.64 - 7.03]	1.31*	[1.05 - 1.63]	2.38	[0.80 - 7.06]	1.52***	[1.19 - 1.92]	2.33	[0.61 - 8.86]	96.0	[0.75 - 1.23]
Marital status (rc=married or												
Ever married	1 22	[0 55 - 2 69]	1 49***	[1 23 - 1 81]	1 72	10 80 - 3 701	1 30***	[1 15 - 1 68]	0.72	IO 29 - 1 771	1 30***	[1 14 - 1 68]
Religion (re=Anglican)	77.	[0.32 - 2.03]	£.	[10.1 - 62.1]	7/:	[0.00 - 0.70]	5.	00.1 - 01.1	00	[77.1 - 67.0]	 	- +
Catholic	0.49	[0.21 - 1.12]	0.93	[0.79 - 1.11]	0.85	[0.36 - 2.00]	1.22*	[1.03 - 1.44]	2.66*	[1.09 - 6.48]	0.89	[0,74 - 1.06]
Muslim	0.66	[0.18 - 2.39]	1.27*	- 1	2.54	[0.66 - 9.81]	0.98	[0.76 - 1.27]	0.68	[0.12 - 3.83]	1.09	[0.84 - 1.43]
Pentecostal and others	0.40	[0.14 - 1.14]	1.23	[0.98 - 1.53]	0.49	[0.17 - 1.42]	1.1	[0.90 - 1.38]	1.77	[0.58 - 5.35]	1.10	[0.86 - 1.42]
Residence (rc=urban)												
Rural	0.39*	[0.16 - 0.93]	0.94	[0.77 - 1.15]	0.38	[0.14 - 1.07]	1.01	[0.84 - 1.22]	0.45	[0.17 - 1.14]	1.22	[0.97 - 1.52]
Region (rc=Central)												
Eastern	0.73	[0.25 - 2.13]	1.00	[0.78 - 1.27]	96.0	- 1	1.04	[0.84 - 1.28]	2.22	[0.84 - 5.87]	1.39*	[1.07 - 1.81]
Northern	0.40	[0.13 - 1.23]	1.17		0.42	1	1.11	[0.86 - 1.43]	0.29*	[0.08 - 0.99]	0.73*	[0.54 - 0.98]
Western	1.85	[0.72 - 4.76]	2.28***	[1.82 - 2.87]	1.28	[0.44 - 3.74]	1.26*	[1.02 - 1.55]	0.65	[0.24 - 1.79]	1.53***	[1.19 - 1.95]
Education (rc=no education)												
Primary	1.72	[0.70 - 4.23]	0.99	[0.81 - 1.21]	1.93	[0.67 - 5.57]	1.14	[0.93 - 1.40]	1.36	[0.51 - 3.64]	1.31*	[1.05 - 1.64]
Secondary and above	1.27	[0.35 - 4.63]	0.85	[0.65 - 1.09]	1.05	[0.24 - 4.56]	0.91	[0.71 - 1.17]	1.37	[0.28 - 6.61]	0.99	[0.76 - 1.30]
Wealth index (rc=poorest)												
Poorer	1.68	[0.59 - 4.77]	0.89	[0.73 - 1.10]	0.94	[0.29 - 2.98]	0.96	[0.76 - 1.20]	2.75	[0.84 - 8.99]	1.10	[0.88 - 1.38]
Middle	1.35	[0.39 - 4.69]	1.04	[0.79 - 1.38]	0.46	[0.14 - 1.54]	0.87	[0.69 - 1.11]	2.63	[0.71 - 9.74]	-	[0.87 - 1.42]
