

Original Research Article

ATTITUDE AND PRACTICE OF FEMALE GENITAL MUTILATION AMONG WOMEN OF REPRODUCTIVE AGE IN A TERTIARY HEALTH FACILITY IN BENIN CITY, EDO STATE.

ABSTRACT

Background: Female genital Mutilation (FGM) is a harmful traditional practice prevalent in Africa, leading to adverse physical, psychological, sexual, and reproductive health outcomes for women.

Objective: This study aims to ascertain the attitude and practice of female genital mutilation (FGM), the extent of FGM practice, and the determinant factors influencing FGM among women of reproductive age attending tertiary health facilities in Benin City, Edo State.

Methodology: A cross-sectional descriptive study design was used. A sample of 316 women was selected using a simple random sampling technique. A self-structured questionnaire served as the instrument for data collection. Data analysis was conducted using the Statistical Package for Social Sciences (SPSS).

Results: The study revealed that 54.1% of respondents have undergone FGM, while 45.9% have not. A significant portion of respondents (48.4%) believe that FGM aims to ensure premarital virginity and marital fertility. Moreover, 65.2% of respondents indicated that FGM is performed in unclean environments.

Recommendation: It is recommended that healthcare workers engage in health education about the health, sexual, and psychological consequences of FGM to mitigate its practice.

KEYWORDS: Attitude, Practice, Women of Reproductive Age, Female Genital Mutilation.

Background

Female Genital Mutilation (FGM) is a harmful practice with no health benefits, often resulting in severe adverse effects. It arises from gender inequality, efforts to control female sexuality, and cultural beliefs about purity, modesty, and beauty. Typically initiated and performed by women to honour traditions and avoid social exclusion, FGM can lead to serious health issues, including infections, chronic pain, difficulty urinating, childbirth complications, and potentially fatal bleeding (WHO, 2018).

FGM involves the alteration or removal of external female genitalia, leading to both immediate and long-term health problems such as shock, hemorrhage, chronic pain, infections, and psychological trauma.

Infibulation, the most severe form of FGM, creates a physical barrier to sexual intercourse and childbirth, necessitating painful and risky procedures to reopen the vaginal opening (UNICEF, 2016; Reisel et al., 2019).

This practice is prevalent in parts of Africa, Asia, and the Middle East, and despite being illegal in many regions, it continues due to deep-rooted cultural and social factors. The persistence of FGM highlights the need for ongoing efforts to eradicate this harmful practice and protect the health and rights of women and girls.

Aven et al. (2017) studied nursing students at Atibe Midwifery and Nursing Training School in Ghana, revealing that most students were well-informed about FGM, with schools being the major source of their knowledge. Oringanje et al. (2017) found that healthcare providers, after being informed about FGM's consequences, generally believed the tradition could be changed or abandoned. Titilayo et al. (2018) noted that men whose religions did not require FGC were more likely to support its discontinuation, indicating that religious teachings significantly influence attitudes toward FGM.

In Ethiopia, Nurilign et al. (2018) discovered a high prevalence of FGM among women and girls, with many supporting its continuation due to cultural beliefs. Abathun et al. (2016) observed regional differences in attitudes, with strong support for FGM in Somali regions and more opposition in Harari regions. Adeniran et al. (2016) highlighted that male adolescents in Nigeria had varied views on FGM, with many recognizing its harm and advocating for education as a key intervention to stop the practice.

Melese et al. (2020) examined mothers in Ethiopia, finding that while many had good knowledge of FGM, a significant number still practiced it on their daughters, influenced by marital status, income, and cultural beliefs. Alemu and Haile (2021) found that in Ethiopia, older, rural, and less-educated women were more likely to support FGM, while opposition was linked to higher education and urban living.

Cappa et al. (2020) studied parental attitudes and found that daughters were more likely to undergo FGM if both parents supported the practice. This underscores the need for targeted interventions addressing both maternal and paternal attitudes to effectively reduce FGM prevalence.

