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ORIGINAL RESEARCH ARTICLE

Prevalence and correlates of female genital mutilation among young women in selected sub-Saharan African countries: A pooled analysis

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Abstract

A deeper understanding of the factors associated with female genital mutilation remains important in the fight against this practice, particularly in developing countries. This study focused on young women (15-35 years) and pooled analysis using DHS data (2015-2019) for selected sub-Saharan African countries was done. The weighted study sample was 26289 and the data were analysed using univariate, bivariate and multivariate regression analysis. The results are based on information at the time of the survey. The overall prevalence of FGM among young women from the selected countries was 71.5%. Sierra Leone had the highest prevalence (83.7%), followed by Tanzania (80.8%), Ethiopia (73.0%), and Gambia (72.4%). The prevalence in Senegal and Guinea were both below 60%. We found that age, level of education, age at first marriage, parity, employment status, media exposure, and type of place of residence were statistically associated with FGM. This calls for targeted interventions focusing on increasing awareness, education, and empowerment for young women with low socio-economic status. *(Afr J Reprod Health 2024; 28 [6]: 15-24).*

Keywords: Young women, female genital mutilation, prevalence, correlates, sub-Saharan Africa

Résumé

Une compréhension plus approfondie des facteurs associés aux mutilations génitales féminines reste importante dans la lutte contre cette pratique, en particulier dans les pays en développement. Cette étude s'est concentrée sur les jeunes femmes (15-35 ans) et une analyse groupée utilisant les données DHS (2015-2019) pour certains pays d'Afrique subsaharienne a été réalisée. L'échantillon pondéré de l'étude était de 26 289 et les données ont été analysées à l'aide d'une analyse de régression univariée, bivariée et multivariée. Les résultats sont basés sur les informations disponibles au moment de l'enquête. La prévalence globale des MGF parmi les jeunes femmes des pays sélectionnés était de 71,5 %. La Sierra Leone avait la prévalence la plus élevée (83,7 %), suivie par la Tanzanie (80,8 %), l'Éthiopie (73,0 %) et la Gambie (72,4 %). La prévalence au Sénégal et en Guinée était inférieure à 60 %. Nous avons constaté que l'âge, le niveau d'éducation, l'âge au premier mariage, la parité, la situation professionnelle, l'exposition aux médias et le type de lieu de résidence étaient statistiquement associés aux MGF. Cela nécessite des interventions ciblées axées sur la sensibilisation, l'éducation et l'autonomisation des jeunes femmes ayant un statut socio-économique faible. *(Afr J Reprod Health 2024; 28 [6]: 15-24).*

Mots-clés: Jeunes femmes, mutilations génitales féminines, prévalence, corrélats, Afrique subsaharienne

Introduction

The World Health Organisation (WHO) describes female genital mutilation (FGM) as a partial or total removal of the external female genitalia for non-medical purposes[1]. FGM can be categorized into clitoridectomy (removal of part or all of the clitoris), an excision (removing part or all of the clitoris and the inner labia, with or without removal of the labia majora), and lastly, infibulation (a narrowing of the vaginal opening by creating a seal, formed by cutting and repositioning the labia)[2]. Female genital mutilation (FGM) is a cultural practice often performed without providing an understanding of the health risks involved (i.e., bleeding, problems with urination, etc.)[3,4]. The origins of FGM remain

unclear, though it was documented in Egypt as early as 250 BC when it was used as a strategy to preserve a girl's virginity and curtail premarital sex[5]. Although much emphasis has been placed on the reduction of this cultural practice, it can be generally discussed that this traditional practice is perceived as discriminatory (since it is often an imposed practice on young girls and reflects society's control over them), which interferes with the satisfaction of women's and girls' fundamental rights in most African countries[3]. FGM is recognised as a violation of various rights including the rights of children, the right to health, and the right to be free from torture and cruel or degrading treatment, amongst others[4,6,7].

Studies have been conducted to examine the factors that influence FGM worldwide. Based on the findings of these studies, the age of the girls and women involved is crucial in understanding the intergenerational transmission of FGM[8,9]. This is because older women have a higher likelihood of having passed through the practice and may be more likely to pass it down to their children and grandchildren. Research shows that the practice is often passed down from older women to younger girls within families and communities, reflecting deeply ingrained cultural beliefs and social pressures[10-12]. Younger girls who undergo FGM may experience immediate health risks, including severe pain, bleeding, infections, and complications during childbirth[13,14]. Older women who have undergone FGM may suffer from long-term physical and psychological consequences including painful urination, pain during intercourse, depression, low self-esteem, and various other problems[4,15,16]. Understanding the age at which FGM occurs and its impact on different age groups is crucial for addressing the health needs of affected individuals[14]. Early marriage has also been culturally linked to FGM; this is because the practice is often viewed as a prerequisite for womanhood and is often thought to increase a woman's marriageability[17-19]. FGM may be performed as part of marriage rituals or to preserve chastity and ensure purity[20].

