



Intimate partner violence as a predictor of marital disruption in sub-Saharan Africa: A multilevel analysis of demographic and health surveys

Abdul-Aziz Seidu^{a,b,c}, Richard Gyan Aboagye^d, Bright Opoku Ahinkorah^e, Collins Adu^{f,*}, Sanni Yaya^{g,h}

^a Department of Population and Health, University of Cape Coast, Cape Coast PMB TF0494, Ghana

^b College of Public Health, Medical and Veterinary Services, James Cook University, Townsville, Queensland, QLD, 4811, Australia

^c Takoradi Technical University, P.O.Box 256, Takoradi, Ghana

^d Department of Family and Community Health, School of Public Health, University of Health and Allied Sciences, Ho PMB 31, Ghana

^e Faculty of Health, School of Public Health, University of Technology Sydney, Sydney, NSW, 2007, Australia

^f Department of Health Promotion, Education and Disability Studies, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

^g School of International Development and Global Studies, University of Ottawa, Ottawa, Canada

^h The George Institute for Global Health, Imperial College London, London, United Kingdom

ARTICLE INFO

Keywords:

Intimate partner violence
Marital disruption
Sub-saharan Africa
Global health

ABSTRACT

Introduction: Intimate partner violence has gained momentum as health, social, and human right issue across the globe. Women within sub-Saharan Africa often do not report any case of violence due to the acceptance of violence which is rooted in their socio-cultural beliefs and practices. With a high prevalence of marital disruption in sub-Saharan Africa, it is important that we understand the role intimate partner violence plays in this phenomenon. Hence, this present study assessed the association between intimate partner violence and marital disruption among women in sub-Saharan Africa.

Methods: This study involved a cross-sectional analysis of data from the Demographic and Health Survey of 25 countries in sub-Saharan Africa. Multilevel binary logistic regression analysis was carried out and the results were presented as adjusted odds ratios (aOR) at 95% Confidence Interval (CI).

Results: The prevalence of physical, emotional, and sexual violence in the 25 countries considered in this study were 29.3%, 28%, and 11.5%, respectively. The highest prevalence of physical violence was in Sierra Leone (50.0%) and the lowest prevalence was in Comoros (5.7%). For emotional violence, the highest prevalence was in Sierra Leone (45.9%) and the lowest prevalence was in Comoros (7.9%). The highest prevalence of sexual violence was in Burundi (25.5%) and the lowest prevalence was in Comoros (1.8%). The average prevalence of marital disruption was 7.7%. This ranged from 1.3% in Burkina Faso to 20.2% in Mozambique. We found that women who had ever experienced physical violence were more likely to experience marital disruptions compared to those who had never experienced physical violence [aOR = 1.42, 95% CI = 1.35–1.50]. Women who had ever experienced sexual violence were more likely to experience marital disruption compared to those who had never experienced sexual violence [aOR = 1.29, 95% CI = 1.21–1.37]. Finally, women who had ever experienced emotional violence were more likely to experience marital disruption compared to those who had never experienced emotional violence [aOR = 1.86, 95% CI = 1.76–1.96].

Conclusion: Findings from this study call for proven effective intimate partner violence reduction interventions such as strengthening laws against intimate partner violence in sub-Saharan Africa. Again, marital counseling and health education interventions should be implemented to address the role of intimate partner violence on the wellbeing of women and the stability of couples in sub-Saharan Africa.

* Corresponding author.

E-mail addresses: abdul-aziz.seidu@stu.ucc.edu.gh (A.-A. Seidu), raboagye18@sph.uhas.edu.gh (R.G. Aboagye), brightahinkorah@gmail.com (B.O. Ahinkorah), collinsadu80@yahoo.com (C. Adu), hsanniya@uottawa.ca (S. Yaya).

<https://doi.org/10.1016/j.ssmph.2021.100877>

Received 23 June 2021; Received in revised form 12 July 2021; Accepted 15 July 2021

Available online 17 July 2021

2352-8273/© 2021 The Authors.

Published by Elsevier Ltd.

This is an open access article under the CC BY-NC-ND license

(<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

1. Introduction

Domestic violence has gained momentum as health, social, and human right issue across the globe (Ahinkorah et al., 2018; World Health Organization [WHO], 2013; 2014). Of all forms of domestic violence, intimate partner violence (IPV) is the most common form, which involves all sexual, emotional, or physical harms as well as controlling behaviours aggravated by a current or former partner (Wagman et al., 2016). Globally, the incidence of IPV is more severe in women compared to men with about 30% of women reporting violence by an intimate partner at some point in their life (Ahamdi et al., 2017; Devries et al., 2013; WHO, 2012).

The United Nations in 2015 adopted the 2030 Global Development Agenda, consisting of 17 Sustainable Development Goal (SDGs) with 169 targets to mitigate health, environmental, and global economic inequality (United Nations, 2015). Sustainable Development Goal 5 calls for greater gender equality and the empowerment of women globally. Particularly, SDG 5.1 aims at ending all forms of discrimination against all women, and Goal 5.2 focuses on the elimination of all forms of violence against all women in the public and private spheres (United Nations, 2015).