Ndikom et al. (2017) studied mothers in Ibadan, Nigeria, and found that education level influenced FGM practices, with more educated mothers less likely to support FGM. Ahmadi (2013) noted that despite a general decline in FGM due to awareness campaigns, the practice persists in certain regions and has spread to immigrant communities in Western countries.

Factors influencing FGM vary widely. Sociological pressures, cultural beliefs, religious misconceptions, and educational disparities all play significant roles. Sociologically, FGM is seen as essential for marriageability and social acceptance. Culturally, it is viewed as a rite of passage, while religiously, it is mistakenly believed to be a requirement. Educationally, higher literacy rates correlate with reduced FGM prevalence, as educated individuals are less likely to support the practice.

The preservation of virginity and suppression of sexual desires are also cited as reasons for FGM. WHO (2018) highlights that FGM aims to ensure premarital virginity and marital fidelity by reducing sexual desire. The complex interplay of these factors underscores the need for multifaceted approaches to eradicate FGM, involving education, cultural change, and legal measures.

In summary, FGM continues to be practiced despite widespread condemnation and legal prohibitions, largely due to entrenched cultural, social, and religious beliefs. Effective eradication efforts must address these underlying factors through education, community engagement, and policy enforcement to protect the health and rights of women and girls.

Methodology

This study utilized a cross-sectional descriptive survey design to assess the attitudes and practices regarding female genital mutilation (FGM) among women of reproductive age at the University of Benin Teaching Hospital (UBTH) in Edo State. The research was conducted at UBTH, a tertiary healthcare center established in 1973, which offers services in healing, teaching, and research. Located in Egor Local Government Area, Benin City, the hospital comprises various departments, including nursing services, medicine, pathology, and pharmacy.

The sampling technique used was convenience sampling, ensuring that all participants had an equal chance of selection. Data collection was facilitated through a self-structured questionnaire featuring both open and closed-ended questions. The questionnaire was divided into two sections: Section A gathered demographic data, while Section B addressed research questions and hypotheses. The questionnaires were administered to women of reproductive age attending the antenatal clinic at UBTH.

The target population for the study included 80 women of reproductive age (15-49 years) attending UBTH antenatal clinic. Taro Yamane's formula (1967) was used to determine the sample size, considering a population size of 1500 and a precision level of 0.05, which resulted in a sample size of 316.

Validity of the instrument was ensured through expert judgment and scrutiny by the project supervisor, who made necessary corrections before distribution. Reliability was tested via a pilot study involving 10% of the sample size, with a Cronbach alpha value greater than 0.5, indicating that the instrument was reliable.

Ethical considerations were paramount, and ethical approval was obtained from the UBTH ethical review committee. Participation was voluntary, and principles such as autonomy, informed consent, beneficence, respect for anonymity and confidentiality, freedom from exploitation, and the right to fair treatment were upheld throughout the study.

Data analysis was conducted using descriptive statistical methods, including frequency distribution tables, percentages, and pie charts. Hypotheses were tested using Chi-square analysis with the aid of the Statistical Package for Social Sciences (SPSS) version 20.

Results

The demographic variables that pertained to this study and which the questionnaires assessed were age, level of education, marital status, religion and tribe. Table 1 shows the demographic distribution of the respondents with respect to the afore-listed demographic variables.

Table 1: Sociodemographic characteristics of study population

	Frequency	Percentage
--	-----------	------------

Age		
15-24 years	68	21.5
25-34 years	106	33.5
35-44 years	108	34.2
45-49 years	34	10.8
Marital Status		
Single	95	30.1
Married	211	66.8
Divorced	10	3.2
Religion		
Christianity	288	91.1
Islam	20	6.3
Others	8	2.5
Tribe		
Yoruba	41	13.0
Igbo	39	12.3
Hausa	12	3.8
Bini	200	63.3
Others	24	7.6
Level of education		
Primary	18	5.7
Secondary	81	25.6
Tertiary	197	62.3
No formal education	20	6.3
Parity		
0	66	20.9
1	120	38.0
2 and above	130	41.1

Table 1 shows the sociodemographic characteristics of study population. It shows that majority 108(34.2%) are 35 – 44years, 211(66.8%) are married, 288(91.1%) are Christians, 200(63.3%) are Binis, 197(62.3) have tertiary level of education, while 130(41.1%) are para 2 and above.