Rich	1.06	[0.30 - 3.73]	1.05	[0.82 - 1.36]	0.65	[0.17 - 2.48]	0.79	[0.62 - 1.01]	1.81	[0.47 - 7.03]	1.13	[0.86 - 1.48]
Morking popagation time sector	1 2/	IO 31 - 4 951	4	IN 92 - 1 151	7 7	[0 30 - 5 8/1]	0.00	[0 74 - 1 16]	2 17	IO 76 - 13 201	1 23	IO 94 - 1 601
Working agriculture or manual	t 7:	[0.0]	2	[0.95 - 1.40]	5	[+0.0 - 60.0]	0.32	[o]	<u>-</u>	[0.7.0]	2.	[00:1 - +6:0]
work	1.84	[0.56 - 6.06]	1.46***	[1.20 - 1.77]	2.66	[0.92 - 7.73]	1.16	[0.95 - 1.40]	5.31**	[1.62 - 17.45]	1.27	[1.00 - 1.61]
Economic empowerment index (rc=no)												
Yes	1.18	[0.51 - 2.74]	1.11	[0.93 - 1.32]	2.07	[0.82 - 5.22]	1.04	[0.88 - 1.24]	1.54	[0.64 - 3.66]	66.0	[0.81 - 1.21]
Woman ever witnessed												
parental violence (rc=no)	**	24 4 4 000	7 70***			C	***		*****	L	,	17 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
Afraid of husband (rc=never)	7.7	[1.11-4.08]	0/.1	[1.33 - 2.00]	<u>.</u>	[0.82 - 5.80]	- 0. 4	[1.45 - 1.00]	70.7	[01.55 - 55.10]	00.	[1.44 - 1.90]
Ever afraid	6.05***	[2.82 - 13.00]	2.72***	[2.36 - 3.13]	11.04***	[5.21 - 23.38]	3.10***	[2.70 - 3.55]	1.67	[0.76 - 3.67]	1.69***	[1.43 - 2.00]
Frequency of partner getting												
arunk (rc=never)	70	7000	÷		0	17 0	7		***************************************	Ç	0	2000
Sometimes	1.64	[0.43 - 6.28]	1.54	[1.08 - 2.18]	2.03	[0.47 - 8.72]	7.53	[1.08 - 2.16]		[2.52 - 388.68]	1.32	[0.89 - 1.95]
No partner	4.99 1.03	[1.04 - 23.91]	2.9.1 0.95	[2.03 - 4.16]	10.39	[2.01 - 55.71]	3.42 0.91	[2.37 - 4.93]	00.04 21.58*	[4.61 - 921.44]	1.74	[1.17 - 2.39]
Partner's control issues					1							
(rc=0-2 issues)	***	00 17	******	100 11 100 11	***	00 27	****	10 70 00 10 10 10 10 10 10 10 10 10 10 10 10	****	175 6 201	*****	10 75 0 701
Sanssi c-c	70.7	[1.20 - 3.42]	4.02	[4.05 - 5.26]	7.04	[cn.c - oc.1]	7.00	[2.40 - 3.30]	3.29	[1.75-0.20]	3.20	[2.75 - 5.75]
		7000	•		:	:						