For the purpose of this study, it is particularly important to use theories to explain IPV and marital disruption. IPV was conceptualized as a subcategory of interpersonal violence. We viewed IPV as a type of interpersonal violence, occurring in a family or partner setting and directed towards an intimate partner. From a social learning theory, it is suggested that violent ways of settling family conflicts are often learned through observing parental or peer-relationships during childhood (Wareham et al., 2009). According to Berzenski and Yates (2010), witnessing or experiencing abuse during childhood might be associated with future IPV perpetration in adulthood. On the aspect of marital disruption, we argued that marital disruption can be explained from irretrievable breakdown of union or marriage perspective. Simply, a marriage or union which is irretrievably broken down means that the parties are not willing to come together and co-habit as partners. These theories explain social learning theory on IPV and irretrievable breakdown of union or marriage theory of marital disruption. The link between these theories could be that those victims and perpetrators of IPV have either witnessed or experienced any form of abuse during childhood, resulting in their developing acceptance or tolerance of violence within the family, leading to dissolving of the union or marriage irretrievably.

Gender inequality is a key driver of IPV at the country level (Heise & Kotsadam, 2015) and while formal marriage protects women from IPV in some settings (Abransky et al., 2011), it increases the risk for abuse in some populations within sub-Saharan Africa (SSA). In SSA, the prevalence of IPV remains high among women as it has generally declined among women over time globally (Gubi et al., 2020). The prevalence of IPV is higher, with about 37% among women (WHO, 2013). IPV contributes greatly to mortality and morbidity and its consequences include sexually transmitted disease, unsafe abortions, stillbirths, depression, unwanted pregnancies, among others (Wagman et al., 2016; Winchester, 2016; Pallitto et al., 2013; WHO, 2012). Women within SSA mostly do not report any case of violence due to the acceptance of violence which is rooted in socio-cultural beliefs that men in SSA are unconditionally entitled to sex (Gubi et al., 2020).

Gaining an understanding of IPV and marital disruption among women in SSA is needful for designing interventions, strategies, and policies to decline the domestic violence rate. Previous studies on IPV and marital disruption among women was conducted in Uganda (Gubi et al., 2020; Wagman et al., 2016). However, there has been no such study that has focused generally on SSA. This present study assessed the association between IPV and marital disruption among women in SSA. The study also looked at how socio-demographic factors also influence IPV among women in SSA. Findings from this study could help to formulate useful interventions and strategies in addressing IPV and

Table 1
Description of sample.

S/N Countries	Year of survey	Weighted N	Weighted %
1. Angola	2015–16	7484	6.04
2. Burkina Faso	2010	9997	8.07
3. Benin	2017–18	4486	3.62
4. Burundi	2016–17	7644	6.17
5. DR Congo	2013–14	5437	4.39
6. Cote d'Ivoire	2011–12	4940	3.99
7. Cameroon	2018	4901	3.95
8. Ethiopia	2016	4999	4.03
9. Gabon	2012	3814	3.08
10. Gambia	2013	3454	2.79
11. Kenya	2014	4329	3.49
12. Comoros	2012	2487	2.01
13. Liberia	2019–20	2099	1.69
14. Mali	2018	3418	2.76
15. Malawi	2015–16	5413	4.37
16. Mozambique	2015	3057	2.47
17. Nigeria	2018	8965	7.23
18. Namibia	2013	1314	1.06
19. Rwanda	2014–15	1923	1.55
20. Sierra Leone	2019	4009	3.23
21. Chad	2014–15	3644	2.94
22. Togo	2013–14	5336	4.31
23. Uganda	2014–15	7505	6.06
24. Zambia	2018	7369	5.95
25. Zimbabwe	2015	5914	4.77
All countries		123,938	100.00

marital disruption among women in SSA.

2. Methods

2.1. Data source and design

This study involved a cross-sectional analysis of data from the Demographic and Health Survey (DHS) of 25 countries in SSA. We used a pooled data from the women's file (individual recode) from the 25 countries. Only countries with datasets between 2010 and 2020 were included in the study. The DHS is a nationally representative survey conducted every five years in over 85 low- and middle-income countries globally (Corsi et al., 2012). The DHS employed a structured questionnaire to collect data on several health and social issues such as domestic violence, sexual and reproductive health, maternal and child health, and men's health (Corsi et al., 2012). A two-stage cluster sampling method was used to recruit women for the study. A study by Aliaga and Ruilin (2006) highlights a detailed sampling technique and data collection procedure used in collecting data from the respondents. In the present study only 123,938 who had ever been in a sexual relationship with complete cases of variables of interest were included in the study (see Table 1). The dataset is freely accessible via this link: <https://dhsprogram.com/data/available-datasets.cfm>.

3. Study variables

3.1. Outcome variable

Marital disruption was the main outcome variable. To derive this variable, each of the respondents was asked about their current marital status. The response options were never in a union, married, living with a partner, widowed, divorced, and no longer living together/separated. Those that responded never in union and widowed were dropped. The responses were further categorised into "separated/divorced [disrupted]" for those that responded "divorced, and no longer living together/separated" whilst the remaining responses (married, living with a partner) were grouped as not separated/divorced [not disrupted].

