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(2023) Exploring the association between attitudes towards wife beating and intimate partner violence using a dyadic approach in three sub-Saharan African countries. BMJ Open.

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BMJ Open Exploring the association between attitudes towards wife beating and intimate partner violence using a dyadic approach in three sub-Saharan African countries

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To cite: Bengesai AV, Khan HTA.

Exploring the association between attitudes towards wife beating and intimate partner violence using a dyadic approach in three sub-Saharan African countries. *BMJ Open* 2023;**13**:e062977. doi:10.1136/bmjopen-2022-062977

► Prepublication history and additional supplemental material for this paper are available online. To view these files, please visit the journal online (<http://dx.doi.org/10.1136/bmjopen-2022-062977>).

Received 30 March 2022

Accepted 16 May 2023



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ABSTRACT

Objective The present study examines the association between attitudes towards wife beating and intimate partner violence (IPV) using a dyadic approach in three sub-Saharan countries.

Setting We use data from the most recent Demographic and Health Survey cross-sectional studies which were conducted between 2015 and 2018 in Malawi, Zambia and Zimbabwe

Participants Our sample comprised 9183 couples who also had completed the information on the domestic violence questions and our variables of interest.

Results Our results indicate that women in these three countries are generally comparatively more inclined to justify marital violence than their husbands or partners. In terms of IPV experience, we found that when both partners endorsed wife beating, the risk of experiencing IPV was twice as likely after controlling for other couple-level and individual factors (OR=1.91, 95% CI 1.54–2.50, emotional violence; OR=2.42, 95% CI 1.96–3.00, physical violence; OR=1.97, 95% CI 1.47–2.61, sexual violence). The risk of IPV was also higher when the women alone endorsed IPV (OR=1.59, 95% CI 1.35–1.86, emotional violence; OR=1.85, 95% CI 1.59–2.15, physical violence; OR=1.83, 95% CI 1.51–2.22, sexual violence) than when the men alone were tolerant (OR=1.41, 95% CI 1.13–1.75, physical violence; OR=1.43, 95% CI 1.08–1.90, sexual violence).

Conclusions Our findings confirm that attitudes towards violence are perhaps one of the key indicators of IPV prevalence. Therefore, to break the cycle of violence in the three countries, more attention must be paid to attitudes towards the acceptability of marital violence. Programmes tailored to gender role transformation and promote non-violent gender attitudes are also needed.

BACKGROUND

Intimate partner violence (IPV) is a persistent public health problem affecting many women regardless of their sociodemographic or economic characteristics^{1 2} and has been gaining global attention over the years due to its deleterious effects. On average, 30%

STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ The study includes data from 9183 couples, which is a substantial sample size.
- ⇒ The study includes data from three countries and, thus, different cultural contexts.
- ⇒ We use a dyadic approach to understand the dynamics within the relationship and how individual and couple-related factors contribute to the overall picture.
- ⇒ The study design is cross-sectional, which precludes causal inferences.

of women globally have experienced IPV throughout their lifetime, suffering severe physical, mental and reproductive health consequences.¹ The prevalence of IPV also varies from country to country. It is significantly worse in low and middle-income countries, especially in sub-Saharan Africa (SSA), where IPV ranges from 9.4% in Comoros,³ 45% in Zimbabwe,⁴ to 78% in Ethiopia⁵ with a regional prevalence of 36%, surpassing the global average.⁶

An increasing body of research has identified the multiple adverse effects of IPV, indicating that it is a human rights problem and a public health issue.^{7–9} These studies have linked IPV to physical health outcomes such as chronic pain and somatic disorders⁷; aggravated symptoms of menopause,⁹ sexually transmitted infections, including HIV and AIDS,¹⁰ and worsening CD4+ cell depletion.⁹ IPV has also been linked to mental health issues such as depression, suicidality, anxiety and post-traumatic stress disorder.¹¹ While some of these effects are short term, others are cumulative across the lifespan.¹²

Preventing IPV clearly requires understanding the factors that make IPV acceptable and endemic in society. Hence, several

studies have attempted to understand them, with some of the risk factors in SSA fairly consistent across different parts of the world.³ For instance, studies have found the individual-level factors, such as a woman's age, education, alcohol use, spousal age difference, age at first marriage and decision-making autonomy, among other predictors, to be associated with IPV risk.^{13–15} However, in SSA, many scholars have mainly attributed IPV to the enduring patriarchal traditions that promote male dominance in many African countries.^{16–17} In particular, scholars have been concerned with the interlocking of masculinity and cultural norms that endorse patriarchy-related attitudes and behaviours in men and women during socialisation.

One universally acknowledged patriarchy-related factor associated with IPV is an individual's beliefs about wife beating.¹⁸ Extensive research evidence shows that such beliefs are widespread, although the magnitude varies widely across countries.^{19–22} For instance, in a multi-country study, Tran *et al*¹⁹ found that the proportion of women who justified wife beating ranged from 2.0% in Argentina to 90.2% in Afghanistan. When disaggregated by region, SSA and Asia had the highest percentage of women who endorsed these attitudes. In another study by Zegeye *et al*,²² approximately 50% of Zambian, 38% of Zimbabwean and 17% of Malawian women were found to be acceptive of marital violence.

Understanding these attitudes and the associated factors is important because women are more likely to be susceptible to IPV in contexts where violence is socially acceptable.^{23–24} This is because such attitudes are often perpetuated by the commonly held norms that create social standards for appropriate behaviours in society.¹⁶ To illustrate, in many African cultures, it is expected that the husband should assert authority over his wife and correct any behaviour which deviates from social norms.^{3–25} Consequently, women who feel that violence is justifiable under any circumstance will likely accept their husband's right to control their behaviour, even if it means using violence. Thus, tolerant attitudes towards IPV are a result of social conditioning and reflect the subordinate status of women and how they respond to violence.^{23–26–27} Further, when violence is normalised, society might have little or no sympathy for the victims, which might prevent the latter from seeking help or leaving abusive marriages.

Unquestionably, IPV is a relational phenomenon. However, most empirical research, especially from SSA, has focused on individuals, either men or women, as units of analysis.^{18–19–22} While this research has been informative in improving our understanding of the role of social norms in the persistence of marital violence, it has been limited in that it ignores the couple-level dynamics which also shape IPV.²⁰ This is because couple-level differences in IPV perspectives 'may indicate broader tensions and ideational differences between partners',²¹ making the context in which IPV is experienced even more complex. For this reason, we adopt a dyadic approach to examine the association between tolerant attitudes towards IPV. We define dyadic concordance as the agreement in the

responses between the husband and the wife and draw on data from three SSA countries (Malawi, Zambia and Zimbabwe).