Table 2: Attitude towards Female Genital Mutilation

	Disagree	Strongly disagree	Agree	Strongly agree	Mean	Remark
Female genital mutilation is a traditional practice and should be stopped	20(6.3)	38(12.0)	95(30.1)	163(51.6)	3.21	Positive
Female genital mutilation prevents premarital sex	121(38.3)	53(16.8)	102(32.3)	40(12.7)	2.41	Negative
Women should actively participate in reduction of female genital mutilation	24(7.6)	42(13.3)	100(31.6)	150(47.5)	3.13	Positive
Female genital mutilation is a religious requirement that should be done	113(35.8)	125(39.6)	40(12.7)	38(12.0)	1.97	Negative
Uncircumcised female should be socially rejected	97(30.7)	165(52.2)	32(10.1)	22(7.0)	1.72	Negative
Women are forced to do FGM in my locality	140(44.3)	94(29.7)	64(20.3)	18(5.7)	2.02	Negative
Attitude					2.41	Negative

Table 2 shows the attitude towards Female Genital Mutilation. It shows that in most of the items, the respondents have negative attitude towards female genital mutilation. The overall mean attitude of 2.41 which is below the decision point of 2.50 shows that they have negative attitude towards the practice.

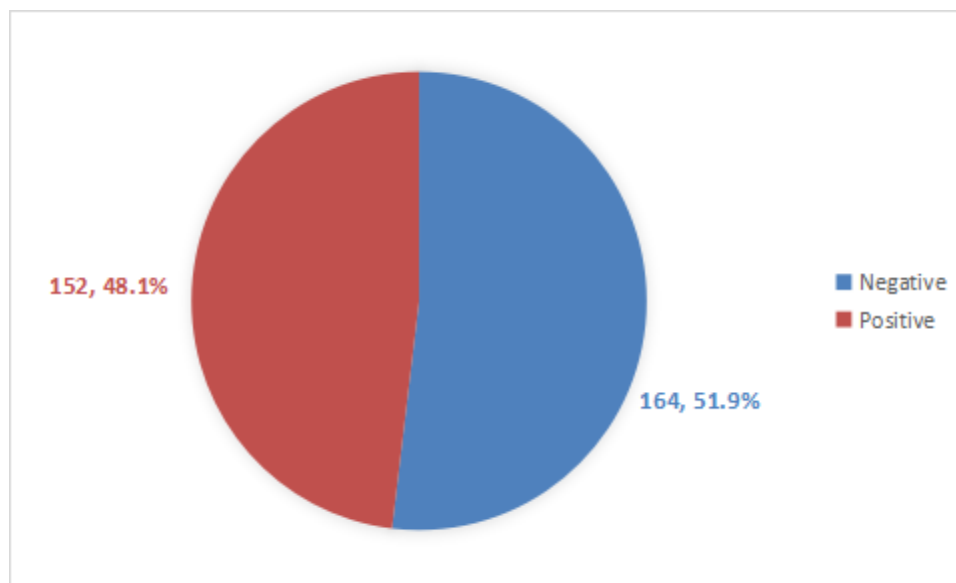


Figure 1: Level of attitude towards FGM

Figure 1 shows the level of attitude towards FGM. It shows that 164(51.9%) have negative attitude while 152(48.1%) have positive attitude towards the practice.

