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The influence of wife abuse on women's reproductive choices in Southern African Countries: Findings from a cross-sectional analysis of demographic and health surveys

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Abstract

Understanding women's attitudes towards wife abuse and its effects on their reproductive choices is crucial for promoting gender equality in Southern Africa. However, a paucity of research has explored this relationship. Using IPUMS Demographic and Health Surveys data from 2011-2018 across eight Southern African nations, we analyzed 17,968 women's attitudes towards wife beating and their reproductive choices through a cross-sectional design and multilevel logistic regression models. Our findings reveal that 84.9% of women expressed negative attitudes towards wife abuse, with 44.2% demonstrating autonomy in reproductive choices. Women who opposed wife beating exhibited greater autonomy in reproductive decision-making (44.6%), while those justifying wife discipline showed decreased autonomy (aOR = 0.84, 95% CI [0.78-0.91]). Older age (aOR = 1.37, 95% CI [1.19-1.58]) and higher education (aOR = 2.15, 95% CI [1.18-2.60]) increased the likelihood of autonomy. Country-level variations were evident, with Mozambique, South Africa, Zimbabwe, and Zambia showing higher autonomy odds compared to Angola. These findings emphasize the need for targeted interventions and policies to shift attitudes and promote gender equality and reproductive health in Southern Africa. *(Afr J Reprod Health 2024; 28 [10]: 99-111)*

Keywords: Reproductive choices, Southern Africa, wife abuse, beating, discipline, women's attitudes

Résumé

Comprendre les attitudes des femmes à l'égard de la violence conjugale et ses effets sur leurs choix en matière de procréation est crucial pour promouvoir l'égalité des sexes en Afrique australe. Cependant, peu de recherches ont exploré cette relation. À l'aide des données des enquêtes démographiques et de santé IPUMS de 2011 à 2018 dans huit pays d'Afrique australe, nous avons analysé les attitudes de 17 968 femmes à l'égard de la violence conjugale et leurs choix en matière de procréation à travers une conception transversale et des modèles de régression logistique à plusieurs niveaux. Nos résultats révèlent que 84,9 % des femmes ont exprimé des attitudes négatives à l'égard de la violence conjugale, et 44,2 % d'entre elles font preuve d'autonomie dans leurs choix reproductifs. Les femmes qui s'opposaient à la violence conjugale présentaient une plus grande autonomie dans la prise de décision en matière de procréation (44,6 %), tandis que celles qui justifiaient la discipline de leur épouse présentaient une autonomie réduite (aOR = 0,84, IC à 95 % [0,78-0,91]). L'âge plus avancé (aOR = 1,37, IC à 95 % [1,19-1,58]) et l'enseignement supérieur (aOR = 2,15, IC à 95 % [1,18-2,60]) augmentaient la probabilité d'autonomie. Les variations au niveau des pays étaient évidentes, le Mozambique, l'Afrique du Sud, le Zimbabwe et la Zambie affichant des chances d'autonomie plus élevées que l'Angola. Ces résultats soulignent la nécessité d'interventions et de politiques ciblées pour changer les attitudes et promouvoir l'égalité des sexes et la santé reproductive en Afrique australe. *(Afr J Reprod Health 2024; 28 [9]: 99-111).*

Mots-clés: CO2 ; Choix reproductifs, Afrique australe, violence conjugale, coups, discipline, attitudes des femmes

Introduction

Globally, a concerning statistic reveals that 38% of all female homicides are perpetrated by their husbands or intimate partners[1]. Appallingly, nearly one-third (27%) of women worldwide, aged 15-49 years, who have been in a marital or cohabiting relationship, report experiencing physical and/or sexual violence from their husbands or partners[1]. Sub-Saharan Africa emerges as the region with the highest documented prevalence of intimate partner violence, affecting 33% of women aged 15-49 years[2]. This concerning trend extends further to the Southern African region, where an estimated 27% of women have experienced intimate partner violence[3].

In Southern Africa, as in many parts of Africa, gender dynamics, cultural norms, and social attitudes play a significant role in shaping the

fertility of women, particularly in the context of reproductive choices (also known as decision-making regarding whether and when to have children, use contraception, engage in family planning, and access reproductive healthcare services)[4–6]. One particularly worrying aspect of these dynamics is the prevailing attitudes toward wife abuse[7,8]. This practice, rooted in traditional patriarchal norms, reflects a power imbalance within relationships and impacts women's exercising of freedoms and choices both within and outside domestic settings[9,10]. While we acknowledge the broader definition of wife abuse, for the purpose of this study, wife abuse is defined specifically as wife beating or 'discipline', a form of domestic violence that is physical in nature but has profound emotional and psychological consequences.