Justification for a dyadic approach

Although couples enter a relationship as individuals, they bring with them their lived experiences which are reshaped through their interactions over time.²¹ Therefore, the attitudes that either the wife or the husband have towards marital violence are likely influenced by a mix of these individual and shared experiences. In many African communities, people often marry spouses from the same geocultural setting and/or ethnic group to prevent core values from being neutralised.¹⁷ For example, local terms such as *kuroora vematongo* or *ukhuni olungaziwayo kaluthezwa* are used in the Zimbabwean cultures to express this view. Even when people intermarry, they are likely to choose partners with similar attributes such as education, occupation, age and values.^{21–28} Yet, despite these commonalities that bring people into marital unions, research has shown that the correlates of marital violence justification may be gendered.^{21–29} For instance, one Sierra Leonean study found that although an increase in education was associated with an increase in the rejection of marital violence by women, the same did not change men's attitudes.³⁰ Gender differences in IPV rejection were also observed in Malawi where a positive association was found between access to media and acceptance of violence among men, while the same resulted in a higher rejection of violence among women.^{21–31} In Nigeria, gender differences in the acceptance of wife beating were also found in the influence of age and media exposure.²⁹

Given this background, it is important that research focuses on couples rather than individuals as this can provide a better understanding of factors behind attitudes towards marital violence.³² This is because analysing interview data from only one partner limits the perception of couple's experiences as the data gathered are restricted to a single perspective. However, combining the husband and wife's perspectives through dyadic analysis can help confirm what the other partner has said, thus enriching the interpretation derived from the data.³³

Context

This study focuses on three geographically connected countries that also share sociopolitical histories. The three countries are all former British colonies, and at one point, they were governed as one 'country' (figure 1) under the Federation of Rhodesia and Nyasaland.³⁴ As a result, migration between the three countries was inevitable.³⁵ Consequently, within each country, there is a large diaspora originating from all three countries. Hence, it can be expected that there is a cross-pollination of norms and values.

Apart from the shared history, the three countries can also be described as resource constrained, characterised by high unemployment, intermittent food shortages and the repercussions of HIV and AIDS.^{27–36–37} The three

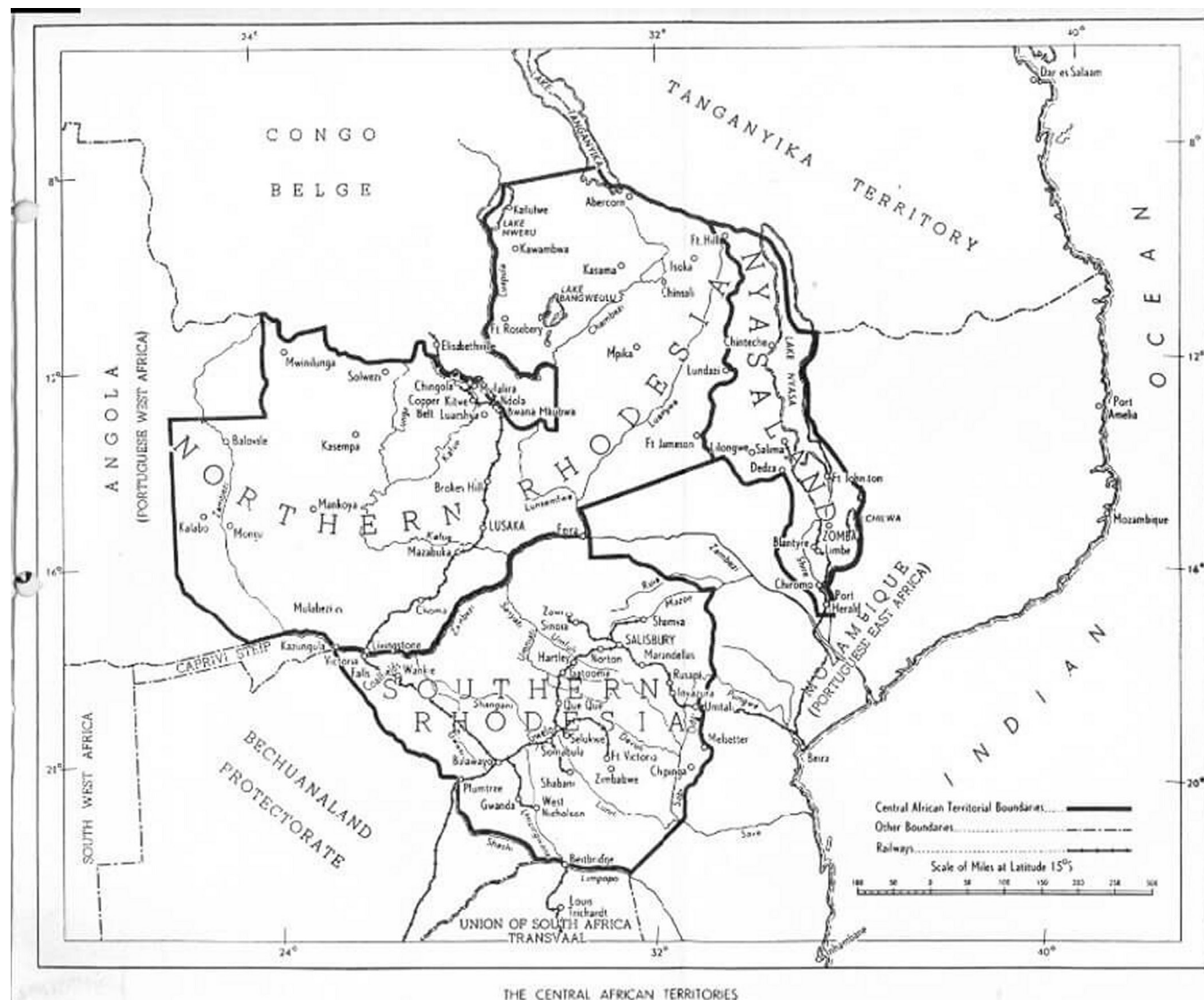


Figure 1 Map of the Central African Republic. Source: <https://eap.bl.uk/archive-file/EAP121-1-3-16>.

countries are also heavily dependent on development aid, which ranges from 35% to 50% of total expenditure, partly due to low economic growth.³⁸

However, despite these similarities, the countries also share some differences that are^{39 40} likely to influence communal attitudes towards marital violence. For instance, in Malawi, certain regions follow the matrilineal tradition,^{40 41} unlike in Zimbabwe and Zambia, which are predominantly patriarchal. However, although descent and inheritance are traced through the maternal line, research evidence suggests that such societies often mirror a patriarchal society in many ways, including domestic violence.⁴⁰

METHODS

The study uses the most recent Demographic and Health Survey (DHS)⁴² cross-sectional data from Malawi (2015), Zambia (2018) and Zimbabwe (2015). The DHS collects data which are nationally representative on a range

of population health indicators, including domestic violence. In general, the DHS surveys employ a stratified two-stage cluster sampling, selecting women based on urban or rural residence. The surveys also use uniform data collection instruments across countries, thus allowing for cross-country comparisons. Further details regarding the methodology used in DHS are found at www.measuredhs.org.