Table 3: Extent of practice of female genital mutilation

	Frequency	Percentage
Is female genital mutilation still practiced in your community		
Yes	181	57.3
No	135	42.7
Is female genital mutilation done in hospitals		
Yes	65	20.6
No	251	79.4
Is female genital mutilation done by health professionals		
Yes	75	23.7
No	241	76.3
Is there any law to stop FGM in your locality		

Yes	101	32.0
No	215	68.0
Is FGM done in a clean environment		
Yes	110	34.8
No	206	65.2
Are parents in support of FGM for their kids		
Yes	110	34.8
No	206	65.2
Have you undergone female genital mutilation		
Yes	171	54.1
No	145	45.9
If yes, when?		
At birth	111	64.9
Before marriage	51	29.8
After marriage	9	5.3
Will you circumcise your baby		
Yes	106	33.5
No	210	66.5

Table 3 shows the extent of practice of female genital mutilation. It shows that 181(57.3%) still practiced FGM in their community, 54(20.6%) reported FGM is still done in the hospitals, 75(23.7%) reported it is done by health professionals, 101(32.0%) reported that there are laws in their locality to stop FGM, 110(34.8%) reported that the environment where FGM is done is clean, 110(34.8%) reported that parents are in support of FGM for their kids, 171(54.1%) reported that they have undergone female genital cutting, 111(64.9%) of those who have undergone Female Genital Cutting, had it at birth, while 106(33.5%) still reported that they will circumcise their babies.

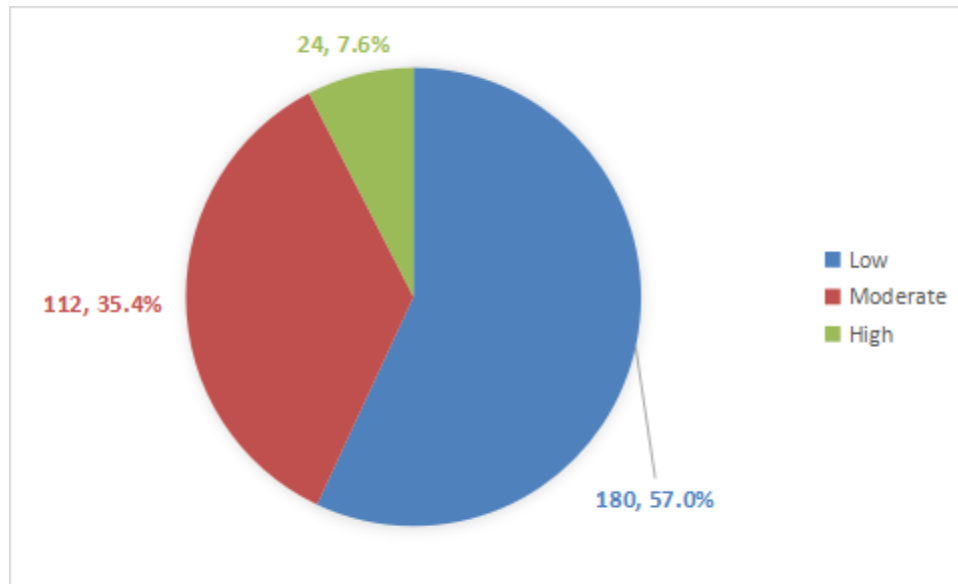


Figure 2: Level of Practice of FGM

Figure 2 shows the level of Practice of FGM. It shows that 180(57.0%) have low level of practice, 112(35.4%) have moderate level of practice while 24(7.6%) have high level of practice.