Research shows that in societies where cultural norms and traditional gender roles are deeply ingrained, violence against married or cohabiting women is often accepted or normalized[11,12]. Women raised in such environments are more likely to tolerate or justify violence within intimate relationships[13,14]. Although attitudes toward wife abuse may evolve or fluctuate over time as women grow older and/or gain more power, the impact on their reproductive health remains significant[15,16].

Studies show that women who are more educated and economically empowered tend to have more agency and control over their reproductive choices and are less likely to tolerate violence within their relationships[17,18]. Education challenges traditional gender norms and promotes more equitable attitudes toward women's rights and autonomy[19,20]. Access to resources such as education, healthcare, economic opportunities, and support services for survivors of domestic violence significantly influences women's reproductive choices and their ability to leave abusive relationships[21,22]. Conversely, the lack of access to such resource's traps women in situations where they feel they have limited options[23,24].

Legal and policy frameworks play a crucial role in shaping societal attitudes towards domestic violence and women's reproductive rights[25–28]. Countries with strong legal protections against domestic violence and policies that promote gender equality are more likely to witness shifts in attitudes towards wife abuse and greater support for women's reproductive autonomy[29,30]. The intersectionality of factors such as race, ethnicity, class, sexual orientation, and disability further intersect with gender to shape women's experiences of violence and their reproductive choices in unique ways[12,31,32]. While existing research on women's attitudes towards wife abuse and their reproductive health emphasizes the importance of comprehensive strategies addressing the root causes of violence against women, promoting gender equality, and ensuring women's access to resources and support for informed decision-making about their bodies and lives, a significant gap remains in the literature[38,39]. Previous studies have predominantly focused on understanding the determinants of wife abuse[40,41], intimate partner violence [3,42], and reproductive health outcomes[9,43], yet none have specifically explored the relationship between women's attitudes towards wife abuse, particularly wife beating, and their reproductive choices in Southern Africa.

Consequently, this study endeavors to fill this void by examining the link between women's attitudes towards wife abuse, with a focus on wife beating or discipline, and their reproductive choices among women of reproductive age in Southern Africa. By investigating this relationship, we aim to provide valuable insights that can inform targeted interventions and policies geared towards fostering positive shifts in attitudes and behaviors, ultimately contributing to healthier reproductive choices and improved gender dynamics within the region.

Theoretical perspectives

Feminist theory provides a lens through which this study examines power dynamics, gender inequality, and how patriarchal structures influence women's reproductive choices. The assumption of feminist theory is that gender inequality is a fundamental aspect of society, rooted in the systemic oppression of women, and it seeks to challenge and transform these power structures to achieve gender equality and social justice[33]. In this context, the theory explores how societal norms and attitudes towards wife abuse, a form of gender-based violence, may impact women's agency in making reproductive choices. Feminist theory emphasizes the importance

of challenging and dismantling oppressive systems to empower women to make autonomous decisions about their bodies and lives[34]. Additionally, the empowerment theory focuses on enhancing individuals' control over their lives and environments[35,36]. In the context of this study, attitudes toward wife abuse may serve as indicators of women's empowerment or lack thereof. Specifically, women who reject justifications for the beating of wives may exhibit greater agency and autonomy in making reproductive choices, while those who accept, tolerate, or justify such violence may experience diminished empowerment [14,37]. Understanding these dynamics through feminist theory and empowerment lens can inform interventions aimed at promoting women's autonomy and well-being[29].

Methods

Data Source and Design

The data for this study were sourced from the IPUM (Integrated Public Use Microdata Series) Demographic and Health Surveys (DHS) datasets and encompassed surveys conducted in eight Southern African countries between January 1, 2011, and December 31, 2018. The most recent survey from each selected country was included in the analysis to ensure the relevance and timeliness of the data. The DHS surveys utilized a cross-sectional design, providing nationally representative data on a wide range of demographic, health, and socio-economic indicators through household interviews with women of reproductive age. It employed a two-stage cluster sampling method to select respondents.