In each of the three selected countries, the sample was limited to currently partnered women, given that some of the covariates used in this paper focused on concordance and gender differences between couples.²¹ The final analytical sample comprised 9183 couples who had completed the information on the 13 IPV questions in the survey and our variables of interest.

Outcome variable

The variable of interest in this study was *ever experienced* IPV, which was derived from 13 questions (table 1).

Table 1 IPV variables used in the study

Variable/question	Coding
Humiliated, threatened them with harm, insulted or made them feel bad	Emotional violence
Pushed, shook or had something thrown, slapped or punched with fist or hit by something harmful; arm twisted, or hair pulled, kicked or dragged, strangled or burnt, threatened with knife/gun/weapon	Less severe physical
Physically forced them into unwanted sex; forced into unwanted sexual acts; physically forced to perform unwanted sexual acts	Sexual
IPV, intimate partner violence.	

Women were asked if their husband or partners ever did any of the following:

If the respondent answered yes to any of these questions, we assumed they had been a victim of that form of violence. We then created dichotomous variables indicating whether a woman had experienced emotional, physical or sexual violence (0=No, 1=Yes).

Main explanatory variable

The main explanatory variable was attitudes towards IPV, which was derived from five questions that asked both men and women's attitudes towards wife beating under five hypothetical situations: (a) going out without telling her husband/partner; (b) neglecting children; (c) arguing with the husband/partner; (d) refusing sex; and (e) burning food. Following prior research on IPV attitudes, we coded the responses to each of these questions as: 1=tolerant if the husband/wife justified marital violence on at least one of the five hypotheticals and 0=non-tolerant if the husband or wife rejected wife beating across all hypotheticals.

In order to capture concordance or discordance in husbands and wives' individual responses to these questions, we created a four-categorical variable: 1=concordance (both reject across all five scenarios); 2=concordance (both accept wife beating in at least one scenario); 3=discordance (husband only accepts at least one scenario); and 4=discordance (wife only accepts).

We also assumed that similarities in background characteristics of both partners might be an important predictor for couple-level concordance tolerance of IPV; therefore, we also included the following variables: work status, educational and age difference and exposure to media.

Extensive research has shown that both wife and husband's employment status is associated with both IPV and IPV acceptance.²¹ Employment increases women's access to resources, reducing their dependency on their husbands and, thus, their susceptibility to violence. At the same time, some studies have shown that when women outearn their husbands, they are more likely to be tolerant of marital violence.^{18 19} For this reason, we also included a categorical variable whether (1) both were working, (2)

both were not working, (3) only the husband was working and (4) only the wife was working.

To get the educational difference, we subtracted the wife's education from that of the husband. A negative score specified that the wife was more educated and was coded as (1=wife more educated); a score of 0 indicated the husband and wife had a similar educational level and was coded as (2=no difference), while a positive score indicated that the husband was more educated and was coded as (3=husband more educated).

We also hypothesised that the age difference could create relationship inequality, which we believed could result in marital discord. We, therefore, proceeded to create the age difference variable in the same way as the educational difference variable. We then created four categorical variables: 1=0–4 years difference; 2=5–9 years difference, 3=≥10 years difference and 4=wife older.

Joint exposure to information about IPV might substantially affect attitudinal change more than when women or men alone are exposed.²¹ As such, we also included a variable that revealed couple similarities in exposure to media. This composite variable was derived from the respondent's frequency of reading newspapers, listening to the radio or watching television and was coded as 0=no access, 1=sometimes (ie, less than once a week) and 2=frequent (at least once a week or every day). We further recoded the variable on a four-level categorical scale to reflect the extent of differences in the characteristics between the man and the woman.

Polygamy was assessed from the respondent's position among cowives (0=no cowives and 1=≥2 wives).

The marital duration was derived from subtracting the age at first cohabitation from the wife's current age at the time of the interview. In order to capture this accurately, we included women who were only married once. We also followed the same procedure we used in deriving the spousal age difference and coded it as a three-categorical variable: 1=0–4 years, 2=5–9 years and 3=≥10 years difference.

Women's decision autonomy

Women's decision autonomy was derived from the question which asked who had the decision-making responsibility on (1) household purchases, (2) visiting relatives, (3) visiting healthcare institutions and (4) husband's earnings. For each of these questions, the women's responses were (1) wife alone, (2) husband alone, (3) joint decision and (4) other. The responses to these questions were recoded to take the value of (0) if the woman was not involved in any decision-making, (1) if the woman indicated 'make sole decisions' and (2) if the woman made decisions jointly with her husband/partner.

We also included the following controls: the place of residence (1=urban, 2=rural) and household wealth, which was categorised into quintiles in the DHS but recoded into three categorical variables for the analysis (1=poor; 2=middle, 3=rich).

Patient and public involvement

There was no direct patient or public involvement, given our study used secondary data.

Data analysis

The analysis was performed in STATA V.16.0. First, we present the descriptive analysis of the outcome variables (emotional, physical and sexual violence) as well as the distribution of the main explanatory variable. Next, we consider the association between dyadic attitudinal concordance or discordance using logistic regression. To show the impact of these attitudinal differences on IPV risk, we also compute the average marginal effects (AMEs), an 'intuitional way of describing relationships predicted using regression methods',⁴³ by computing numerical rather than analytical derivatives.⁴⁴ Simply put, AMEs present regression results as differences in probabilities rather than ORs.

RESULTS

The sample (table 2) consisted of 9183 couples from Malawi (n=2788), Zambia (n=3880) and Zimbabwe (n=2515). Exposure to emotional violence ranged from 241.1% in Malawi to 29.9% in Zimbabwe. Physical violence was highest in Zambia (34.5%), followed by Zimbabwe (29.2) % and then Malawi (22.6%). Exposure to sexual violence was highest in Malawi (16.5%), Zambia (12.3%) and then Zimbabwe (10.4%).