Moreover, several studies have highlighted the positive relationship between FGM and education[21,22]. The findings of such studies revealed that when women's educational levels rise, attitudes toward FGM tend to shift, thus, the likelihood of practising FGM decreases[23,24]. Education is indeed a fundamental social factor that plays a significant role in shaping attitudes, behaviours, and outcomes related to various issues, including FGM in sub-Saharan Africa. Another crucial factor contributing to the practice of FGM is the employment status of women. Employment provides women with a source of income and economic independence, which can enhance their decision-making power and autonomy[25]. A study conducted by Ahinkorah and colleagues delineated that women who were employed had a lower likelihood of undergoing FGM compared to those who were unemployed[23]. Media also plays a significant role in combating FGM; as revealed by Ahinkorah and colleagues women who are exposed to different forms of media (newspaper/magazine, radio, and television) are less likely to undergo or subject their daughters to FGM[23].

Methods

Data sources

The study used secondary data from the Demographic and Health Surveys (DHS) drawn from six countries (Sierra Leone, Tanzania, Gambia, Ethiopia, Senegal and Guinea) in sub-Saharan Africa. The surveys are conducted every five years in most countries and are representative of households nationally. The DHS provides data for a wide range of monitoring and evaluation indicators in the areas of population, health, and nutrition. The current study focused on six countries in sub-Saharan Africa, namely Tanzania, Sierra Leone, Gambia, Ethiopia, Guinea, and Senegal. These six countries were purposely selected based on the highest prevalence of FGM ranking using Stat compiler. DHS were conducted in these countries during the period 2015 and 2019. The study focused on young women from 15-35 years of age. The total sample size is 26289, which is a combination of sampled young women in all six countries. Refer to Table 1 for details about the sample size.

Description of variables

The outcome variable for this study was female genital mutilation. The variable was derived from the question "*Was any flesh removed from the genital?*" This is based on information collected at

Table 1: Sample size by country

Country	Survey year	Sample size
Sierra Leone	2019	9 078
Tanzania	2015–16	774
Gambia	2019–20	3 407
Ethiopia	2016	3 695
Senegal	2018	1 643
Guinea	2018	7 692
Total	-	**26 289**

the time of the survey; here, the women report on events that happened in the past (when they were young). For this study, the outcome variable was dichotomised, where 0 was applied for those who did not experience genital mutilation and 1 was applied for those who had experienced genital mutilation.

Explanatory variables

This study included ten explanatory variables. The variables were age, marital status, education, employment status, age at first marriage, parity, sex of household head, media exposure, household wealth, and place of residence. Age was categorised into the following groups: 15–19, 20–24, 25–29, and 30–35. Marital status was coded as never married, in-union, and no longer in-union. The education status of the participant was coded as no education, primary, as well as secondary and above. Age at first marriage was coded as never married, <15, 15–19, 20–24, and 25–29. Parity was coded as 0, 1–2, 3–4, and 5+. Employment was coded as employed and unemployed. The gender of the household head was coded as male and female. Media exposure was coded as yes and no. Household wealth was coded as poor, middle, and rich. The type of place of residence was coded as urban and rural.

Statistical analysis

Statistical analysis was performed using Stata version 17[26]. Univariate, bivariate, and multivariate analyses were performed in this study. The bivariate analysis included the chi-square (χ^2) test, to measure the association between the selected explanatory factors and FGM. We also performed a binary logistic regression model to examine the relationship between socio-demographic factors and FGM. The regression equation applied to this paper is expressed as follows:

$$ln\left(\frac{p}{1-p}\right) = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \cdots + \beta_i x_i$$

This model is represented by more than one explanatory variable that is either binary, ordinal, nominal and so forth. The dependent variable in this model is FGM ($\frac{p}{1-p}$). The regression coefficient ($\beta_i x_i$) increases the natural logarithm (log- odds) for a one-unit increase in the predictor variable (x_i) when all other variables (x_i) are constant. It measures the relationship between x_i and natural logarithm (log-odds) adjusted for all other (x_i) variables.

Results

The prevalence of female genital mutilation

Figure 1 shows the prevalence of FGM by country. The results showed that Sierra Leone had the highest prevalence (83.7%) of FGM, followed by Tanzania (80.8%), Ethiopia (73.0%), and Gambia (72.4%). Guinea and Senegal had a lower prevalence (less than 60%) of FGM.