Detailed information on the sampling technique can be found in the literature[44]. Data collection was conducted using standardized structured questionnaires. The analysis included a total of 17,968 married or cohabiting women with complete data on the variables of interest. To filter wife or cohabiting women from the total sample in the DHS dataset, we selected only those women who were currently married or living with a partner at the time of the survey by using the marital status variable, which categorized respondents based on their current relationship status. This allowed for a focused analysis on the subset of women most relevant to the study's exploration of attitudes towards wife abuse and reproductive choices. The dataset used is accessible for free at https://dhsprogram.com/data/available-datasets.cfm. This manuscript adheres to the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines[45]. Table 1 presents key demographic information for the Southern African countries included in the study.

Study variables

Outcome variable

The primary outcome variable of interest was women's autonomy in reproductive choices, defined as the ability of women to make decisions regarding their reproductive health, including contraceptive use, family planning, and reproductive healthcare utilization [4,5]. This variable was assessed through women's responses to three key questions: 'final say on woman's health care', 'decision-maker for family planning', and 'wanted last child'. Women who reported making decisions alone or jointly with their husbands/partners across these three variables were categorized as having autonomy in reproductive choices, while those with other responses were considered lacking autonomy. For logistic regression analysis, responses were recoded to designate autonomy in reproductive choices as "0", and lack of autonomy as "1".

Explanatory variables

The explanatory variables included in the analysis were selected based on theoretical relevance, availability of variables in the DHS datasets, and prior literature[7,10,17]. These included the key explanatory variable of interest (wife abuse) as well as its covariates. The covariates encompassed socio-demographic factors such as age, education, marital status, employment status, wealth index, residence (urban/rural), and country of residence.

Attitude towards wife abuse, wife beating or the disciplining of wives, was included as a key explanatory variable, reflecting cultural norms and beliefs that may influence women's agency and decision-making autonomy[20].

Table 1: Country, sample size and survey year

Country	Year	Weighted Sample	Weighted %
1. Angola	2015	685	3.8
2. Lesotho	2014	1333	7.4
3. Malawi	2016	7125	39.7
4. Mozambique	2011	951	5.3
5. Namibia	2013	1059	5.9
6. South Africa	2016	819	4.6
7. Zimbabwe	2015	3015	16.8
8. Zambia	2018	2981	16.6
All Countries	**-**	**17,968**	**100.0**

Note: DHS 2011-2018

Statistical analyses

Descriptive statistics were employed to summarize the characteristics of the study population, including frequencies and percentages for categorical variables. Bivariate analyses, such as chi-square tests, were conducted to examine the associations between study variables and women's autonomy in reproductive choices. Variables with significance levels of $p<0.05$ were advanced to the subsequent phase of the analysis. Multivariable logistic regression analyses were performed to assess the independent effects of attitudes towards wife abuse and socio-demographic factors on women's autonomy, while controlling for potential confounding variables. Adjusted odds ratios (aOR) and 95% confidence intervals (CI) were calculated to quantify the strength and direction of associations.

The wealth index in the DHS dataset was determined in quintiles through Principal Component Analysis (PCA), considering respondents' ownership of various household assets such as cars, televisions, water sources, toilet facilities, and building materials [46].

Examination of multicollinearity using the variance inflation factor (VIF) revealed no evidence of collinearity among the explanatory variables (with a minimum VIF of 1.04 and a maximum VIF of 1.68). Reference categories were selected based on those with a lower likelihood of influencing reproductive choices; where this was not applicable, the first category in the DHS dataset's coding was utilized. To mitigate oversampling and under-sampling errors, the DHS datasets were weighted using the women's unit of analysis (v005) with the formula COMPUTE WGT = V005/1000000. All 'missing' and 'don't know' responses were dropped to avoid wrongful association and interpretation of variables. SPSS Statistics 29 software was employed for the analysis.

Furthermore, to mitigate bias in the study, sensitivity analyses were conducted to confirm the consistency and reliability of the results across different models and assumptions. Sensitivity analyses were conducted by running the multilevel logistic regression models with alternative specifications, such as varying the inclusion and exclusion criteria for certain demographic variables and testing the models with different subsets of the data (e.g., excluding specific countries or adjusting for additional covariates). These analyses helped to ensure that the main findings were robust and not unduly influenced by specific model choices or data subsets.

Ethical Clearance

Ethical clearance for the use of DHS data was obtained from the ICF Institutional Review Board (ICF IRB FWA00000845) and from the Research Ethics Committees of the relevant institutions responsible for conducting the surveys in each country. Additionally, informed consent was obtained from all participants before data collection, and confidentiality and anonymity were ensured throughout the data management and analysis process. The researchers adhered to the principles outlined in the Declaration of Helsinki and other relevant ethical guidelines for research involving human subjects. More information about DHS

ethical standards can be found at http://goo.gl/ny8T6X.