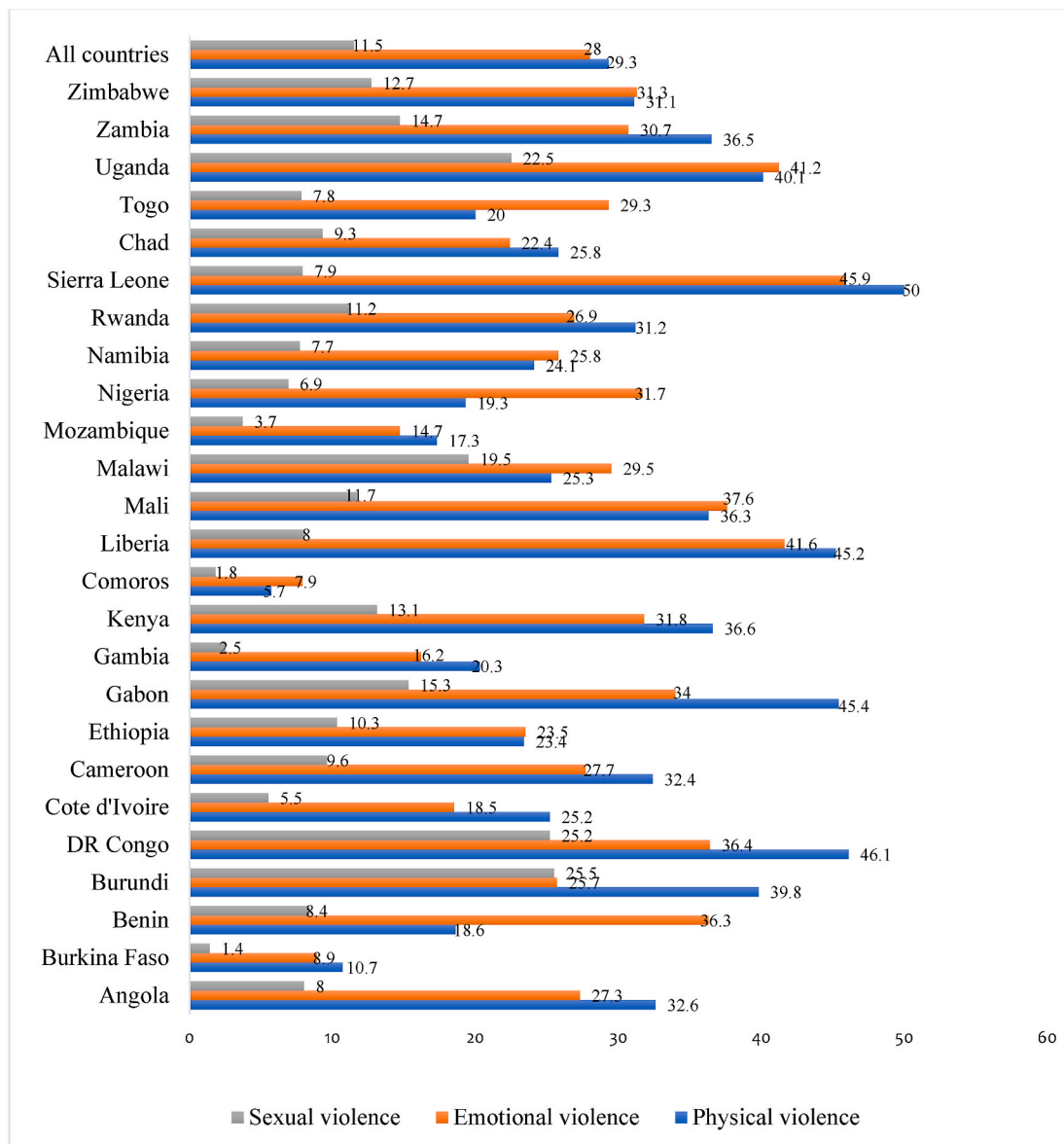


Fig. 1. Prevalence of physical, emotional, and sexual violence among women in sub-Saharan Africa.

3.2. Key explanatory variable

The key explanatory variable in the present study was IPV. IPV was created as an index variable from three key variables consisting of physical, emotional, and sexual violence respectively. The three variables were based on several questions in the domestic violence module. However, questions were obtained from a modified version of the conflict tactics scale (Kishor, 2005). With physical violence, each respondent was asked whether her last partner ever: pushed her; shook or threw something at her; slapped her; punched her with his fist or something harmful; kicked or dragged her; strangled or burnt her; threatened her with a knife, gun or other weapons; and twisted her arm or pulled her hair. On emotional violence, respondents were asked whether their last partner ever: humiliated her; threatened to harm her, and insulted or made her feel bad. Regarding sexual violence, respondents were asked whether their partner ever: physically forced the respondent into unwanted sex; whether the partner ever forced her into other unwanted sexual acts; and whether the respondent has been physically forced to perform sexual acts which she did not want to. For these questions, the responses were ‘yes’ and ‘no’. More importantly, a

respondent who had experienced at least one of the violent acts was considered as ever experienced physical, emotional, and sexual violence respectively (Ahinkorah et al., 2021).