Concordance in attitudes towards wife beating

Figure 2 presents the distribution of the main explanatory variable for Malawi, Zambia and Zimbabwe, while figure 3 presents the overall distribution for the three countries.

Malawi had the highest rejection of marital violence (79.0%), followed by Zimbabwe (51.6%) and then Zambia (40.9%). In all three countries, more women than men were acceptive of wife beating, with the highest proportion being observed in Zambia, followed by Zimbabwe and then Malawi. Given that Malawi's Central and Southern regions where the majority of the population live are largely matrilineal,⁴¹ and thus women in these regions are considered more autonomous, we conducted a supplementary analysis (see online supplemental file 1) to determine if this could have influenced the low tolerance of violence. Consistent with our assumptions, the supplementary analysis revealed a high couple-level rejection rate of marital violence in the Central (81.5%) and Southern (82.1%) versus the Northern (68.1%).

Overall, there was a higher rejection of marital violence among men (81.3%) than women (64.3%) in the three countries. In terms of concordance, slightly above half (55.4%) of the couples rejected wife beating, while for a quarter of the couples, only the wife felt marital violence was justified.

Table 3 presents the adjusted logistic regression models for IPV experience and couple-level attitudes towards wife beating. The probability of experiencing all forms

of IPV was highest when both partners endorsed marital violence, followed by when the woman alone was tolerant and then the husband alone, in that order. Women were almost twice as likely to be victims when both partners justified IPV, with the highest effect recorded for physical (OR=2.42, 95% CI 1.96-3.00). Among the couples where only the wife accepted wife beating, the risk of experiencing IPV was 59%, 85% and 83% for emotional, sexual and physical violence, respectively. When the husband/partner alone justified wife beating, the risk of IPV increased by 41% for physical violence and 43% for sexual violence.

Access to media increased the risk of physical violence (OR=1.30, 95% CI 1.04-1.61) in couples where only the woman had access and sexual violence (OR=1.37, 95% CI 1.09-1.72) when both partners had no access.

When both partners or the husband alone was working, the risk of experiencing all forms of violence was reduced. However, these results were only significant for a few interactions; emotional violence (OR=0.69, 95% 0.51-0.92) when both were working and sexual violence (OR=0.77, 95% CI 0.65-0.91) when the husband alone was working. Interestingly, the risk of experiencing IPV increased but was not statistically significant when the wife alone was working. Women who made decisions with their partners or had no decision-making power on health issues were less likely to report emotional (OR=0.77-0.82) or physical violence (OR=0.66-0.89). However, the risk for sexual violence increased by 25% for women with no say in their health matters. Women who made joint or no decisions on household issues were also less likely to experience emotional and sexual abuse (OR=0.53-0.79). Making joint decisions on mobility or having no say on mobility also reduced the odds of experiencing all forms of IPV (OR=0.65-0.82). There was no significant association for the husband's earnings except for emotional violence. The odds of experiencing emotional violence were up to 1.65 for women with no say in husbands' earnings. When the husband was more educated than the wife, the risk of emotional violence increased by up to 16%.

The spousal age difference was significantly associated with sexual and physical violence for the ≥10 years age gap category. The risk of physical violence was reduced by 30% in wife older relationships and 20% when the age gap was ≥10 years. Sexual violence also reduced by 19% in couples where the age difference was at least 10 years. Women in polygamous marriages were up to 54% more likely to experience physical violence.

The marital duration was also associated with the risk of experiencing all forms of IPV. Couples married for at least 5-9 or 10 years and more had higher chances of experiencing all forms of IPV (OR=1.36-1.96).

Among non-couple-level factors included in our model, the risk of IPV generally decreased with age, although it was only significant for sexual violence for the age category of 35-49 (OR=0.74, 95% 0.57-0.95). Women from very wealthy families also had reduced odds of experiencing all forms of IPV (OR=0.67-0.73). Place of residence only

Table 2 Descriptive statistics for controls used in the analysis

Variables	Malawi n=2788	Zambia n=3880	Zimbabwe n=2515	Overall n=9183
Views of wife beating				
Concordance—both reject	79	40.9	51.6	55.4
Concordance—both accept	1.5	15.8	9.8	9.8
Discordance—husband only accepts	6.2	7.5	14.2	8.9
Discordance—wife only accepts	13.3	35.7	24.4	25.9
Experience of IPV				
Emotional violence	24.1	26.4	29.9	26.6
Physical violence	22.6	34.5	29.2	29.4
Sexual violence	16.4	12.6	10.4	13.1
Educational difference				
No difference	16.6	15.9	30.5	20.1
Husband more educated	56	54.8	46.1	52.8
Wife more educated	27.4	29.3	23.4	27.1
Spousal age difference				
0–4	48.8	42.2	40.9	43.9
5–9	33.9	39.1	37.9	37.1
10+	12.5	15.8	17.3	15.2
Wife older	4.9	2.9	3.4	3.8
Work				
Both working	63.2	47.5	37.1	49.5
Both not working	3.4	3.2	11.9	5.6
Husband only	30	47	45.1	41.2
Wife only	3.4	2.4	5.8	3.2
Media access				
Both have no access	31	26.4	20.6	26.2
Both have access	29.5	37.6	48.8	38.2
Husband only	28	27.7	20.5	25.8
Wife only	11.5	8.3	10.15	9.8
Age				
15–24	33.09	27.49	25.59	28.71
25–34	42.73	40.99	56.26	42.96
35+	24.18	31.53	28.15	28.33
Residence				
Urban	17.79	29.99	40.39	29.04
Rural	82.21	70.01	59.61	59.61
Wealth				
Poor	38.98	49.26	34.9	42.17
Middle	20.92	21.47	15.37	19.64
Rich	40.1	29.26	49.73	38.19
Polygamy				
Yes	8.72	7.53	6.16	7.53
No	91.28	92.47	93.84	92.47
Health decision-making				
Alone	14.83	38.33	31.31	29.13
Joint	52.83	40.77	53.17	47.88

Continued

Table 2 Continued

Variables	Malawi n=2788	Zambia n=3880	Zimbabwe n=2515	Overall n=9183
No	32.35	20.9	15.52	22.99
Household decision-making				
Alone	5.95	7.77	24.93	11.87
Joint	52.94	57.21	62.52	57.33
Visiting relatives				
No	41.11	35.02	12.55	30.79
Alone	13.08	19.69	23.72	18.74
Joint	65.11	56.44	63.63	61.08
Husband's earnings				
No	21.81	23.86	12.65	20.18
Alone	5.76	7.09	11.71	7.94
Joint	50.62	57.63	72.53	59.52
No	43.62	35.28	15.75	32.54

IPV, intimate partner violence.

significantly affected emotional violence, where rural women were 27% less likely to report this type of violence than their urban counterparts. Compared with Zambia, the risk of emotional violence was higher in Malawi and Zimbabwe (OR=1.32–1.38). The risk of sexual violence was also higher in Malawi (OR=1.81, 95% 1.43–2.28), while the probability of experiencing physical violence was lower in Malawi (OR=0.80, 95% 0.67–1.63).