Results

Figure 1 provides an overview of the proportion of women exercising autonomy in their reproductive choices across various Southern African nations. Zimbabwe stands out with the highest proportion of women exercising autonomy at 55.0%, followed by Mozambique at 49.7% and Zambia at 46.7%. Lesotho, Namibia, and South Africa also show competent percentages, ranging from 43.7% to 46.2%. Angola exhibits the lowest proportion at 36.1%, while Malawi emerges as slightly higher at 38.5%. The aggregated data for all countries shows that, on average, 44.2% of women in Southern African nations exercise autonomy in their reproductive choices. This table sheds light on the degree of women's agency in matters concerning their reproductive health across the region, with notable variations among individual countries.

Table 2 presents findings regarding the relationship between demographic characteristics and autonomy in reproductive choices among women in Southern Africa. The data reveal significant associations between wife abuse and women's agency in decision-making regarding their reproductive health. Notably, attitudes towards wife abuse exhibit a strong correlation with autonomy, as women who perceive wife beating as justified in certain circumstances were less likely to have autonomy in reproductive choices. For instance, 44.7% of women who did not justify wife beating had autonomy in reproductive choices compared to only 41.2% of those who did justify it. Moreover, age, education level, marital status, employment status, wealth index, and residence also demonstrated statistically significant relationships with autonomy. For instance, women (aged 20-39), those with higher levels of education, and those from wealthier households were more likely to have autonomy in reproductive choices.

Similarly, women who were currently working (45.2%) or residing in urban areas (49.9%) tended to exhibit higher levels of autonomy.

These underscore the complex interplay of socio-demographic factors in shaping women's ability to make decisions regarding their reproductive health in Southern Africa, highlighting the importance of addressing societal attitudes and structural inequalities to promote women's agency and empowerment in this domain.

Table 3 presents the results of a multilevel logistic regression analysis examining the association between wife abuse, its covariates and autonomy in reproductive choices among women in Southern Africa. The adjusted odds ratios (aOR) and 95% confidence intervals (CI) are reported for each variable in four different models. Model I, adjusted for attitudes towards wife beating, reveals that a significant majority of the women (84.9%) who find no justification for wife beating have greater autonomy.

Conversely, women who find justification for wife beating have 15% lower likelihood (aOR = 0.85, 95% Cl [0.79-0.91]) of autonomy in reproductive choices when compared to those who oppose wife beating. Model II, which includes demographic variables such as age, education, marital status, currently working, wealth index, and residence, demonstrates significant associations between these factors and autonomy. Notably, older age groups (20-39 years) exhibit higher likelihoods of autonomy compared to the reference group (e.g., aOR = 1.37 for women aged 20-24, 95% CI [1.19-1.58]). Additionally, higher education levels (e.g., aOR = 2.15 for women with higher education, 95% CI [1.18-2.60]) and residing in urban areas (aOR = 0.88 for rural residence, 95% CI [0.82-0.96]) were positively associated with autonomy. Model III, adjusted for country variables, indicates significant variations in autonomy levels across different countries, with Mozambique (aOR = 1.76, 95% CI [1.44-2.15]), South Africa (aOR = 1.52, 95% CI [1.24-1.87]), Zimbabwe (aOR = 2.16, 95% CI [1.82-2.57]), and Zambia (aOR = 1.55, 95% CI [1.31-1.85]) exhibiting higher likelihoods of autonomy compared to Angola (the reference category).

Model IV, which adjusted for all variables, provides a comprehensive understanding of the combined effect of attitudes towards wife beating, demographic characteristics, and country-level factors on autonomy in reproductive choices among women in Southern Africa.