3.3. Covariates

A total of eight covariates were controlled for in the present study. The variables were selected based on their availability in the DHS dataset as well as their significant association with divorce or separation (Dagneu et al., 2020; Wagman et al., 2016). In the analysis, we utilised the existing coding in the DHS dataset for maternal age (years), educational level, current working status. In the DHS, maternal age was coded as “15–19”, “20–24”, “25–29”, “30–34”, “35–39”, “40–44”, and “45–49”. Educational level was coded as “no education”, “primary”, “secondary”, and “higher”. The current working status was coded as “yes” and “no”. Exposure to mass media was created as an index variable from the frequency of listening to the radio, frequency of reading newspapers/magazines, and frequency of watching television. The response options in each of the three variables (frequency of listening to radio, frequency of reading newspaper/magazine, and frequency of

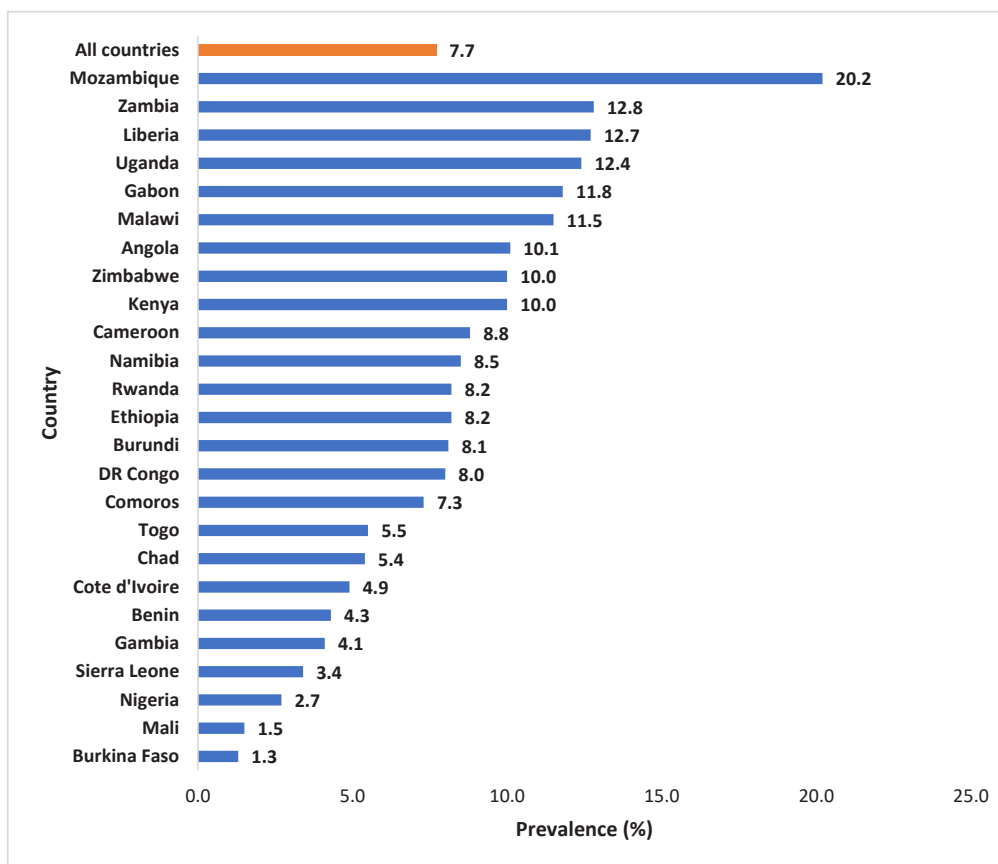


Fig. 2. Prevalence of marital disruption among women in sub-Saharan Africa.

watching television) were the same. The response options were “not at all,” “less than once a week”, “at least once a week”, and “almost every day”. The respondents whose response option was, “not at all” and “less than once a week” were recoded as “No [not exposed]” whilst those that responded, “at least once a week” and “almost every day” were recoded as “Yes [exposed]”. The categorisation was used in each of the three variables (radio, newspaper, and television). Afterward, the variable exposure to mass media was created using the categorisation in the three variables. A respondent was said to be exposed to mass media if she had at least one “Yes [exposed]” in any of the exposure variables (radio, newspaper, and television). All these variables were considered as individual level factors.

Wealth index, place of residence, and sub-region were considered as contextual factors. In the DHS, wealth is a composite measure computed by combining data on a household’s ownership of carefully identified assets including television, bicycle, materials used for house construction, sanitation facilities, and type of water access. Principal component analysis was used to transform these variables into wealth index by placing individual households on a continuous measure of relative wealth. The DHS segregates households into five wealth quintiles: poorest, poorer, middle, richer, and richest. The quintiles were used in the final analysis. Place of residence was coded as “urban” and “rural” in the DHS dataset and this was used in the analysis. Sub-region was coded as West Africa, East Africa, Central Africa, and Southern Africa.