CI = confidence interval; * p < 0.05, ** p < 0.01, *** p < 0.001; rc = reference category; AOR = adjusted odds ratio WWD = women with disabilities; IPEV = intimate partner sexual violence

4 DISCUSSION

This paper examined the association between women's disability status and experience of intimate partner violence. The analysis also entailed examining the determinants of IPEV, IPPV, IPSV, and any IPV among women with disabilities compared with women without disabilities. As observed elsewhere, we found that the prevalence of the various forms of IPV was higher among WWD (Brownridge 2006; Smith 2008; Sobsey 2006). Disability status was significantly associated with IPEV, IPPV, and IPSV independently and after adjusting for women's characteristics for IPEV and IPSV, with higher odds of experiencing the respective forms of IPV among WWD (Barrett et al. 2009; Brownridge 2006; Jones et al. 2012; Martin et al. 2006; Smith 2008; Sobsey 2006; Young et al. 1997). However, partner behavioral factors, particularly getting drunk and having controlling behaviors, and to a large extent women's fear of the partner and witnessing parental violence, proved to be stronger determinants of IPV after adjusting for all independent factors, and when women with and without disabilities were analyzed in separate models (Brownridge 2006; Krug et al. 2002; WHO 2012; Kwagala et al. 2013).

Our findings are in agreement with earlier findings in Uganda with respect to recent IPV for all women, where the negative influence of partners' excessive alcohol consumption, controlling behaviors, and inducement of fear were highlighted as risk factors for IPV (Kwagala et al. 2013; Tumwesigye et al. 2012; Shamu et al. 2011; Krug et al. 2002). The finding on the significant positive association between partners' excessive alcohol consumption and IPV differs from Brownridge (2006), who found no association between partner's excessive alcohol consumption and IPV among WWD. Results on controlling behaviors reflect findings in other contexts, that WWD are not exempt from partnering with domineering individuals with sexual proprietary tendencies that increase the likelihood of IPV (Brownridge 2006; Smith 2008). Similar findings have been observed among women in general (Antai 2011; Krug et al. 2002; Kwagala et al. 2013). Controlling behaviors and inducement of fear are probably a result of previous or ongoing IPV (Jewkes 2002; Kwagala et al. 2013).

The fact that the association between disability status and specific forms of IPV lost significance after adjusting for spousal behavioral factors highlights the centrality of partners' behaviors with respect to IPV. This is especially the case for IPPV among WWD, where all the determinants were spouse-related. Other studies also have highlighted a strong association between spousal behaviors and IPV. For instance, the study by Antai in Nigeria showed that spouses' controlling behaviors were associated with IPPV and IPSV (Antai 2011). McClintock et al. also had similar findings on the contribution of controlling behaviors to lifetime experience of IPPV, IPSV, and IPEV in sub-Saharan Africa (McClintock, Trego, and Wang 2019). Krug et al. (2002) made similar observations. Frequent drunkenness or excessive alcohol consumption by the partner has been highlighted as a risk factor for IPV among women in Uganda (Kwagala et al. 2013; Wandera et al. 2015) and among pregnant women in Africa (Shamu et al. 2011) and globally (Krug et al. 2002).

A strong economic position, as assessed by women's economic empowerment and wealth status, had no mitigating effect on all three forms of IPV after adjusting for other explanatory factors. Education had limited influence, contrary to findings elsewhere (Brownridge 2006; Nosek et al. 2006). Efforts towards promotion of gender equity and the wellbeing of women in Uganda mainly places emphasis on women's empowerment (Tamale 2008). However, our results imply that, given the significant influence of spouse-

associated factors on IPV, its prevention cannot be complete without addressing behavioral characteristic among men, in this case women's spouses or partners (Mahmud, Shah, and Becker 2012).

The influence of witnessing parental violence on the different forms of IPV is in consonance with a previous study in Uganda among all women, where witnessing parental violence was a significant determinant of IPPV (Kwagala et al. 2013). Speizer's study also showed that women who witnessed parental IPV not only had increased odds of having attitudes that were supportive of IPV, but also had increased odds of having been IPV victims (Speizer 2010). Witnessing parental violence entails social learning that may lead to perceptions and behaviors that could induce IPV as well as contribute to tolerance of it (Speizer 2010; UNICEF 2006; WHO 2012).

Apart from the stated cross-cutting issues, significant determinants of the various forms of IPV for women with and without disabilities differ to a large extent. Our findings with respect to IPEV and IPPV among WWD agree with the observation by Jewkes (2002) that there are few socio demographic factors associated with IPV. This implies that with respect to IPEV and IPPV, women with disabilities fare in a similar manner to those without disabilities.

In our study, the risk factor that is unique to WWD is urban residence for IPEV. For IPSV, risk factors are the Catholic faith, engaging in agriculture or manual work, and residence in Central region. Contrary to findings with reference to all women (Karamagi et al. 2006; Krug et al. 2002; Tumwesigye et al. 2012), in our study urban residence was associated with IPEV among WWD. This could be linked to the pressures of urban survival, often without close kinship support. While being Catholic increased the odds of IPSV among WWD, being Catholic increased the odds of IPPV for women without disabilities. The Catholic faith has been associated with submission and aspiration to keep marriage vows irrespective of circumstances, partner violence inclusive (Westenberg 2017). A study conducted in Uganda found that Catholic women were more likely to have positive attitudes toward wife beating (Speizer 2010). However, the association between the Catholic faith and IPSV among WWD requires further exploration. Another study in Uganda alluded to problem drinking among Catholic male partners as a possible catalyst of IPPV (Tumwesigye et al. 2012).