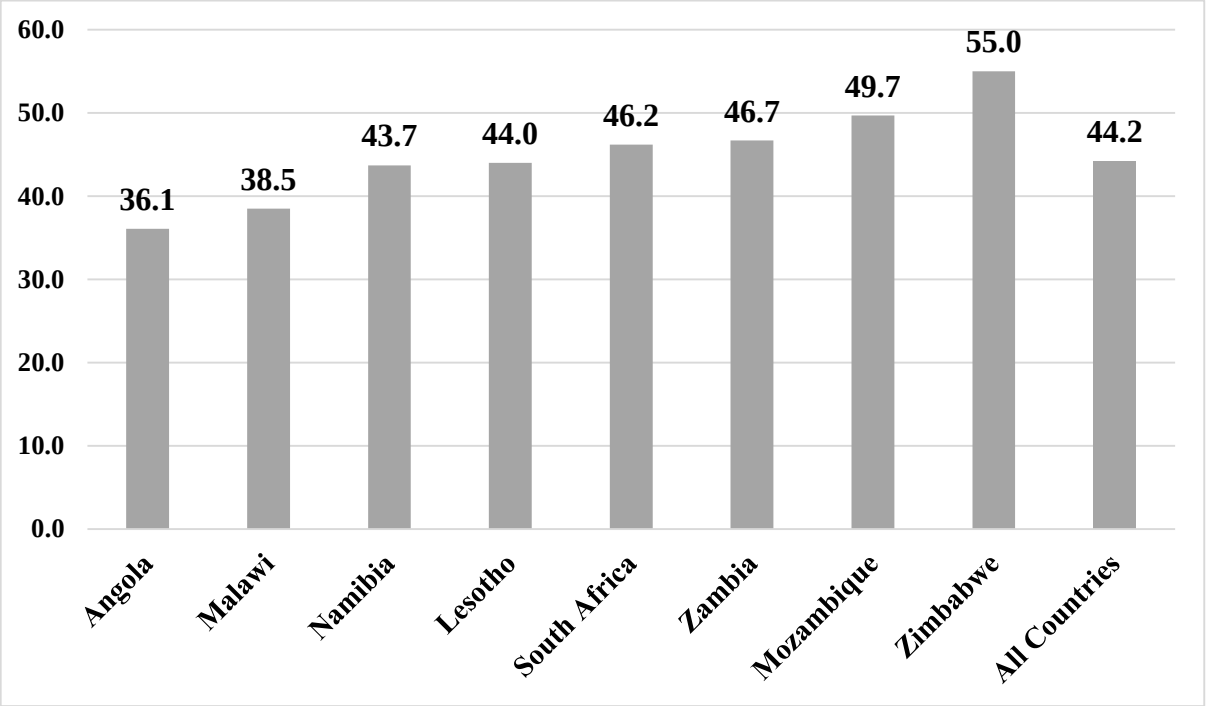

Figure 1: Proportion of women exercising autonomy in reproductive choices across Southern African Nations

Firstly, attitudes towards wife beating remain a significant factor, with women offering justification and thus receptive attitudes towards wife beating having decreased odds of autonomy (aOR = 0.84, 95% CI [0.78-0.91]). Secondly, demographic factors such as age and education continue to demonstrate notable associations. Older age groups show higher odds of autonomy compared to the reference group, with women aged 30-34 exhibiting the highest odds (aOR = 1.55, 95% CI [1.34-1.78]). Age often brings with it greater power and influence within the home and community, leaving the youngest age group most vulnerable in this context. Higher education levels are also positively associated with autonomy in reproductive choices, with women having a higher education level showing increased likelihood of autonomy (aOR = 1.76, 95% CI [1.44-2.15]).

Additionally, marital status remains influential, with women who are cohabiting/living together having decreased odds of autonomy in reproductive choices compared to those who are married (aOR = 0.87, 95% CI [0.78-0.97]). Country-level factors also play a significant role, with Mozambique (aOR = 1.89, 95% CI [1.54-2.35]), South Africa (aOR = 1.52, 95% CI [1.23-1.89]), Zimbabwe (aOR = 2.29, 95% CI [1.88-2.79]), and Zambia (aOR = 1.81, 95% CI [1.48-2.20]) all exhibiting higher likelihoods of autonomy in reproductive choices compared to Angola, the reference category. The overall model evaluation metrics, including the chi-square statistic, -2 log likelihood, Nagelkerke R^2, and Hosmer & Lemeshow Test, demonstrate the goodness-of-fit and explanatory power of the model in predicting autonomy in reproductive choices.

Discussion

Our findings provide valuable insights into the influence of wife abuse on autonomy in reproductive choices among women in Southern Africa. Firstly, attitudes towards the abuse and disciplining of women (specifically, wife beating) emerge as a significant predictor of autonomy, highlighting the importance of addressing gender norms and beliefs that perpetuate violence against women's reproductive choices[11,21].

Table 2: Demographic characteristics and autonomy in reproductive choices among women in Southern Africa.