4. Statistical analyses

Various steps were followed to analyse the data. First, frequency and percentages to show the prevalence of IPV and marital disruption in the selected sub-Saharan African countries were determined. After this, we cross-tabulated the distribution of marital disruption across the

individual and contextual level factors as well as an estimated Pearson’s chi-square test of independence [χ^2] at a p-value of less than 0.05 to show significant factors. Further, a multilevel binary logistic regression analysis was used to examine the individual and contextual factors associated with marital disruption using four models. Model 0 showed the variance in marital disruption attributed to the clustering of the primary sampling units (PSUs) without the explanatory variables. Model I and Model II contained the individual and contextual factors, respectively. The final model (Model III) had all the individual and contextual factors. The Stata command “melogit” was used in fitting these models. We used Akaike’s Information Criterion (AIC) tests for Model comparison. All the results were presented using adjusted odds ratios (aOR) at 95% Confidence Interval (CI). Sample weight and the ‘svy’ command were used to correct for over and under-sampling, including the complex survey design to improve our findings’ generalizability. The paper was written following the Strengthening Reporting of Observational Studies in Epidemiology (STROBE) reporting guidelines (Von Elm et al., 2014).

5. Ethical considerations

We did our analysis using data that is publicly available. Since, the dataset is already available in the public domain, no ethical approval was required for this study. Details about the data and ethical standards are available at: <http://goo.gl/ny8T6X>.

6. Results

6.1. Prevalence of IPV and marital disruption in sub-Saharan Africa

Figs. 1 and 2 show the prevalence of IPV and marital disruption in SSA respectively. The prevalence of physical, emotional, and sexual

Table 2
Bivariate analysis of marital disruption and intimate partner violence among women in SSA.

Variable	Weighted N	Weighted %	Marital disruption (Yes)	P-value
Physical violence				<0.001
No	87,601	70.7	5.8	
Yes	36,337	29.3	12.5	
Emotional violence				<0.001
No	89,235	72.0	5.7	
Yes	34,703	28.0	13.0	
Sexual violence				<0.001
No	109,716	88.5	6.8	
Yes	14,222	11.5	14.8	
Maternal age				<0.001
15–19	7441	6.0	5.6	
20–24	21,893	17.7	6.7	
25–29	27,651	22.3	7.1	
30–34	24,492	19.8	7.9	
35–39	19,046	15.4	8.4	
40–44	13,298	10.7	9.5	
45–49	10,117	8.1	9.3	
Educational level				<0.001
No education	47,078	38.0	5.0	
Primary	41,413	33.4	9.6	
Secondary	30,391	24.5	9.4	
Higher	5055	4.1	7.9	
Religion				<0.001
Christianity	81,197	65.5	9.5	
Islamic	36,187	29.2	4.0	
African Traditional	2557	2.1	2.5	
No religion	3200	2.6	8.3	
Others	797	0.6	11.1	
Current working status				<0.001
No	39,661	32.0	6.3	
Yes	84,277	68.0	8.4	
Parity				<0.001
0	7434	6.0	7.9	
1	36,187	14.9	10.1	
2	2557	17.6	9.1	
3	19,899	16.0	8.6	
4 or more	56,410	45.5	6.1	
Mass media exposure				0.018
No	64,264	51.9	8.0	
Yes	59,674	48.1	7.5	
Wealth index				<0.001
Poorest	25,573	20.6	8.8	
Poorer	25,245	20.4	6.9	
Middle	24,636	19.9	6.8	
Richer	25,068	20.2	8.1	
Richest	23,416	18.9	8.1	
Place of residence				<0.001
Urban	43,978	35.5	9.6	
Rural	79,960	64.5	6.7	

violence in the 25 countries considered in this study were 29.3%), 28%, and 11.5%, respectively. The highest prevalence of physical violence was in Sierra Leone (50.0%) and the lowest prevalence was in Comoros (5.7%). For emotional violence, the highest prevalence was in Sierra Leone (45.9%) and the lowest prevalence was in Comoros (7.9%). The highest prevalence of sexual violence was in Burundi (25.5) and the lowest prevalence was in Comoros (1.8%). The average prevalence of marital disruption was 7.7%. This ranged from 1.3% in Burkina Faso to 20.2% in Mozambique (Fig. 2).in

6.2. Distribution of IPV across marital disruption

Table 2 shows the distribution of IPV across marital disruption and covariates. The results showed that marital disruption was more prevalent among women who had experienced physical violence (12.5%) compared to those who had never experienced physical violence (5.8%).

The prevalence of marital disruption was higher among those who had experienced emotional violence (13.0%) compared to those who had never experienced emotional violence (5.7%). Marital disruption was higher among women who had experienced sexual violence (14.8%) compared to those who had never experienced sexual violence (6.8%). In terms of the covariates, maternal age, educational level, religion, current working status, parity, mass media exposure, wealth index, and place residence showed significant associations with marital disruption.