Average marginal effects

Given that our main focus in this study was on concordance or discordance in attitudes towards wife beating, we also present country-specific regression results for this variable (table 4). We also computed the AMEs based on the estimation of the regression models. As in the pooled models (table 3), women were generally more likely to

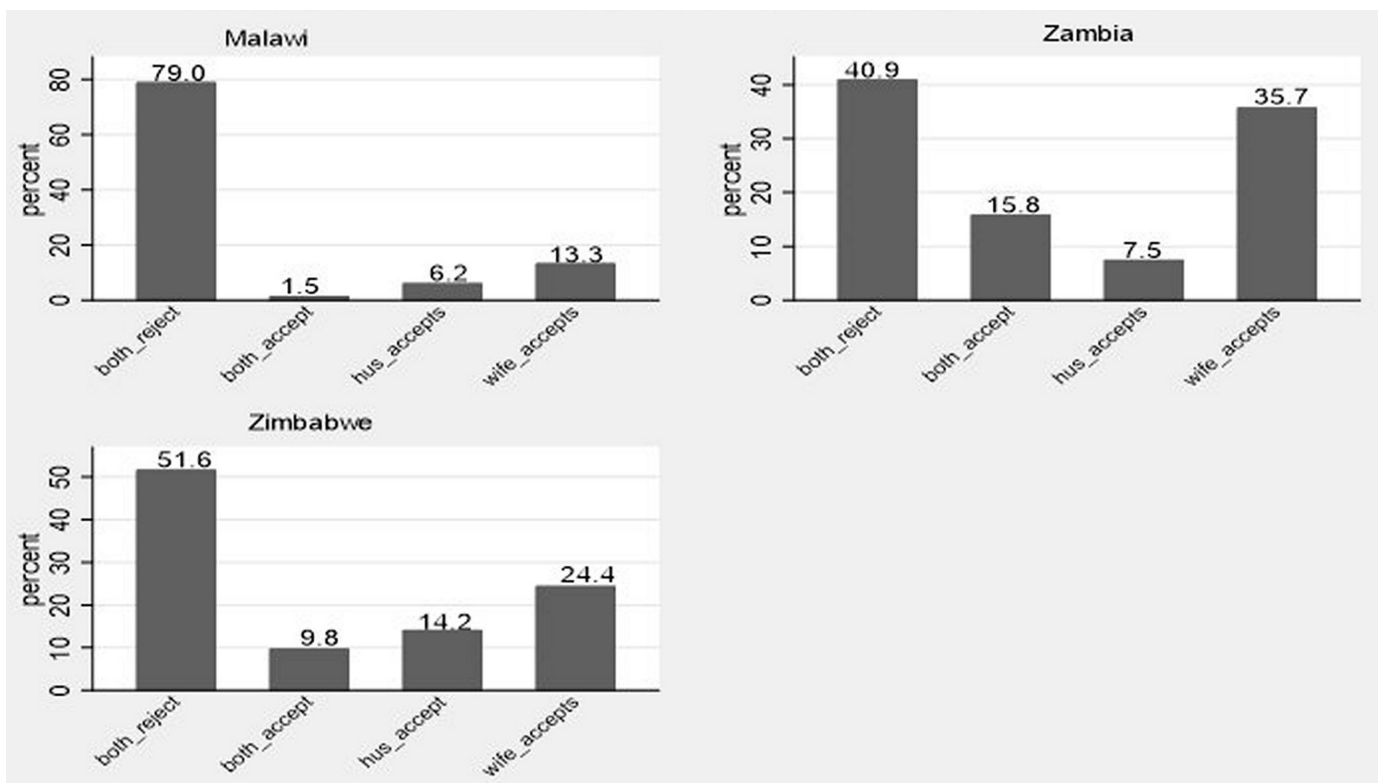


Figure 2 Distribution of attitudes towards wife beating for Malawi, Zambia and Zimbabwe (n=9183).