Characteristics of the study sample

Table 2 shows the background characteristics of the respondents. The results show that the majority (26%) of the participants were in the age groups 30 and 35 and 15 and 19 respectively. In terms of marital status, 64% of young women reported that they were in-union and only 4% were no longer in a union. The study also revealed that most (37%) participants had their first marriage between the ages of 15 and 19 years. The findings also showed that most of the study participants (45%) reported that they had no formal education, followed by those with secondary and higher education with 35%. The study further shows that young women with zero parity contributed 34% of the study population. With regards to employment status in the last 12 months, the majority (62%) of the respondents reported that they were employed. Most (77%) of the households were headed by males, and the majority (44%) of the respondents categorized their household wealth as rich. In terms of the type of place of residence, the study revealed that the majority (57%) of young women were residing in rural areas.

The results presented in Table 2 show the association between the FGM and socio-

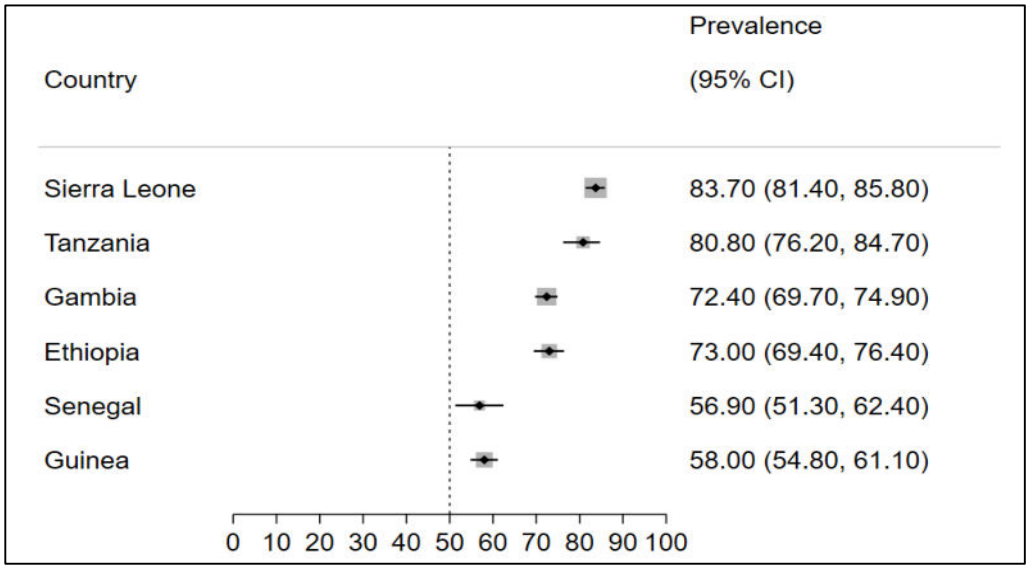

Figure 1: Forest plot for the prevalence of FGM by country

demographic factors. The findings showed that age, level of education, age at first marriage, parity, employment status, media exposure, and type of place of residence had an association with FGM. The findings also showed that young women in the 30–35-year age group had the highest prevalence (73.8%) of FGM. The prevalence was lowest (67.7%) among women in the 15–19 years age group. Moreover, women who were no longer married had a higher prevalence (73.0%) of FGM compared to those still in a relationship. Concerning the level of education, women with secondary education or higher had a higher prevalence (73.2%) of FGM; however, it was lowest (69.5%) among those with no education. Regarding age at first marriage, women who got married in their early twenties had a higher prevalence (73.9%) of FGM. In terms of parity, women who had five or more children had a higher prevalence (76.0%) of FGM. Moreover, women who were employed had a higher prevalence (72.4%) of FGM. Although there was not much variation in the prevalence of FGM by sex of household head women from female-headed households had a slightly higher prevalence (71.5%) of FGM. Furthermore, the findings showed that the prevalence of FGM decreased with household wealth. Women from poor households had a higher prevalence (72.3%) of FGM. Concerning the type of place of residence, women from rural areas had a higher prevalence (72.7%) of FGM.

Determinants of female genital mutilation

Table 3 presents the results of the binary logistic regression model for FGM by background explanatory factors. The findings showed that younger women, aged 15–19 years, had lower odds [AOR: 0.87, 95% CI: 0.77–0.97] of FGM compared to those aged 20–24 years. Concerning marital status, young women who were in-union had lower odds [AOR: 0.73, 95% CI: 0.64–0.83] of FGM than those who were never married. Moreover, the findings showed that the odds of FGM increased with education. Women who had no education had lower odds [AOR: 0.65, 95% CI: 0.58–0.73] of FGM than those with secondary or higher education. Concerning age at first marriage, women whose age at first marriage was below 15 years had lower odds [AOR: 0.84, 95% CI: 0.75–0.94] of FGM than those whose age at first marriage was in the 15–19 age group. Additionally, the findings showed that FGM increased with parity. Women who had five or more children had higher odds [AOR: 1.89, 95% CI: 1.57–2.27] of FGM compared to those with no children. Women who had one-to-two children had higher odds [AOR: 1.40, 95% CI: 1.24–1.57] of FGM compared to those with no children. Additionally, the findings showed that media exposure plays a significant role in the experience of FGM. The findings showed that women who have no media exposure had higher odds [AOR: 2.32, 95% CI:

Table 2: Distribution of respondents and prevalence of FGM by explanatory factors

Variable	Female genital mutilation						χ^2, p-value
	No		Yes		Total		
	No.	%	No.	%	No.	%	
Age group							45.71***
15–19	2 210	32.3	4 629	67.7	6 839	26.0	
20–24	1 697	28.7	4 214	71.3	5 911	22.5	
25–29	1 788	26.9	4 850	73.1	6 638	25.3	
30–35	1 810	26.2	5 091	73.8	6 901	26.3	
Marital status							0.15
Never married	2 438	29.1	5 948	70.9	8 386	31.9	
In-union	4 783	28.4	12 070	71.6	16 853	64.1	
No longer in-union	283	27.0	766	73.0	1 049	4.0	
Level of education							67.55***
No education	3 630	30.5	8 253	69.5	11 883	45.2	
Primary	1 419	27.1	3 817	72.9	5 236	19.9	
Secondary+	2 456	26.8	6 713	73.2	9 170	34.9	
Age at first marriage							19.8***
Never married	2 438	29.1	5 948	70.9	8 386	31.9	
<15	1 033	31.2	2 281	68.8	3 314	12.6	
15–19	2 709	28.2	6 905	71.8	9 614	36.6	
20–24	1 002	26.1	2 832	73.9	3 834	14.6	
25–29	323	28.3	818	71.7	1 141	4.3	
Parity							55.46***
0	2 817	32.0	5 993	68.0	8 810	33.5	
1–2	2 340	27.7	6 111	72.3	8 450	32.1	
3–4	1 576	27.2	4 228	72.8	5 804	22.1	
5+	772	24.0	2 452	76.0	3 225	12.3	
Employment in the last 12 months							84.03***
Not employed	2 988	30.1	6 939	69.9	9 927	37.8	
Employed	4 516	27.6	11 845	72.4	16 361	62.2	
Media exposure							47.43***
No	7 278	28.2	18 514	71.8	25 792	98.1	
Yes	227	45.7	270	54.3	497	1.9	
Gender of household head							0.92
Male	5 785	28.6	14 476	71.4	20 261	77.1	
Female	1 720	28.5	4 308	71.5	6 028	22.9	
Household wealth							1.39
Poor	2 688	27.7	7 018	72.3	9 706	36.9	
Average	1 433	28.1	3 666	71.9	5 099	19.4	
Rich	3 384	29.5	8 099	70.5	11 484	43.7	
Type of place of residence							9.44**
Urban	3 421	30.1	7 935	69.9	11 356	43.2	
Rural	4 083	27.3	10 849	72.7	14 932	56.8	
Total	**7 505**	**28.5**	**18 784**	**71.5**	**26 289**	**100.0**	

Note: *** = p<0.001; ** = p<0.01; * = p<0.05; totals are not the same for all variables due to rounding

1.76–3.06] of FGM than those with exposure to the media. Furthermore, the findings showed that being from rural areas plays a significant role in experiencing FGM. The findings showed that women from rural areas had higher odds [AOR: 1.25, 95% CI: 1.04–1.49] of FGM than those from urban areas.

Table 4 contains the unadjusted binary logistic results of the relationship between country and FGM. The findings suggest varying levels of

Table 3: Binary logistic regression findings for the determinants of FGM by background explanatory factors

Variables	AOR	SE	t	95% CI
Age group				
15–19	0.87*	0.05	-2.52	[0.77–0.97]
20–24	1			
25–29	1.07	0.06	1.13	[0.95–1.19]
30–35	1.07	0.07	1.02	[0.94–1.22]
Marital status				
Never married	1			
In-union	0.73***	0.05	-4.81	[0.64–0.83]
No longer in-union	0.84	0.09	-1.54	[0.68–1.05]
Level of education				
No education	0.65***	0.04	-7.53	[0.58–0.73]
Primary	0.86**	0.05	-2.62	[0.76–0.96]
Secondary+	1			
Age at first marriage				
Never married	-	-	-	-
<15	0.84**	0.05	-3.00	[0.75–0.94]
15–19	1			
20–24	1.10	0.06	1.72	[0.99–1.23]
25–29	1.02	0.10	0.21	[0.84–1.24]
Parity				
0	1			
1–2	1.40***	0.08	5.59	[1.24–1.57]
3–4	1.52***	0.11	5.60	[1.31–1.76]
5+	1.89***	0.18	6.82	[1.57–2.27]
Employment in the last 12 months				
Not employed	0.93	0.05	-1.49	[0.84–1.02]
Employed	1			
Media exposure				
No	2.32***	0.33	5.99	[1.76–3.06]
Yes	1			
Sex of household head				
Male	1.02	0.05	0.37	[0.92–1.13]
Female	1			
Household wealth				
Poor	1			
Average	0.98	0.07	-0.23	[0.86–1.13]
Rich	0.99	0.09	-0.12	[0.83–1.17]
Type of place of residence				
Urban	1			
Rural	1.25*	0.11	2.42	[1.04–1.49]
Intercept	1.18	0.20	0.99	[0.85–1.65]