6.3. Association between IPV and marital disruption in sub-Saharan Africa

Model III of Table 3 shows the results of the association between IPV and marital disruption in SSA. We found that women who had experienced physical violence were more likely to experience marital disruptions compared to those who never experienced physical violence [aOR = 1.42, 95% CI = 1.35–1.50]. Women who had ever experienced sexual violence were more likely to experience marital disruption compared to those who had never experienced sexual violence [aOR = 1.29, 95% CI = 1.21–1.37]. Finally, women who had ever experienced emotional violence were more likely to experience marital disruption compared to those who had never experienced emotional violence [aOR = 1.86, 95% CI = 1.76–1.96].

6.4. Random effects (measures of variation)

The random effects results are shown in Table 3. It was found that in the empty model (Model 0), there are substantial variations in marital disruption in SSA across the PSUs [$\sigma^2 = 2.2$; 95% (CI = 1.4–3.6)]. The ICC showed that about 1% (0.007) of the total variance was attributable to the community where the women live. In model 1 and III, it increased to 0.008 which was also about 1%. In the final model, it increased to 0.009 which is also approximately 1%. Therefore in all the models, about 1% of the variations in marital dissolution is attributable to the community where the women are living. The Akaike's Information Criterion (AIC) values showed a reduction, between model 0 and model 1 but increased in model 2 and reduced again in model 3. Therefore, Model III, the complete model with both the selected individual and household/community factors, was the best model.

7. Discussion

IPV is the most common form of gender-based violence, which involves all sexual, emotional, or physical harms as well as controlling behaviors aggravated by a current or former partner (Wagman et al., 2016). The study examined the prevalence and association between IPV and marital disruption in SSA. The findings from the study showed a 29.3%, 28%, and 11.5% prevalence of physical, emotional, and sexual violence respectively among women in SSA. The findings possibly suggest that generally, IPV is a great avenue for causing marital disruption as some literature have explained (Wagman et al., 2016). In this present study, women who had ever experienced physical, sexual, and emotional violence were more likely to experience marital disruptions compared to those who never experienced any of these.

On IPV, the current study used three variables (physical, emotional, and sexual violence). It is possible that sexual, physical, and emotional violence are distal determinants of marital dissolution, however, in the study, physical violence is a more direct driver of marital disruption. This finding is in line with a previous study conducted in Uganda (Wagman et al., 2016) where physical violence was more prevalent in causing union dissolution. It could be that women in our study who experienced severity and increasing levels of IPV (especially physical violence) became less tolerant of the violence and more motivated to dissolve the relationship with their partners.

The study revealed that compared to the poorest women, women of all other wealth index were less likely to experience marital disruption.

Table 3
Multilevel regression analysis of the association between IPV and marital disruption among women in sub-Saharan Africa.

	Model O	Model I aOR [95% CI]	Model II aOR [95% CI]	Model III aOR [95% CI]
Fixed effects results				
Physical violence				
No		1 [1.00,1.00]		1 [1.00,1.00]
Yes		1.50*** [1.42,1.58]		1.42*** [1.35,1.50]
Sexual violence				
No		1 [1.00,1.00]		1 [1.00,1.00]
Yes		1.42*** [1.34,1.50]		1.29*** [1.21,1.37]
Emotional violence				
No		1 [1.00,1.00]		1 [1.00,1.00]
Yes		1.76*** [1.67,1.85]		1.86*** [1.76,1.96]
Maternal age				
15–19		1 [1.00,1.00]		1 [1.00,1.00]
20–24		1.29*** [1.15,1.45]		1.29*** [1.15,1.45]
25–29		1.83*** [1.63,2.06]		1.87*** [1.66,2.10]
30–34		2.71*** [2.40,3.05]		2.77*** [2.45,3.13]
35–39		3.17*** [2.80,3.59]		3.27*** [2.88,3.71]
40–44		3.87*** [3.41,4.40]		3.96*** [3.48,4.51]
45–49		3.93*** [3.45,4.49]		4.11*** [3.60,4.71]
Educational level				
No education		1 [1.00,1.00]		1 [1.00,1.00]
Primary		1.54*** [1.45,1.63]		1.34*** [1.27,1.43]
Secondary		1.41*** [1.32,1.50]		1.36*** [1.27,1.46]
Higher		0.94 [0.83,1.06]		0.94 [0.82,1.07]
Current working status				
No		1 [1.00,1.00]		1 [1.00,1.00]
Yes		1.19*** [1.13,1.25]		1.38*** [1.31,1.45]
Religion				
Christianity		1 [1.00,1.00]		1 [1.00,1.00]
Islamic		0.60*** [0.57,0.64]		0.84*** [0.79,0.90]
African Traditional		0.37*** [0.29,0.46]		0.62*** [0.49,0.78]
No religion		1.01 [0.89,1.15]		1.11 [0.97,1.26]
Others		1.20 [0.95,1.51]		1.25 [0.99,1.59]
Parity				
0		1 [1.00,1.00]		1 [1.00,1.00]
1		1.21*** [1.10,1.34]		1.23*** [1.11,1.36]
2		0.83*** [0.75,0.92]		0.83*** [0.75,0.92]
3		0.64*** [0.58,0.71]		0.64*** [0.57,0.71]
4 or more		0.36*** [0.32,0.39]		0.35*** [0.31,0.38]
Mass media exposure				
No			1 [1.00,1.00]	1 [1.00,1.00]
Yes			0.87*** [0.83,0.91]	0.78*** [0.74,0.82]
Wealth index				
Poorest			1 [1.00,1.00]	1 [1.00,1.00]
Poorer			0.80*** [0.75,0.85]	0.76*** [0.71,0.81]
Middle			0.73*** [0.69,0.78]	0.69*** [0.64,0.74]
Richer			0.69*** [0.65,0.74]	0.61*** [0.57,0.66]
Richest			0.59*** [0.54,0.64]	0.50*** [0.46,0.55]
Place of residence				
Urban			1 [1.00,1.00]	1 [1.00,1.00]
Rural			0.48*** [0.45,0.50]	0.50*** [0.47,0.53]
Subregions				
Southern			1 [1.00,1.00]	1 [1.00,1.00]
Central			1.07 [0.88,1.29]	1.31** [1.08,1.60]
East			1.46*** [1.21,1.76]	1.75*** [1.44,2.13]
West			0.44*** [0.37,0.54]	0.65*** [0.53,0.79]
Random effect results				
PSU variance (95% CI)	0.022 [0.014, 0.036]	0.028 [0.018, 0.043]	0.025 [0.016, 0.039]	0.030 [0.020, 0.046]
ICC	0.007	0.008	0.008	0.009
LR Test	24.15 (<0.001)	33.16 (<0.001)	29.52 (<0.001)	37.98 (<0.001)
Wald chi-square	Reference	4471.68***	2352.86***	5716.19***
Model fitness				
Log-likelihood	−33820.064	−31414.268	−32476.169	−30574.395
AIC	67644.13	62874.54	64974.34	61212.79
N	123938	123938	123938	123938
Number of clusters	1602	1602	1602	1602