The finding of increased odds of experiencing IPSV for WWD in Central region compared with Northern Uganda is surprising, since Northern Uganda has a recent history of protracted war. Region in this paper was used as proxy variable to capture the general cultural groupings. Hence, cultures in the respective regions could be part of the explanation (Sobsey 2006), but further research is essential to establish reasons for the association.

Age and marital status were not associated with any form of IPV for WWD, but were consistently associated with all forms of IPV for women without disabilities. The three forms of IPV were expected to increase consistently with age, since this paper considers whether the respondents had ever experienced IPV. This was not the case for WWD or women without disabilities, however. For women with no disabilities, IPEV and IPPV peak at age 35-39 and decline thereafter. The odds for IPSV increase significantly only among women age 30-34. According to the results, IPV is common among women without disabilities who are in their thirties. With respect to increased odds of ever experiencing the various forms of IPV among evermarried women without disabilities, IPV could be either a cause or a result of marital conflict, separation, or divorce (Jewkes 2002). The consistent increased odds of experiencing the three forms of IPV among

women without disabilities in Western region require attention. A previous study revealed that Western Uganda was one of the regions with increased odds of IPPV. The link between the relevant cultural beliefs and practices and IPV in Western Uganda should be assessed (Sobsey 2006).

This study has some limitations. The analysis is based on cross-sectional data, so causal relationships cannot be assessed. As cautioned by Sobsey (2006), research on intimate partner violence against WWD that draws comparisons with the general population may yield misleading results, because women who have severe developmental and cognition disabilities are underrepresented among women in intimate relationships. Additionally, the study used ever experience of IPEV, IPPV, and IPSV rather than experience of IPV in the last 12 months, because the small number of women with disabilities who experienced the various forms of IPV would pose challenges to analysis. However, given the dearth of comprehensive national studies on the wellbeing of WWD, findings of this paper not only provide vital information on the variations in experience of IPV between WWD and women without disabilities, but also, most importantly, highlight critical issues in addressing IPV among WWD.

5 CONCLUSIONS

In the Ugandan context, spousal behavioral factors and perpetuation of IPV through having witnessed parental violence were the strongest determinants of emotional, physical, and sexual IPV among women, regardless of disability status. Effective interventions to address IPV in Uganda should address spousal behavioral factors, namely frequent drunkenness, the root causes of male controlling behaviors, and behaviors that generate fear. Efforts to reduce IPV should be complemented by creation of awareness on the grave effects of childrearing in a context of IPV. Gender-associated policies that promote the wellbeing of women—in this case protection from intimate partner violence—should focus not only on women but on men as well, taking into consideration contextual issues of socialization and upbringing.

Significant determinants of the different forms of IPV, especially IPEV and IPPV, differ by disability status. Interventions therefore should consider each group separately. In addition to the cross-cutting factors, other risk factors to consider for WWD include urban residence for IPEV, participation in agriculture and manual work, belonging to the Catholic faith, and residence in Central region. Further research is needed to explain reasons for the high odds of IPV among these categories in Uganda. Root causes of negative spousal behaviors in Uganda require further exploration. Variations in experiences of IPV could exist by the different forms of disability. In order to ensure that concerns of the individuals with the various forms of disability are addressed, studies of persons with disabilities by type of disability are essential.

REFERENCES

Antai, D. 2011. "Controlling Behavior, Power Relations within Intimate Relationships and Intimate Partner Physical and Sexual Violence against Women in Nigeria." *BMC Public Health* 11 (1):511. https://doi.org/10.1186/1471-2458-11-511.

Barrett, K. A., B. O'Day, A. Roche, and B. Lepidus Carlson. 2009. "Intimate Partner Violence, Health Status, and Health Care Access among Women with Disabilities." *Women's Health Issues* 19 (2):94-100. https://doi.org/10.1016/j.whi.2008.10.005.

Brownridge, D. A. 2006. "Partner Violence against Women with Disabilities: Prevalence, Risk, and Explanations." *Violence Against Women* 12 (9):805-822. https://doi.org/10.1177%2F1077801206292681.