Variables	**Demographics Weighted (n = 17,968)**		**Autonomy in Reproductive Choices**		
	N	**%**	**No (%)**	**Yes (%)**	**p-values**
Age group					<0.001
15-19	1,056	5.9	66.7	33.3	
20-24	4,288	23.9	57.4	42.6	
25-29	4,680	26.0	53.4	46.6	
30-34	3,937	21.9	51.9	48.1	
35-39	2,544	14.2	54.8	45.2	
40-44	1,162	6.5	62.7	37.3	
45-49	301	1.7	65.8	34.2	
Education					<0.001
No education	1,265	7.0	61.7	38.3	
Primary	8,606	47.9	60.9	39.1	
Secondary	7,198	40.1	51.3	48.7	
Higher	899	5.0	35.7	64.3	
Marital status					<0.001
Married	15,349	85.4	55.3	44.7	
Cohabiting/living together	2,619	14.6	58.8	41.2	
Currently working					<0.004
No	8,185	45.6	57.1	42.9	
Yes	9,775	54.4	54.8	45.2	
Wealth index					<0.001
Poorest	3,125	17.4	60.3	39.7	
Poorer	3,466	19.3	59.1	40.9	
Middle	3,517	19.6	59.5	40.5	
Richer	3,813	21.2	55.5	44.5	
Richest	4,047	22.5	46.8	53.2	
Residence					<0.001
Urban	6,192	34.5	50.1	49.9	
Rural	11,776	65.5	58.8	41.2	
Attitudes towards wife abuse/beating:					
Justified if woman argues with him					<0.001
No	15,127	84.2	55.3	44.7	
Yes	2,841	15.8	58.8	41.2	
Justified if woman burns food					<0.001
No	16,301	90.7	55.4	44.6	
Yes	1,667	9.3	60.0	40.0	
Justified if woman goes out without telling him					0.073
No	15,353	85.4	55.6	44.4	
Yes	2,615	14.6	57.4	42.6	
Justified if woman refused to have sex					0.004
No	15,451	86.0	55.4	44.6	
Yes	2,517	14.0	58.4	41.6	
Justified if woman neglects the children					<0.001
No	14,997	83.5	55.3	44.7	
Yes	2,971	16.5	58.5	41.5	

Statistically significant at P < 0.05

Table 3: Multilevel logistic regression of autonomy in reproductive choices among women in Southern Africa

Variable	Model I aOR (95% CI)	Model II aOR (95% CI)	Model III aOR (95% CI)	Model IV aOR (95% CI)
Attitudes towards wife beating/abuse				
Negative	Ref			Ref
Positive	0.85*** [0.79-0.91]			0.84*** [0.78-0.91]
Covariates				
Age group				
15-19		Ref		Ref
20-24		1.37*** [1.19-1.58]		1.39*** [1.20-1.60]
25-29		1.53*** [1.33-1.76]		1.51*** [1.31-1.74]
30-34		1.61*** [1.40-1.87]		1.55*** [1.34-1.78]
35-39		1.48*** [1.27-1.72]		1.41*** [1.21-1.64]
40-44		1.09 [0.91-1.33]		1.02 [0.85-1.22]
45-49		1.02 [0.77-1.33]		0.95 [0.72-1.25]
Education				
No education		Ref		Ref
Primary		0.99 [0.88-1.13]		0.96 [0.84-1.08]
Secondary		1.37*** [1.21-1.56]		1.16* [1.01-1.33]
Higher		2.15*** [1.78-2.60]		1.76*** [1.44-2.15]
Marital status				
Married		Ref		Ref
Cohabiting/living together		0.79*** [0.73-0.87]		0.87** [0.78-0.97]
Currently working				
No		Ref		Ref
Yes		1.06* [0.99-1.13]		1.16*** [1.09-1.24]
Wealth index				
Poorest		Ref		Ref
Poorer		1.02 [0.93-1.13]		1.04 [0.95-1.15]
Middle		0.95 [0.86-1.05]		0.99 [0.60-1.10]
Richer		1.01 [0.91-1.12]		1.04 [0.94-1.16]
Richest		1.21** [1.07-1.36]		1.30*** [1.14-1.47]
Residence				
Urban		Ref		Ref
Rural		0.88** [0.82-0.96]		0.93 [0.85-1.0]
Country				
Angola			Ref	Ref
Lesotho			1.40*** [1.15-1.69]	1.53*** [1.24-1.89]
Malawi			1.11 [0.94-1.30]	1.23* [1.02-1.49]
Mozambique			1.76*** [1.44-2.15]	1.89*** [1.54-2.35]
Namibia			1.38*** [1.13-1.68]	1.53*** [1.25-1.88]
South Africa			1.52*** [1.24-1.87]	1.52*** [1.23-1.89]
Zimbabwe			2.16*** [1.82-2.57]	2.29*** [1.88-2.79]
Zambia			1.55*** [1.31-1.85]	1.81*** [1.48-2.20]
Overall model evaluation:				
Model X^2	*22.030***	483.774***	275.984***	694.470***
-2 Log Likelihood	*24642.316*	24180.572	24388.362	23969.876
Nagelkerke R^2	*0.212*	0.236	0.120	0.351
Hosmer & Lemeshow Test	*0.157*	0.103	0.910	0.314
N	*17,968*	*17,968*	*17,968*	*17,968*