Note: *** = p<.001; ** = p<.01; * = p<.05; CI = Confidence interval; AOR = Adjusted odds ratio; SE = Standard error

Table 4: Binary logistic regression findings for the determinants of FGM by country

Country	COR	SE	T	95% CI
Sierra Leone	1			
Tanzania	0.82	0.13	-1.19	[0.60–1.13]
Gambia	0.51***	0.05	-6.38	[0.41–0.63]
Ethiopia	0.53***	0.06	-5.20	[0.42–0.67]
Senegal	0.26***	0.04	-9.58	[0.20–0.34]
Guinea	0.27***	0.03	-12.51	[0.22–0.33]
Intercept	*5.13*	*0.42*	*19.89*	*[4.37–6.03]*

Note: *** = p<.001; ** = p<.01; * = p<.05; CI = Confidence interval; COR = Crude odds ratio; SE = Standard error

FGM across the countries. The findings showed that women from the Gambia had lower odds [COR: 0.51, 95% CI: 0.41–0.63] of FGM than those from Sierra Leone. Likewise, women from Ethiopia had lower odds [COR: 0.53, 95% CI: 0.42–0.67] of FGM than those from Sierra Leone. Additionally, women from Senegal had lower odds [COR: 0.26, 95% CI: 0.20–0.34] of FGM than those from Sierra Leone. Furthermore, women from Guinea had lower odds [COR: 0.27, 95% CI: 0.22–0.33] of FGM than those from Sierra Leone.

Discussion

The study examined the prevalence and correlates of FGM among young women in selected sub-Saharan African countries. Evidence from the data showed that the age of the respondent, marital status, educational level, age at first marriage, parity, employment status, exposure to media and type of place of residence are predictors of FGM. The results confirm that the age of the respondent is a relevant factor of considerable importance in FGM. The odds of FGM were lower among young women. A study conducted in Kenya on female genital mutilation/cutting discovered similar findings where older women had higher rates of FGM[27]. The primary justifications for older generations to continue the practice can be justified based on their deep cultural beliefs, while younger generations, who have learned more from school and media, may be more likely to not be willing to participate and bring a halt to FGM[27]. Moreover, the study also discovered that marital status plays a significant role in predicting FGM. Young women who were in-union had lower odds of practicing FGM compared to those who were never married. The findings of this study are different compared to findings from other scholars; Research by scholars focusing on Chad and Senegal found that women who have never been married tend to have lower instances of genital mutilation[28,29]. These findings could be attributed to the increasing awareness among younger generations about the harmful effects of FGM[29].

This study also found that the odds of FGM increased with level of education, where the odds of FGM were lower among women with lower levels of education. Similarly, a study by Mwanja and colleagues discovered that young women with secondary or higher education are more likely to undergo FGM compared to those with little to no formal education[30]. While it is commonly believed that higher education for young women reduces the likelihood of experiencing FGM, it can be contended that in many African communities adhering to traditional beliefs, female education may be undervalued[31,32]. This is because there is a perception that women must conform to traditional practices to uphold cultural values and norms, and these norms can contribute to the persistence of FGM practices[33,34]. In such contexts, the importance of education in combating FGM may be overlooked due to the emphasis on traditional values[21,35,36].

The findings also showed that the odds of FGM were lower among respondents who reported that their age at first marriage was younger than fifteen years. In contrast, Sakeah and colleagues maintain a different view that young women younger than 20 years are more likely to practice FGM given the fact that the husband's family members decide for them, one can articulate those young women in a marriage have less or no decision making related to FGM[37]. The findings also indicated that the odds of FGM increased with parity. This aligns with previous studies that have shown varying prevalence and odds of FGM based on a woman's parity[38,39]. In certain African societies, FGM tends to be more common among nulliparous female youths (those who have not given birth) compared to multiparous female youths (those with one or more children)[39,40]. This practice is often associated with cultural beliefs that link FGM to enhancing female chastity, fertility, and ability to have children[41].