Chenoweth, L. 1996. "Violence and Women with Disabilities: Silence and Paradox." *Violence Against Women* 2 (4):391-411. https://doi.org/10.1177%2F1077801296002004004.

Heise, L. L. 2012. "Determinants of Partner Violence in Low and Middle-income Countries: Exploring Variation in Individual and Population-level Risk." *London School of Hygiene & Tropical Medicine*. https://doi.org/10.17037/PUBS.00682451.

Howe, K. 1999. "Violence against Women with Disabilities - An Overview of the Literature." Women Against Violence: An Australian Feminist Journal (7):11.

Jewkes, R. 2002. "Intimate Partner Violence: Causes and Prevention." *The Lancet* 359 (9315):1423-1429. https://doi.org/10.1016/S0140-6736(02)08357-5.

Jones, L., M. A. Bellis, S. Wood, K. Hughes, E. McCoy, L. Eckley, G. Bates, C. Mikton, T. Shakespeare, and A. Officer. 2012. "Prevalence and Risk of Violence against Children with Disabilities: A Systematic Review and Meta-analysis of Observational Studies." *The Lancet* 380 (9845):899-907. https://doi.org/10.1016/S0140-6736(12)60692-8.

Karamagi, C. A. S., J. K. Tumwine, T. Tylleskar, and K. Heggenhougen. 2006. "Intimate Partner Violence against Women in Eastern Uganda: Implications for HIV Prevention." *BMC Public Health* 6 (1):284. https://doi.org/10.1186/1471-2458-6-284.

Krug, E. G., J. A. Mercy, L. L. Dahlberg, and A. B. Zwi. 2002. "The World Report on Violence and Health." *The Lancet* 360 (9339):1083-1088. https://doi.org/10.1016/S0140-6736(02)11133-0.

Kwagala, B., S. O. Wandera, P. Ndugga, and A. Kabagenyi. 2013. "Empowerment, Partner's Behaviours and Intimate Partner Physical Violence among Married Women in Uganda." *BMC Public Health* 13 (1):1112. https://doi.org/10.1186/1471-2458-13-1112.

Mahmud, S., N. M. Shah, and S. Becker. 2012. "Measurement of Women's Empowerment in Rural Bangladesh." *World Development* 40 (3):610-619. https://dx.doi.org/10.1016%2Fj.worlddev.2011.08.003.

Martin, S. L., N. Ray, D. Sotres-Alvarez, L. L. Kupper, K. E. Moracco, P. A. Dickens, D. Scandlin, and Z. Gizlice. 2006. "Physical and Sexual Assault of Women with Disabilities." *Violence Against Women* 12 (9):823-837. https://doi.org/10.1177%2F1077801206292672.

McClintock, H. F., M. L. Trego, and E. M. Wang. 2019. "Controlling Behavior and Lifetime Physical, Sexual, and Emotional Violence in sub-Saharan Africa." *Journal of Interpersonal Violence*. https://doi.org/10.1177%2F0886260519835878.

Nosek, M. A., R. B. Hughes, H. B. Taylor, and P. Taylor. 2006. "Disability, Psychosocial, and Demographic Characteristics of Abused Women with Physical Disabilities." *Violence Against Women* 12 (9):838-850. https://doi.org/10.1177/1077801206292671.

Saulo, B., E. Walakira, and E. Darj. 2012. "Access to Healthcare for Disabled Persons. How Are Blind People Reached by HIV Services?" *Sexual & Reproductive Healthcare* 3 (1):49-53. https://doi.org/10.1016/j.srhc.2011.12.004.

Shamu, S., N. Abrahams, M. Temmerman, A. Musekiwa, and C. Zarowsky. 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.org/10.1371/journal.pone.0017591.

SIDA. 2015. "Disability Rights in sub-Saharan Africa." March 20, 2019.

Smith, D. L. 2008. "Disability, Gender and Intimate Partner Violence: Relationships from the Behavioral Risk Factor Surveillance System." *Sexuality and Disability* 26 (1):15-28. https://doi.org/10.1007/s11195-007-9064-6.