Significant at p < .05*, p < .01**, p < .001***; Ref – reference category; CI – confidence interval; N – weighted count; aOR – adjusted Odds Ratio.
Model I = adjusted for attitude towards wife beating/abuse variable
Model II = adjusted for demographic variables
Model III = adjusted for country variables
Model IV = adjusted for all variables.

The majority who found no justification for wife beating reflect a potentially influential group whose views and sentiments can be made more audible within public spaces in Southern African societies. Women who justified wife beating were less likely to have autonomy in reproductive decision-making, emphasizing the need for interventions aimed at challenging harmful gender stereotypes and promoting gender equality[3,37]. Similarly, previous studies conducted in Zambia[47], Zimbabwe[6], and Pakistan[14] noted that justification for wife beating and abuse, consanguineous marriages and fear of intimate partner violence influence women's reproductive choices and their utilization of family planning services.

Our study revealed that demographic characteristics, such as age and education, interacting with attitudes towards wife abuse, play pivotal roles in shaping autonomy in reproductive decision-making. Older women and those with higher levels of education demonstrate greater autonomy, indicating the potential influence of life experiences and access to information on decision-making agency[27,43]. However, it's essential to note nuances within these associations. While older age groups generally exhibit higher odds of autonomy, disparities emerge within specific age brackets, particularly among women aged 40 and above, where no significant association with autonomy in reproductive choices is observed. Similarly, the positive association between higher education, interacting with attitudes towards wife abuse, and autonomy suggests the importance of educational opportunities in empowering women, aligning with previous studies conducted in Ethiopia[22] and South Africa[48]. Nonetheless, barriers to education access and quality hinder the realization of autonomy for marginalized groups, highlighting the need for inclusive educational policies[21]. Furthermore, the association between education and autonomy differs based on other factors like wealth and residence, highlighting the need for an intersectional approach in understanding autonomy dynamics in reproductive choices[7,49].

Marital status, interacting with attitude towards wife abuse, also emerges as a significant determinant of autonomy in reproductive choices, with women who are cohabiting/living together exhibiting decreased likelihoods of autonomy compared to married women. While being married may provide certain benefits or constraints regarding autonomy, factors like the quality of the relationship, power dynamics, and support systems within partnerships may vary, influencing women's ability to make autonomous reproductive choices, as found in previous studies conducted in India[41] and Bangladesh[18]. This finding indicates the complex dynamics within intimate partnerships and the potential influence of relationship power dynamics on decision-making autonomy. Interventions aimed at promoting healthy relationships and equitable decision-making processes within partnerships could enhance women's autonomy and well-being[50,51].

Furthermore, country-level differences highlight the influence of broader social, economic, and political contexts on autonomy. Our study revealed that among Southern African nations, Zimbabwe has the highest proportion of women exercising autonomy in their reproductive choices, with Mozambique and Zambia following closely. Lesotho, Namibia, and South Africa display moderate levels, each with less than 50% of women exercising autonomy in reproductive choices. Angola recorded the lowest proportion. Overall, the combined data for all countries indicate that, on average, 44.2% of women in Southern Africa exercise autonomy in their reproductive choices. Countries such as Mozambique, South Africa, Zimbabwe, and Zambia demonstrating higher odds of autonomy in reproductive choices compared to Angola, suggest variations in the implementation of policies, access to resources, and socio-cultural norms across different settings[8,23,52]. Understanding these contextual nuances is crucial for designing targeted interventions that address specific barriers to autonomy within each country. This further underscores the importance of considering country-specific contextual factors such as socio-economic development, governance, and cultural norms in understanding reproductive choice autonomy dynamics[24,53].