Exponentiated coefficients; 95% confidence intervals in brackets; aOR adjusted odds ratios; CI Confidence Interval; *p < 0.05, **p < 0.01, ***p < 0.001; 1 = Reference; category PSU=Primary Sampling Unit; ICC = Intra-Class Correlation; LR Test = Likelihood ratio Test; AIC = Akaike’s Information Criterion.

This simply means that marital disruption decreases with increasing wealth index. This findings contradict the findings of previous study conducted in Zambia and Mozambique (Bamiwuye & Odimegwu, 2014). Surprisingly, the odds of experiencing marital disruption were high among women who were employed compared to those who were

unemployed. This finding can be explained by the fact that employed women can cater for their basic needs in life on their own. Employed women will tend to end any violent relationship with their partners.

Also, the study found that women with higher education were less likely to experience marital disruption. The possible justification could

be that women with higher education do better understand IPV than women with no education. This knowledge acquired can help them champion the fight against indiscriminate and bad socio-cultural practices that are against women. The findings of this study are congruent to that of Hindin et al. (2008), who found education as a protective factor against sexual or emotional violence in Bolivia, Kenya, and Zimbabwe. It can, therefore, be assumed that encouraging more women to be educated can reduce the prevalence of marital disruption.

8. Strengths and limitations

Nationally representative data in 25 countries in SSA were employed to assess the association between IPV among women and marital disruption in SSA. The study has offered insights on IPV as a predictor of marital disruption among women in SSA. The study had its strength from the large data used from different countries in SSA. The use of nationally representative surveys (DHS) made it possible to obtain samples that are highly representative of the target populations. The use of large sample size and the national representative nature of data make conclusions from our study valid. However, due to the cross-sectional nature of the study design, causal inference cannot be drawn from current outcomes. The relationships established between the explanatory and dependent variables may vary over time.

9. Conclusion

This study has shown the association between intimate partner violence and marital disruption among women in SSA. Findings from this study call for proven effective intimate partner violence reduction interventions such as strengthening laws against intimate partner violence in sub-Saharan Africa. Again, marital counseling and health education interventions could be implemented to address the role of intimate partner violence on the wellbeing of women and the stability of marriages in sub-Saharan Africa.

Funding

The study did not receive any funding.

Authors statement

RGA and AS conceived the study. RGA and BOA designed and performed the analysis. AS, RGA, BOA, CA, and SY designed first draft of the manuscript. AS, RGA, BOA, CA, and SY revised the manuscript for intellectual content and gave consent for the version to be published. All authors have read and approved final manuscript and agreed to be accountable for all aspects of the work.

Ethical considerations

We did our analysis using data that is publicly available. Since, the dataset is already available in the public domain, no ethical approval was required for this study. Details about data and ethical standards are available at: <http://goo.gl/ny8T6X>.

Declaration of competing interest

The authors declare that they have no competing interests.

Acknowledgement

Not applicable.