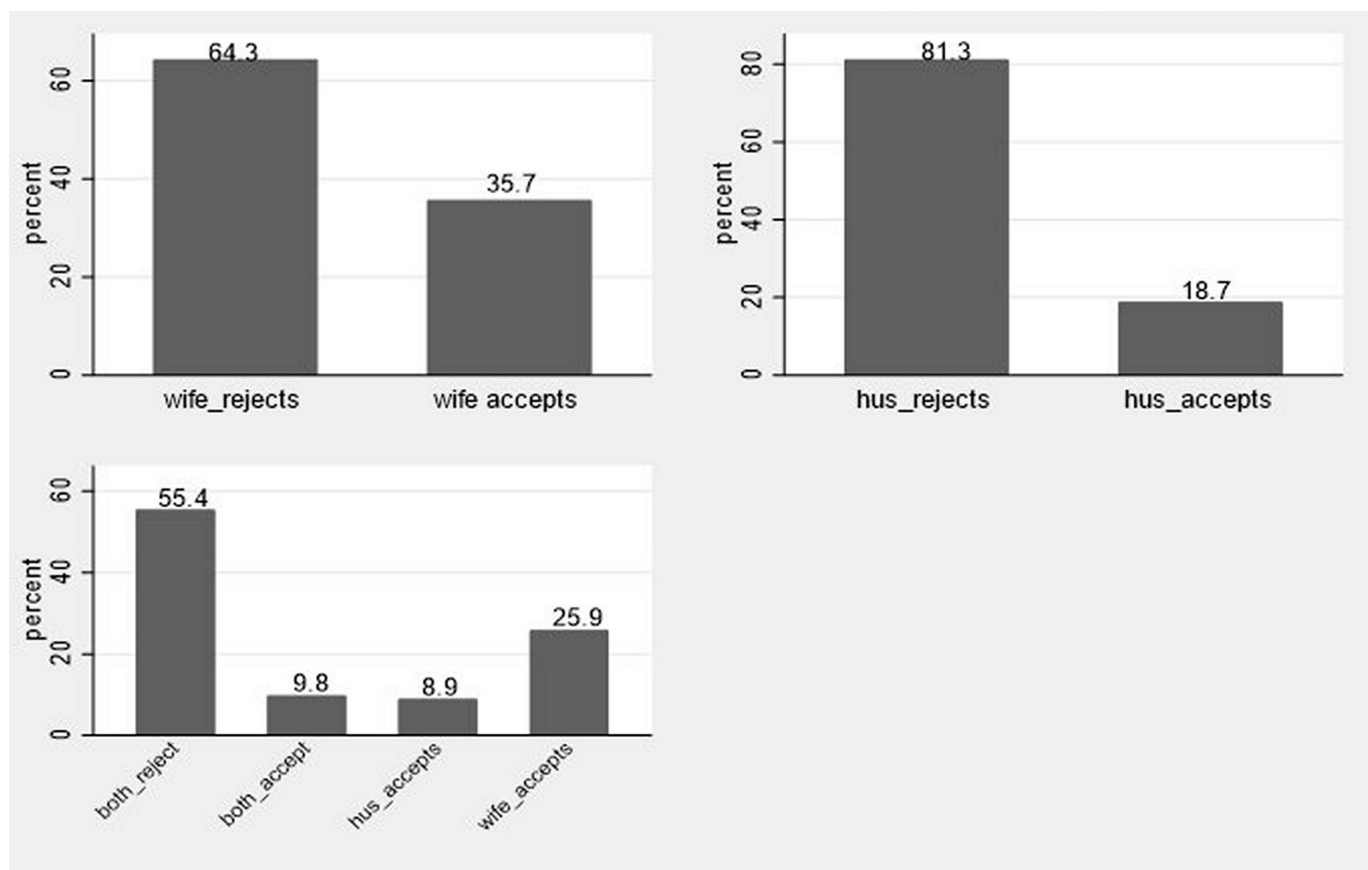


Figure 3 Overall distribution of attitudes towards wife beating (n=9183).

be at risk of IPV if both partners or the woman alone endorsed IPV. The probability of experiencing emotional violence increased by 10% for Malawian women, 14% for Zambian women and 11% for Zimbabwean women when both partners endorsed IPV. When the wife alone was tolerant, the risk increased by 6% in Malawi, 11% in Zambia and 8% in Zimbabwe. A similar pattern can be observed for the other IPV types, where the AMEs increase the most when both partners are tolerant of IPV, followed by the women alone and, lastly, the men—although for the latter, the results were not statistically significant.

DISCUSSION

Although attitudes towards marital violence are universally acknowledged as a proxy indicator for perpetration and victimhood,²³ limited research has examined couple-level concordance or discordance, especially in SSA countries. We came across only two studies investigating this relationship on a cross-national level.^{20 21} Thus, our study adds to this research by adopting a dyadic approach and focusing on three geographically connected countries with similar sociopolitical histories and values, making cross-country comparisons plausible.

Overall, the findings suggest a high rejection of IPV at the individual level, with more men (81%) than women (64%) not endorsing wife beating. While this is counterintuitive, as one would expect the perpetrators to be

more accepting of wife beating, similar findings have also been reported in Nigeria,⁴⁵ Uganda⁴⁶ as well as in a cross-country study.²³ The results from our study have also shown greater variability in attitudes at the couple level, with couples who justify wife beating ranging from 1.5% in Malawi to 16.1% in Zambia. The low tolerance of IPV in Malawi could be due to the matrilineal nature of the Central and Southern regions in that country⁴¹ which was also revealed in our supplementary analysis. In these communities, women hold more power and are more autonomous, hence, it is not surprising that overall, Malawian women would have the least tolerance of marital violence relative to their Zimbabwean and Zambian counterparts. Yet, despite this low tolerance, our findings also suggest that Malawian women were more likely to experience sexual violence (but not physical or emotional) compared with Zambian and Zimbabwean women, with the highest prevalence found in the Central and Northern regions. This finding was rather unexpected given matrilineality is supposed to provide more leverage in a relationship.⁴¹ Thus, sexual violence might operate differently in Malawi, and may even follow a similar pattern as in patrilineal societies where cultural or societal norms limit women's agency and control over their bodies and sexual lives. However, this conclusion remains speculative, and further explorations are needed to validate it.

Table 3 Logistic regression models for IPV experience and couple-level attitudes towards wife beating

Variable	Emotional violence	Physical violence	Sexual violence
Attitudes (Both reject=ref)			
Concordance—both accept	1.91 (1.54–2.5)***	2.42 (1.96–3.00)***	1.97 (1.47–2.61)***
Discordance—husband only accepts	1.10 (0.86–1.39)	1.41 (1.13–1.75)**	1.43 (1.08–1.90)**
Discordance—wife only accepts	1.59 (1.35–1.86)***	1.85 (1.59–2.15)***	1.83 (1.51–2.22)***
Media use (Both have access=ref)			
Both have no access	1.13 (0.94–1.36)	1.13 (0.95–1.33)	1.37 (1.09–1.72)**
Husband only	1.07 (0.89–1.28)	1.14 (0.96–1.35)	1.02 (0.82–1.27)
Wife only	1.18 (0.94–1.48)	1.30 (1.04–1.61)**	1.23 (0.92–1.64)
Work (Both do not work=ref)			
Both work	0.69 (0.51–0.92)**	0.91 (0.68–1.21)	0.73 (0.50–1.08)
Husband only	0.88 (0.76–1.03)	0.98 (0.85–1.12)	0.77 (0.65–0.91)***
Wife only	1.12 (0.83–1.52)	1.11 (0.81–1.52)	1.10 (0.97–1.58)
Healthcare decision-making (Sole=ref)			
Both	0.77 (0.63–0.91)**	0.66 (0.56–0.77)***	0.96 (0.76–1.21)
Wife does not make decisions	0.82 (0.67–1.00)**	0.89 (0.74–1.08)*	1.25 (1.00–1.58)**
Household purchases (Sole=ref)			
Both	0.71 (0.57–0.88)**	0.89 (0.71–1.10)	0.53 (0.40–0.69)***
Wife does not make decisions	0.67 (0.54–0.84)***	0.79 (0.63–1.00)**	0.65 (0.48–0.87)**
Visiting friends and relatives (Sole=ref)			
Both	0.65 (0.54–0.79)***	0.82 (0.69–0.97)**	0.68 (0.55–0.84)***
Wife does not make decisions	0.71 (0.57–0.88)***	0.77 (0.62–0.96)**	0.68 (0.52–0.89)**
Husband's earnings (Sole=ref)			
Both	1.00 (0.78–1.29)	0.87 (0.66–1.14)	0.91 (0.67–1.25)
Wife does not make decisions	1.65 (1.27–2.11)***	1.07 (0.81–1.42)	1.24 (0.89–1.72)
Educational difference (No difference=ref)			
Husband more educated	1.16 (1.00–1.36)**	1.02 (0.87–1.20)	0.85 (0.67–1.07)
Wife more educated	1.12 (0.93–1.35)	0.93 (0.78–1.13)	0.88 (0.69–1.14)
Spousal age difference (0–4=ref)			
5–9	0.94 (0.81–1.08)	1.00 (0.87–1.15)	0.95 (0.81–1.12)
10+	0.98 (0.81–1.18)	0.80 (0.67–0.96)**	0.81 (0.63–1.03)*
Wife older	0.83 (0.57–1.21)	0.70 (0.47–1.02)*	0.67 (0.38–1.16)
Polygamy (No=ref)	1.17 (0.92–1.49)	1.54 (1.23–1.92)***	1.16 (0.87–1.55)
Marital duration (0–4=ref)			
5–9	1.36 (1.12–1.66)**	1.59 (1.31–1.93)***	1.48 (1.10–2.00)**
10+	1.63 (1.28–2.08)***	1.96 (1.55–2.47)***	1.47 (1.03–2.11)**
Age			
25–34	1.09 (0.90–1.33)	0.91 (0.75–1.09)	0.86 (0.63–1.18)
35–49	0.87 (0.66–1.15)	0.74 (0.57–0.95)**	0.77 (0.52–1.19)
Wealth (Poor=ref)			
Middle	0.92 (0.77–1.09)	0.95 (0.80–1.12)	0.92 (0.74–1.15)
Rich	0.72 (0.59–0.87)***	0.73 (0.60–0.94)**	0.67 (0.50–0.88)***
Residence (Urban=ref)	0.73 (0.59–0.89)**	0.87 (0.70–1.07)	1.04 (0.76–1.43)
Country (Zambia=ref)			
Malawi	1.32 (1.14–1.56)***	0.80 (0.67–0.97)**	1.81 (1.43–2.28)***
Zimbabwe	1.38 (1.18–1.62)***	0.90 (0.76–1.07)	0.88 (0.76–1.43)