These findings highlight the need for continuous monitoring and evaluation of policies aimed at improving reproductive autonomy to ensure their effectiveness across diverse national

contexts. Strategies to promote autonomy must, therefore, be tailored to address country-specific challenges and opportunities. Understanding these nuances is essential for designing effective interventions and policies aimed at promoting women's autonomy in reproductive decision-making in Southern Africa[29].

Limitations of the Study

This study has some limitations that should be acknowledged. First, the cross-sectional design of the DHS data limits the ability to infer causal relationships between women's attitudes towards wife beating and their reproductive choices, as the data capture only a single point in time. Second, the study relies on self-reported data, which may be subject to social desirability bias, particularly on sensitive topics such as domestic violence and reproductive autonomy. The use of trained field data collectors helped to reduce this bias. Third, while the analysis adjusted for various demographic and country-level factors, there may still be unmeasured confounding variables that could influence the observed associations. Additionally, the study focused on Southern African countries, which may limit the generalizability of the findings to other regions with different cultural and socio-economic contexts. The definition of wife abuse was defined specifically as wife beating, a form of domestic violence that is physical in nature but has profound emotional and psychological consequences, ignoring its broader approach. Finally, despite using a large and representative sample, the variability in survey years across countries may introduce some inconsistencies in the data. To address these limitations, the study employed weighted multilevel modeling to account for both individual and country-level variations, ensuring more robust estimates, and conducted sensitivity analyses to confirm the consistency of results across different model specifications.

Implications for research and policy

Policymakers, researchers and non-state actors should prioritize the development and implementation of gender-sensitive policies aimed at challenging harmful gender norms and promoting gender equality. Policies should address culturally embedded practices and attitudes towards violence against women and promote women's rights to make autonomous reproductive choices. Investment in education and empowerment programs for women, particularly those from rural and marginalized communities, is crucial. Policies should focus on improving access to quality education, vocational training, and information on reproductive health and rights to enhance women's agency and decision-making capabilities. Ensuring equitable access to healthcare services, including reproductive health services and family planning resources, is essential for promoting women's autonomy. Policies should prioritize the removal of barriers to healthcare access, especially in rural and underserved areas, and support comprehensive sexual and reproductive health education programs. Strengthening legal protections against gender-based violence and discrimination is imperative. Policymakers should enact and enforce laws that prohibit all forms of violence against women, including intimate partner violence, and ensure access to justice and support services for survivors. Economic empowerment initiatives targeting women, such as microfinance programs, entrepreneurship support, and employment opportunities, can enhance financial independence and decision-making autonomy. Policies should promote women's economic participation and address structural barriers to women's economic empowerment.

Conclusion

Our study sheds light on the complex dynamics surrounding women's autonomy in reproductive decision-making within Southern Africa. It reveals significant associations between wife abuse and autonomy in reproductive choices, highlighting the multi-dimensional nature of this phenomenon. Dominant gendered attitudes towards wife beating, age, education, marital status, employment, wealth, residence, and country-level differences all play crucial roles in shaping women's agency in reproductive choices. The implications of these findings are far-reaching, both for research and policy. Moving forward, it is imperative to continue exploring the nuanced interactions between wife

abuse, socio-demographic factors and autonomy through longitudinal studies and qualitative inquiries. Additionally, policymakers must prioritize the development and implementation of gender-sensitive policies that challenge harmful gender norms, promote gender equality, improve access to education and healthcare, strengthen legal protections against gender-based violence, and enhance economic empowerment opportunities for women.

The findings hold political and policy significance. By addressing these complex factors comprehensively, we can advance gender equality, help enable the empowerment of women, and improve the reproductive health and rights of women in Southern Africa. It is our hope that this study contributes to the ongoing efforts to promote women's autonomy and well-being in the region and beyond.

Authors' contributions

TOM and KN conceived the proposal; TOM performed data analysis, TOM and KN participated in data interpretation; TOM and KN drafted the original manuscript; TOM and KN participated in manuscript reviewing and editing. All the authors read and agreed on the final manuscript.

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Data availability

The data used for this study are publicly available from The DHS Program. Interested researchers can register on the DHS Program website (https://dhsprogram.com/) and request access to the datasets.

Competing interests

The authors declare no conflict of interest.

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