The study found that the odds of FGM were higher among those with no media exposure. Mass media plays a crucial role in unpacking the impact of FGM and has the potential to shape discussions for policymakers[42]. How news media portray female genital cutting holds significant implications for the global status of women[43]. In such contexts, positive media coverage can highlight the human rights violations associated with FGM, spark discussions, and encourage communities to question and reconsider the cultural norms that perpetuate the practice[42]. On the other hand, negative or sensationalised media reports may inadvertently reinforce stereotypes or stigmatize communities practising FGM, hindering efforts to address the issue collaboratively[41,43]. The findings further

showed that the odds of FGM were higher among those from rural areas; young women residing in rural areas tend to embrace FGM because the practice is deeply rooted in cultural traditions, especially in rural settings[44]. Similarly, studies from Burkina Faso and Gambia have also reported that the prevalence of FGM was low among urban area dwellers[45,46]. In some cases, urban areas may have lower prevalence rates compared to rural areas, as urbanization and education can contribute to changing attitudes towards FGM[46].

Strengths and limitations of the study

This study used nationally representative datasets to perform the analysis. One of the study's limitations is the cross-sectional nature of the data so it is not possible to measure causation between the variables.

Conclusion

The results of the study revealed that the prevalence of FGM is high (72%) among young women in the selected countries. Moreover, the findings revealed that the odds of FGM increased with education and parity; the odds of FGM were higher among women who had no media exposure and those from rural areas. The study provides evidence of the relationship between selected socio-demographic indicators and FGM in selected sub-Saharan countries. Based on the findings, there is a need for capacity building for community leaders on the psycho-social effect of FGM, especially in rural settings, within the respective sub-Saharan countries. There is also a need for initiatives that promote empowerment initiatives among young women.

Authors' contributions

LNM and BKMN conceptualised this study. LNM, BKMN, SKM, KP, TB, and DT worked on the literature review. MT, LNM, and BKMN worked on the data analysis and interpretation of results. All authors worked on the discussion of the findings. All the authors read and approved the final manuscript.

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Declaration of conflicting interests

The authors declare no competing interests.

Ethical consideration

The authors requested and received permission to download datasets. The DHS program has ensured that all data is anonymous before its release so that survey respondents are unidentifiable to the public or researchers. The DHS program followed the requisite ethical processes in collecting the data. More information about the DHS ethics processes can be found at https://dhsprogram.com/Methodology/Protecting-the-Privacy-of-DHS-Survey-Respondents.cfm.

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References

1. WHO. World mental health report: transforming mental health for all. 2022,
2. WHO. Female genital mutilation: fact sheet. *World Health Organization* 2016,
3. Liyew EB. Female Genital Mutilation in the Afar Community: A Practice Against Female's Human Rights. *Journal of Human Rights and Social Work* 2022;7(3):322-30. doi: 10.1007/s41134-022-00213-4
4. World Health Organization. Female genital mutilation 2024 [Available from: https://www.who.int/news-room/fact-sheets/detail/female-genital-mutilation.
5. Scamell M and Ghumman A. The experience of maternity care for migrant women living with female genital mutilation: A qualitative synthesis. *Birth* 2019;46(1):15-23. doi: https://doi.org/10.1111/birt.12390
6. Yusuf C and Fessha Y. Female genital mutilation as a human rights issue: Examining the effectiveness of the law against female genital mutilation in Tanzania. *African Human Rights Law Journal* 2013;13(2):356-82. https://www.ahrlj.up.ac.za/yusuf-c-fessha-y
7. World Health Organization. Eliminating female genital mutilation: An interagency statement: OHCHR, UNAIDS, UNDP, UNECA, UNESCO, UNFPA, UNHCR, UNICEF, UNIFEM, WHO, 2008.
8. Newman A. Grandmother-inclusive intergenerational approaches: the missing piece of the puzzle for ending FGM/C by 2030? *Frontiers in Sociology* 2023;8 doi: 10.3389/fsoc.2023.1196068
9. Boyle EH and Svec J. Intergenerational Transmission of Female Genital Cutting: Community and Marriage Dynamics. *Journal of Marriage and Family* 2019;81(3):631-47. doi: https://doi.org/10.1111/jomf.12560