Sobsey, D. 2006. "Violence and Disability." *Health Promotion for Persons with Intellectual/developmental Disabilities: The State of Scientific Evidence*: 205-234.

Speizer, I. S. 2010. "Intimate Partner Violence Attitudes and Experience among Women and Men in Uganda." *Journal of Interpersonal Violence* 25 (7):1224-1241. https://dx.doi.org/10.1177%2F0886260509340550.

Tamale, S. 2008. *When Hens Begin to Crow: Gender and Parliamentary Politics in Uganda*: New York, USA: Routledge. http://dx.doi.org/10.4324/9780429503085.

Tumwesigye, N. M., G. B. Kyomuhendo, T. K. Greenfield, and R. K. Wanyenze. 2012. "Problem Drinking and Physical Intimate Partner Violence against Women: Evidence from a National Survey in Uganda." *BMC Public Health* 12 (1):399. https://doi.org/10.1186/1471-2458-12-399.

Uganda Bureau of Statistics (UBOS) and ICF. 2018. *Uganda Demographic and Health Survey 2016*. Kampala, Uganda, and Rockville, Maryland, USA: UBOS and ICF.

UNICEF. 2006. "Behind Closed Doors: The Impact of Domestic Violence on Children." New York, USA: UNICEF.

United Nations. 2015. "The Millennium Development Goals Report 2015." United Nations. http://www.un.org/millenniumgoals/2015 MDG Report/pdf/MDG%202015%20rev%20(July%201).pdf

Valentine, A., I. Akobirshoev, and M. Mitra. 2019. "Intimate Partner Violence among Women with Disabilities in Uganda." *International Journal of Environmental Research and Public Health* 16 (6):947. https://doi.org/10.3390/ijerph16060947.

Wandera, S. O., B. Kwagala, P. Ndugga, and A. Kabagenyi. 2015. "Partners' Controlling Behaviors and Intimate Partner Sexual Violence among Married Women in Uganda." *BMC Public Health* 15 (1):214. https://dx.doi.org/10.1186%2Fs12889-015-1564-1.

Wandera, S. O., J. P. M. Ntozi, and B. Kwagala. 2010. "Spousal Sexual Violence, Sexual Behavior and Sexually Transmitted Infections among Ever-married Women in Uganda." *African Population Studies* 24 (1-2). https://doi.org/10.11564/24-1-2-307

Westenberg, L. 2017. "When She Calls for Help'—Domestic Violence in Christian Families." *Social Sciences* 6 (3):71. https://doi.org/10.3390/socsci6030071.

World Health Organization (WHO). 2011. The World Report on Disability. 2011. WHO Library Cataloguing-in-Publication Data: Geneva: World Health Organization.

WHO. 2012. "Understanding and Addressing Violence against Women: Intimate Partner Violence." Geneva: World Health Organization.

WHO. 2018a. "Disability and Health." WHO, last modified 16 January 2018, accessed 15 October 2019. http://www.who.int/en/news-room/fact-sheets/detail/disability-and-health. Geneva: World Health Organization.

WHO. 2018b. "Violence Against Women." WHO, accessed 7/11/2018. http://www.who.int/newsroom/fact-sheets/detail/violence-against-women. Geneva: World Health Organization.

Young, M. E., M. A. Nosek, C. Howland, G. Chanpong, and D. H. Rintala. 1997. "Prevalence of Abuse of Women with Physical Disabilities." *Archives of Physical Medicine and Rehabilitation* 78 (12):S34-S38. https://doi.org/10.1177%2F104420739700800208.

Zablotska, I. B., R. H. Gray, M. A. Koenig, D. Serwadda, F. Nalugoda, G. Kigozi, N. Sewankambo, T. Lutalo, F. Wabwire Mangen, and M. Wawer. 2009. "Alcohol Use, Intimate Partner Violence, Sexual Coercion and HIV among Women aged 15–24 in Rakai, Uganda." *AIDS and Behavior* 13 (2):225-233. https://doi.org/10.1007/s10461-007-9333-5.