References

- Abramsky, T., Watts, C. H., Garcia-Moreno, C., Devries, K., Kiss, L., Ellsberg, M., & Heise, L. (2011). What factors are associated with recent intimate partner violence? Findings from the WHO multi-country study on women's health and domestic violence. *BMC Public Health*, 11(1), 1–17. <https://doi.org/10.1186/1471-2458-11-109>
- Ahinkorah, B. O., Dickson, K. S., & Seidu, A. A. (2018). Women decision-making capacity and intimate partner violence among women in sub-Saharan Africa. *Archives of Public Health*, 76(1), 1–10.
- Ahinkorah, Bright Opoku, Onayemi, Olayinka Modupe, Seidu, Abdul-Aziz, Awopegba, Oluwafemi Emmanuel, Ajayi, Anthony Idowu, et al. (2021). Association between girl-child marriage and intimate partner violence in Sub-Saharan Africa: insights from a multicountry analysis of demographic and health surveys. *Journal of Interpersonal Violence*, 1–21. <https://doi.org/10.1177/08862605211005139>
- Ahmadi, R., Soleimani, R., Jalali, M. M., Yousefnezhad, A., Roshandel Rad, M., & Eskandari, A. (2017). Association of intimate partner violence with sociodemographic factors in married women: A population-based study in Iran. *Psychology Health & Medicine*, 22(7), 834–844.
- Aliaga, A., & Ruilin, R. (2006). Cluster optimal sample size for demographic and health surveys. In *Paper presented at the 7th international conference on teaching statistics-ICOTS*.
- Bamiwuye, S. O., & Odimegwu, C. (2014). Spousal violence in sub-saharan Africa: Does household poverty-wealth matter? *Reproductive Health*, 11(1), 1–10.
- Berzenski, S. R., & Yates, T. M. (2010). A developmental process analysis of the contribution of childhood emotional abuse to relationship violence. *Journal of Aggression, Maltreatment & Trauma*, 19(2), 180–203. <https://doi.org/10.1080/10926770903539474>
- Corsi, D. J., Neuman, M., Finlay, J. E., & Subramanian, S. (2012). Demographic and health surveys: A profile. *International Journal of Epidemiology*, 41(6), 1602–1613.
- Dagnew, G. W., Asresie, M. B., Fekadu, G. A., & Gelaw, Y. M. (2020). Factors associated with divorce from first union among women in Ethiopia: Further analysis of the 2016 Ethiopia demographic and health survey data. *PLoS One*, 15(12), Article e0244014.
- Devries, K. M., Mak, J. Y., Garcia-Moreno, C., Petzold, M., Child, J. C., Falder, G., & Watts, C. H. (2013). The global prevalence of intimate partner violence against women. *Science*, 340(6140), 1527–1528.
- Gubi, D., Nansubuga, E., & Wandera, S. O. (2020). Correlates of intimate partner violence among married women in Uganda: A cross-sectional survey. *BMC Public Health*, 20(1), 1–11. <https://doi.org/10.1186/s12889-020-09123-4>
- Heise, L. L., & Kotsadam, A. (2015). Cross-national and multilevel correlates of partner violence: An analysis of data from population-based surveys. *The Lancet Global Health*, 3(6), e332–e340.
- Hindin, M. J., Kishor, S., & Ansara, D. L. (2008). Intimate partner violence among couples in 10 DHS countries: Predictors and health outcomes. *Reproductive Health Matters*, 17(33), 1–75.
- Kishor, S. (2005). *Domestic violence measurement in the demographic and health surveys: The history and the challenges* (pp. 1–10). Division for the Advancement of Women.
- Pallitto, C. C., Garcia-Moreno, C., Jansen, H. A., Heise, L., Ellsberg, M., & Watts, C. (2013). Intimate partner violence, abortion, and unintended pregnancy: Results from the WHO multi-country study on women's health and domestic violence. *International Journal of Gynecology & Obstetrics*, 120(1), 3–9.
- United Nations. (2015). Sustainable development Goals. <http://www.un.org/sustainable-development/sustainable-development-goals/>. (Accessed 15 May 2021).
- Von Elm, E., Altman, D. G., Egger, M., Pocock, S. J., Gøtzsche, P. C., Vandenbroucke, J. P., & Initiative, S. (2014). The strengthening of reporting of observational studies in Epidemiology (STROBE) statement: Guidelines for reporting observational studies. *International Journal of Surgery*, 12(12), 1495–1499.
- Wagman, J. A., Charvat, B., Thoma, M. E., Ndyababo, A., Nalugoda, F., Ssekasanvu, J., & Gray, R. H. (2016). Intimate partner violence as a predictor of marital disruption in rural Rakai, Uganda: A longitudinal study. *International Journal of Public Health*, 61(8), 961–970.
- Wareham, J., Boots, D. P., & Chavez, J. M. (2009). A test of social learning and intergenerational transmission among batterers. *Journal of Criminal Justice*, 37(2), 163–173. <https://doi.org/10.1016/j.jcrimjus.2009.02.011>
- Winchester, M. S. (2016). Marriage, violence and HIV: The shifting policy context in Uganda. *Culture, Health & Sexuality*, 18(12), 1333–1346.
- World Health Organization. (2012). *Understanding and addressing violence against women: Intimate partner violence* (No. WHO/RHR/12.36). World Health Organization.
- World Health Organization. (2013). *Responding to intimate partner violence and sexual violence against women: WHO clinical and policy guidelines*. World Health Organization.
- World Health Organization. (2014). *Health care for women subjected to intimate partner violence or sexual violence: A clinical handbook* (No. WHO/RHR/14.26). World Health Organization.