10. Ali S, de Viggiani N, Abzhaparova A, Salmon D and Gray S. Exploring young people's interpretations of female genital mutilation in the UK using a community-based participatory research approach. *BMC Public Health* 2020;20(1):1132. doi: 10.1186/s12889-020-09183-6
11. Ayenew AA, Mol BW, Bradford B and Abeje G. Prevalence of female genital mutilation and associated factors among women and girls in Africa: a systematic review and meta-analysis. *Systematic Reviews* 2024;13(1):26. doi: 10.1186/s13643-023-02428-6
12. Elnakib S, Elsallab M, Wanis MA, Elshiwy S, Krishnapalan NP and Naja NA. Understanding the impacts of child marriage on the health and well-being of adolescent girls and young women residing in urban areas in Egypt. *Reproductive Health* 2022;19(1) doi: 10.1186/s12978-021-01315-4
13. Antoine C and Young BK. Cesarean section one hundred years 1920–2020: the Good, the Bad and the Ugly. *Journal of Perinatal Medicine* 2021;49(1):5-16. doi: doi:10.1515/jpm-2020-0305
14. Klein E, Helzner E, Shayowitz M, Kohlhoff S and Smith-Norowitz TA. Female Genital Mutilation: Health Consequences and Complications—A Short Literature Review. *Obstetrics and Gynecology International* 2018;2018:7365715. doi: 10.1155/2018/7365715
15. Sarayloo K, Latifnejad Roudsari R and Elhadi A. Health Consequences of the Female Genital Mutilation: A Systematic Review. *Galen Med J* 2019;8:e1336. doi: 10.22086/gmj.v8i0.1336 [published Online First: 20190101]
16. O'Neill S and Pallitto C. The Consequences of Female Genital Mutilation on Psycho-Social Well-Being: A Systematic Review of Qualitative Research. *Qualitative Health Research* 2021;31(9):1738-50. doi: 10.1177/10497323211001862
17. Dhatt R and Pley C. Gender and Global Health Inequality. In: Haring R, Kickbusch I, Ganten D, and Moeti M, eds. Handbook of Global Health. Cham: Springer International Publishing 2020:1-47.
18. Alosaimi AN, Essen B, Riitta L, Nwaru BI and Mouniri H. Factors associated with female genital cutting in Yemen and its policy implications. *Midwifery* 2019;74:99-106. doi: 10.1016/j.midw.2019.03.010
19. United Nations Children's Fund. Understanding the Relationship between Child Marriage and Female Genital Mutilation: A statistical overview of their co-occurrence and risk factors. New York, 2021.
20. Abdel-Aleem MA, Elkady MM and Hilmy YA. The relationship between female genital cutting and sexual problems experienced in the first two months of marriage. *International Journal of Gynecology & Obstetrics* 2016;132(3):305-08. doi: https://doi.org/10.1016/j.ijgo.2015.07.030
21. Rawat R. The association between economic development, education and FGM in six selected African countries. *African Journal of Midwifery and Women's Health* 2017;11(3):137-46. doi: 10.12968/ajmw.2017.11.3.137
22. Pesambili JC and Mkumbo KAK. Implications of female genital mutilation on girls' education and psychological wellbeing in Tarime, Tanzania. *Journal of Youth Studies* 2018;21(8):1111-26. doi: 10.1080/13676261.2018.1450969
23. Ahinkorah BO, Hagan JE, Ameyaw EK, Seidu A-A, Budu E, Sambah F, Yaya S, Torgbenu E and Schack T. Socio-economic and demographic determinants of female genital mutilation in sub-Saharan Africa: analysis of data from demographic and health surveys. *Reproductive Health* 2020;17(1):162. doi: 10.1186/s12978-020-01015-5
24. Grabowska-Lepczak I. Rola edukacji w kształtowaniu bezpiecznych zachowań i postaw w aspekcie zrównoważonego rozwoju. *De Securitate et Defensione O Bezpieczeństwie i Obronności* 2021;7(1) doi: 10.34739/dsd.2021.01.09
25. Morhason-Bello IO and Fagbamigbe AF. Association between Knowledge of Sexually Transmitted Infections and Sources of the Previous Point of Care among Nigerians: Findings from Three National HIV and AIDS Reproductive Health Surveys. *International Journal of Reproductive Medicine* 2020;2020:6481479. doi: 10.1155/2020/6481479
26. Stata Statistical Software: Release 17 [program]. College Station, TX: StataCorp LLC, 2021.
27. Shell-Duncan B, Gathara D and Moore Z. Female genital mutilation/cutting in Kenya: Is change taking place? Descriptive statistics from four waves of Demographic and Health Surveys. New York Population Council, 2017.
28. Ahinkorah BO. Factors associated with female genital mutilation among women of reproductive age and girls aged 0–14 in Chad: a mixed-effects multilevel analysis of the 2014–2015 Chad demographic and health survey data. *BMC Public Health* 2021;21(1):286. doi: 10.1186/s12889-021-10293-y
29. Rawat R and Tirkey NN. Female genital mutilation practice, associated factors, and its consequences on women's reproductive health in Senegal. *IJPS* 2022;7(1) doi: 10.36922/ijps.v7i1.292
30. Mwanja CH, Herman PZ and Millanzi WC. Prevalence, knowledge, attitude, motivators and intentional practice of female genital mutilation among women of reproductive age: a community-based analytical cross-sectional study in Tanzania. *BMC Women's Health* 2023;23(1):226. doi: 10.1186/s12905-023-02356-6
31. Ameyaw EK, Tetteh JK, Armah-Ansah EK, Aduo-Adjei K and Sena-Iddrisu A. Female genital mutilation/cutting in Sierra Leone: are educated women intending to circumcise their daughters? *BMC International Health and Human Rights* 2020;20(1):19. doi: 10.1186/s12914-020-00240-0
32. Arafa A, Mostafa A and Eshak ES. Prevalence and risk factors of female genital mutilation in Egypt: a systematic review. *Clinical Epidemiology and Global Health* 2020;8(3):850-57. doi: https://doi.org/10.1016/j.cegh.2020.02.012
33. Sakeah E, Debpuur C, Aborigo RA, Oduro AR, Sakeah JK and Moyer CA. Persistent female genital mutilation despite its illegality: Narratives from women and men in northern Ghana. *PLOS ONE* 2019;14(4):e0214923. doi: 10.1371/journal.pone.0214923