*P<0.10; **p<0.05; ***p<0.005.

IPV, intimate partner violence; OR, Odds ratio.

Table 4 Logistic regression and average marginal effect models for IPV experience and couple-level attitudes towards wife beating

Variable	Emotional (OR)	AME	Physical	AME	Sexual	AME
Concordance (both reject=ref)						
Malawi						
Concordance (both accept)	1.68 (0.60–4.69)	0.10 (0.06–0.31)	1.28 (0.40–4.13)	0.04 (–0.17 to 0.26)	0.66 (0.21–2.09)	–0.05 (–0.15 to 0.07)
Discordance (husband accepts)	1.15 (0.71–1.84)	0.02 (–0.06 to 0.11)	1.31 (0.77–2.21)	0.05 (–0.05 to 0.14)	1.41 (0.85–2.36)	0.05 (–0.03 to 0.13)
Discordance (wife accepts)	1.37 (0.97–1.95)*	0.06 (–0.01 to 0.13)**	1.48 (1.02–2.13)**	0.07 (–0.01 to 0.14)**	1.37 (0.96–1.97)	0.05 (–0.13 to 0.10)
Zambia						
Concordance (both accept)	2.28 (1.59–2.81)***	0.14 (0.08–0.19)***	3.10 (2.38–4.10)***	0.24 (0.18–0.30)***	2.72 (1.81–4.09)***	0.10 (0.06–0.14)***
Discordance (husband accepts)	1.33 (0.90–1.97)	0.05 (–0.02 to 0.11)	1.53 (1.08–2.17)**	0.08 (0.01–0.15)**	1.63 (0.96–2.79)*	0.04 (–0.01 to 0.09)
Discordance (wife accepts)	1.84 (1.45–2.34)***	0.11 (0.07–0.15)**	2.19 (1.78–2.70)***	0.16 (0.12–0.20)***	2.38 (1.75–3.24)***	0.08 (0.05–0.11)***
Zimbabwe						
Concordance (both accept)	1.69 (1.18–2.41)***	0.11 (0.03–0.18)***	1.81 (1.25–2.63)***	0.12 (0.04–0.20)***	1.76 (1.02–3.05)**	0.05 (–0.01 to 0.11)**
Discordance (husband accepts)	0.92 (0.63–1.36)	–0.01 (–0.08 to 0.06)	1.30 (0.94–1.80)	0.05 (–0.01 to 0.11)	1.25 (0.80–1.98)	0.02 (–0.02 to 0.06)
Discordance (wife accepts)	1.47 (1.11–1.95)**	0.08 (0.02–0.13)**	1.73 (1.27–2.35)***	0.11 (–0.05 to 0.17)***	1.70 (1.12–2.57)**	0.05 (0.01–0.09)**

*p < .10, **p < .05, ***p < .005.

AME, average marginal effect; AME, average marginal effect; IPV, intimate partner violence; OR, Odds ratio.

In terms of associations, the findings from this study indicate that the risk of IPV was highest when both partners justified wife beating. After controlling for other couple-level and demographic variables, the risk of experiencing IPV was up to two times more likely when both partners were tolerant of IPV. This is consistent with findings from other studies that adopted a dyadic approach.^{20 21} However, among discordant couples, our findings suggest that the risk of IPV was higher when the wife justified IPV than when the husband/partner alone was acceptive. Again, this finding was somewhat counter-intuitive as we had expected that IPV risk would be higher when the men perceived violence as normal. Explanations for this *status quo* could be associated with several factors. For instance, there is a possibility of reporting bias, especially where sensitive or socially undesirable traits are involved.⁴⁷ Hence, abusive men might not disclose their actual attitudes in order to remain favourable to the interviewer. Hence, social desirability is one of the inherent major threats in self-reported surveys such as the DHS. Another possibility is that women subjected to repeated victimisation might have developed low self-esteem and have been conditioned to self-blame for whatever reason is causing the violence.⁴⁵ Such a situation, unfortunately, perpetuates IPV and might have a significant psychosocial impact on the victims.³³ As such, studies that seek to disentangle the psychological aspects of conditioned abuse are needed to have a better and more concrete understanding of the phenomenon.