34. Sood S and Ramaiya A. Combining Theory and Research to Validate a Social Norms Framework Addressing Female Genital Mutilation. *Frontiers in Public Health* 2022;9 doi: 10.3389/fpubh.2021.747823
35. Doucet M-H, Pallitto C and Groleau D. Understanding the motivations of health-care providers in performing female genital mutilation: an integrative review of the literature. *Reproductive Health* 2017;14(1):46. doi: 10.1186/s12978-017-0306-5
36. Santos-Hövener C, Marcus U, Koschollek C, Oudini H, Wiebe M, Ouedraogo OI, Thorlie A, Bremer V, Hamouda O, Dierks M-L, an der Heiden M and Krause G. Determinants of HIV, viral hepatitis and STI prevention needs among African migrants in Germany; a cross-sectional survey on knowledge, attitudes, behaviors and practices. *BMC Public Health* 2015;15(1):753. doi: 10.1186/s12889-015-2098-2
37. Sakeah E, Debpuur C, Oduro AR, Welaga P, Aborigo R, Sakeah JK and Moyer CA. Prevalence and factors associated with female genital mutilation among women of reproductive age in the Bawku municipality and Pusiga District of northern Ghana. *BMC Women's Health* 2018;18(1):150. doi: 10.1186/s12905-018-0643-8
38. Gebremicheal K, Alemseged F, Ewunetu H, Tolossa D, Ma'alin A, Yewondwessen M and Melaku S. Sequela of female genital mutilation on birth outcomes in Jijiga town, Ethiopian Somali region: a prospective cohort study. *BMC Pregnancy and Childbirth* 2018;18(1):305. doi: 10.1186/s12884-018-1937-4
39. Suleiman IR, Maro E, Shayo BC, Alloyce JP, Masenga G, Mahande MJ and McHome B. Trend in female genital mutilation and its associated adverse birth outcomes: A 10-year retrospective birth registry study in Northern Tanzania. *PLOS ONE* 2021;16(1):e0244888. doi: 10.1371/journal.pone.0244888
40. Varol N, Dawson A, Turkmani S, Hall JJ, Nanayakkara S, Jenkins G, Homer CSE and McGeechan K. Obstetric outcomes for women with female genital mutilation at an Australian hospital, 2006–2012: a descriptive study. *BMC Pregnancy and Childbirth* 2016;16(1):328. doi: 10.1186/s12884-016-1123-5
41. Williams-Breault BD. Eradicating Female Genital Mutilation/Cutting: Human Rights-Based Approaches of Legislation, Education, and Community Empowerment. *Health and Human Rights* 2018;20(2):223-33.
42. Barker H. Media and community influences on female genital cutting in Egypt. *Journal of Development Communication* 2019;30(2):1-15. https://nwulib.idm.oclc.org/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=cms&AN=141469921
43. Sobel M. Female genital cutting in the news media: A content analysis. *International Communication Gazette* 2015;77(4):384-405. doi: 10.1177/1748048514564030
44. Setegn T, Lakew Y and Deribe K. Geographic Variation and Factors Associated with Female Genital Mutilation among Reproductive Age Women in Ethiopia: A National Population Based Survey. *PLOS ONE* 2016;11(1):e0145329. doi: 10.1371/journal.pone.0145329
45. Kaplan A, Forbes M, Bonhoure I, Utzet M, Martín M, Manneh M and Ceesay H. Female genital mutilation/cutting in The Gambia: long-term health consequences and complications during delivery and for the newborn. *International journal of women's health* 2013:323-31.
46. Karmaker B, Kandala N-B, Chung D and Clarke A. Factors associated with female genital mutilation in Burkina Faso and its policy implications. *International Journal for Equity in Health* 2011;10(1):20. doi: 10.1186/1475-9276-10-20.