In terms of the other couple-level variables, working status and decision-making autonomy were found, in some cases, to be significantly associated with all forms of IPV. In particular, we found that women who made joint decisions or did not have decision-making power on health, household purchases or mobility had lesser odds of experiencing emotional and sexual violence (except for health). This finding aligns with previous studies from other low-income countries such as the Philippines,⁴⁸ Peru⁴⁹ and Ethiopia⁵⁰ and suggests that in patriarchal societies such as Malawi, Zambia and Zimbabwe, women who control household decisions are more likely to be at risk of experiencing IPV.⁴⁸ This is likely because female autonomy is not consistent with gender and societal norms in patriarchal contexts and is therefore perceived as undermining men's position as decision-makers.²⁶ Moreover, in many African communities, especially those of the patrilineal tradition, the family is at the centre of the marital relationship.

In general, this suggests that men are less likely to use violence when the women are working, provided they are working too.⁵¹ This finding is not surprising as other studies have drawn similar conclusions. This finding is significant for the three countries under study, as is the case in many SSA countries, considering their economic condition characterised by high unemployment and low wages, encouraging women to engage in informal work to supplement the household income. Resnick⁵² notes that more than 70% of the working population in Lusaka

(Zambia) alone were in informal jobs. The situation is similar in Zimbabwe and Malawi, where more than 80%⁵³ and 89%⁵⁴ of the labour force, respectively, is also involved in informal work. Most of the people in the informal sector are women, who work as tailors, hairdressers or food sellers, and, in most cases, earn more from this work than those in formal employment. In patriarchal countries, such economic empowerment might threaten patriarchal societal norms, especially if the man is involved in formal work and earns less than the wife engaged in informal work. While these explanations we provide are plausible, further explorations are required to tease out the association between work status and IPV in the three countries, considering the largely non-significant results.

All categories of spousal age difference were negatively associated with all forms of violence but only statistically significant for physical violence (wife older and ≥ 10 years) as well as sexual violence (≥ 10 years). This echo results from a Nigerian⁵⁵ and South African study,⁵⁶ which also found that having older partners was protective against IPV. Thus, it is possible that when the spousal age difference is wider, the man is most likely to be more mature than the wife.⁴ As such, he might be more tolerant of his wife and better able to handle marital conflict.⁵⁵

Although older age was generally negatively associated with the risk of experiencing IPV, the results were not statistically significant for the most part. Without other evidence, we attribute these insignificant results to the possibility of a correlation between the age variable used in our study and the marital duration and spousal age difference variables. Given that the woman's age was used to create these two variables, it is possible that some of the effects were picked up by these two variables. Regardless, the finding mirrors what has been found in other countries that older age can protect women against marital violence.^{57 58}

The relationship duration was found to have a significant effect on IPV. Couples in relationships for longer durations (5 years and above) had an elevated risk of experiencing marital violence. This finding was somewhat unexpected as we had assumed that younger women lack social and economic power as well as conflict management skills, all of which can influence their capacity to negotiate power dynamics in a relationship, making them vulnerable to IPV.³¹ Nonetheless, this finding is supported by some empirical studies which have shown that the longer the couple is married, the more likely the wife is to experience IPV.^{59 60} It is most likely that women stay longer in these relationships mainly for the sake of children, societal pressure and financial constraints, among others.⁵⁹ Thus, terms such as *kugarira vana* (Zimbabwe)⁶⁰ or *ukushipikisha* (Bemba, Zambia) are often used to encourage women to endure marital violence.⁶¹

Our study suggests that women from rich households were less likely to experience all forms of IPV. On the flip side, these findings indicate that IPV is positively associated with poverty. The main argument running in this paper is that power and control are the main drivers of

IPV.⁶² However, when people live in poverty, they have little to control, except perhaps their families and spouses. Family theorists also argue that the socioeconomic strain and financial insecurities of low-income families mediate the relationship between family wealth and IPV.^{63 64} These tensions and insecurities can create an environment in which IPV can thrive.

Place of residence was only significantly associated with emotional violence. We found that rural women had lesser odds of experiencing emotional violence than their urban counterparts. This could be because women who reside in urban areas are more likely to be exposed to more content on gender-based violence than their rural counterparts.⁵⁹ Hence, they are more likely to recognise even the non-physical forms of IPV, such as emotional violence. Thus, the observed differences could be due to exposure and awareness of different forms of IPV.

While our findings can be generalised to couples in Southern Africa where the conditions that drive patriarchy and violence are similar, they should be interpreted with some limitations in mind. For instance, the data used in this study are cross-sectional; hence, it only shows patterns of IPV victimisation at particular points in time and does not allow us to determine causality. Given that DHS data are collected retrospectively, there is potential for recall bias among participants. Also, each member of the couple dyad was interviewed separately, which again may lead to socially desirable responses or withholding of information if the partner is not present. However, it is also possible that since IPV is a sensitive topic, it may be necessary to interview couples separately, especially in cases where one partner may be experiencing abuse and may feel uncomfortable or unsafe discussing the issue in front of their abuser.

Despite these limitations, this study has demonstrated that attitudes towards IPV are an important risk factor for IPV. The dyadic approach has also shown increased risk when both partners endorse IPV. Therefore, addressing social norms around violence might be the best solution to break these cycles of violence. Evidence from South Africa⁵⁶ and India⁵⁷ has shown that gender role transformative programmes such as the Stepping Stones and Creating Futures intervention⁵⁶ have greatly altered the attitudes in these countries. More specifically, the findings have demonstrated that while the three countries share many similarities, there are significant differences in attitudes towards wife beating, with Malawi having the least tolerant couples. Yet, despite such low tolerance, more women from Malawi reported sexual violence than in the other three countries. Thus, more studies comparing IPV along patriarchal and matrilineal lines are needed to understand how IPV manifests in these contexts.

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Acknowledgements The authors thank the DHS programme for providing access and allowing the use of data in this study.

Contributors AVB conceptualised and designed the study. AVB performed the formal analysis. Both AVB and HTAK contributed towards the interpretation of the findings. Both authors provided input into the final version of the manuscript.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Map disclaimer The inclusion of any map (including the depiction of any boundaries therein), or of any geographic or locational reference, does not imply the expression of any opinion whatsoever on the part of BMJ concerning the legal status of any country, territory, jurisdiction or area or of its authorities. Any such expression remains solely that of the relevant source and is not endorsed by BMJ. Maps are provided without any warranty of any kind, either express or implied.

Competing interests None declared.

Patient and public involvement Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

Patient consent for publication Not applicable.

Ethics approval This study used publicly available data from the Demographic and Health Survey site at <https://dhsprogram.com> and data were collected using ethical and legal procedures. The use of these data was in compliance with the terms and conditions set by the original data source. No additional ethical approval was required for this study.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement Data are available in a public, open access repository. The data used in this study are available from the Demographic and Health Survey (DHS) programme and can be accessed from <https://dhsprogram.com/Data/>.

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