Table 4: Factors influencing the practice of female genital mutilation

Variable	Disagree	Strongly disagree	Agree	Strongly agree	Mean
FGM is utilized as an initiation rite of passage to womanhood	46(14.6)	22(7.0)	110(34.8)	138(43.7)	2.99
FGM is aimed at ensuring premarital virginity and marital fidelity by reducing her desire for extramarital sexual acts	43(13.6)	30(9.5)	153(48.4)	90(28.5)	3.15
Difficulty in finding a husband for the girl, shame, stigmatization loss of social status, honor and protection are consequences of FGM	50(15.8)	60(19.0)	131(41.5)	75(23.7)	2.96
Females who have undergone FGM	151(47.8)	77(24.4)	72(22.8)	16(5.1)	2.70

have less passion for education because they see themselves as more matured women than those who have not					
Because of the harmful physical and psychological effects of the practice it prevents most girls from finishing their education	99(31.3)	90(28.5)	111(35.1)	16(5.1)	2.09
FGM is performed in order to prepare them for marriage and adulthood	51(16.1)	30(9.5)	152(48.1)	83(26.3)	2.17

Table 4 shows the factors influencing the practice of female genital mutilation. It shows that the major factors from the mean score is FGM is aimed at ensuring premarital virginity and marital fidelity by reducing her desire for extramarital sexual acts with a mean of 3.15, while the least factor is because of the harmful physical and psychological effects of the practice, it prevents most girls from finishing their education with a mean of 2.09.

Table 5: Association between sociodemographic characteristics and level of practice

	Level of Practice			χ^2	P
	Low	Moderate	High		
Age					
15-24 years	31(45.6)	31(45.6)	6(8.8)	9.115	0.167
25-34 years	59(55.7)	37(34.9)	10(9.4)		
35-44 years	70(64.8)	34(31.5)	4(3.7)		
45-49 years	20(58.8)	10(29.4)	4(11.8)		
Marital Status					
Single	42(44.2)	45(47.4)	8(8.4)	10.461	0.033*

Married	132(62.6)	63(29.9)	16(7.6)		
Divorced	6(60.0)	4(40.0)	0(0.0)		
Religion					
Christianity	174(60.4)	96(33.3)	18(6.3)		
Islam	6(30.0)	8(40.0)	6(30.0)	32.111	0.000*
Others	0(0.0)	8(100.0)	0(0.0)		
Tribe					
Yoruba	22(53.7)	17(41.5)	2(4.9)	53.655	0.000*
Igbo	10(25.6)	25(64.1)	4(10.3)		
Hausa	0(0.0)	10(83.3)	2(16.7)		
Bini	124(62.0)	60(30.0)	16(8.0)		
Others	24(100.0)	0(0.0)	0(0.0)		
Level of education					
Primary	3(16.7)	15(83.3)	0(0.0)		
Secondary	38(46.9)	35(43.2)	8(9.9)	46.485	0.000*
Tertiary	133(67.5)	54(27.4)	10(5.1)		
No formal education	6(30.0)	8(40.0)	6(30.0)		
Parity					
0	26(39.4)	36(54.5)	4(6.1)	17.451	0.002*
1	68(56.7)	44(36.7)	8(6.7)		
2 and above	86(66.2)	32(24.6)	12(9.2)		

Table 5 shows the association between sociodemographic characteristics and level of practice. It shows that marital status, Religion, Tribe, Level of education and parity show significant association with level of practice, while age didn't show significant association ($p < 0.05$) with level of practice.

Table 6: Chi-Square statistics of association between attitude and practice of Female Genital Mutilation (FGM)

Practice

	High	Moderate	Low	χ^2	P-value
Attitude				41.42	.000*
Positive	02 (11.5)	37 (53.9)	113 (86.6)		
Negative	22 (12.5)	75 (58.1)	67 (93.4)		

Table 6 shows the association between attitude towards female genital mutilation and practice. A chi-Square (χ^2) value of 41.42 with a degree of freedom 2 was obtained, while a p-value of .000 was indicated. Since the p-value is less at level of significance, the null hypothesis is rejected, implying that there is a significant association between attitude and practice of FGM.

Discussion

Attitude towards Female Genital Mutilation

Findings of this study shows that majority of the respondents (51.9%) have negative attitude while fewer respondents (48.1%) have positive attitude towards the female genital mutilation. Specifically, 81.7% believe FGM is a traditional practice that should be stopped, reflecting a strong opposition to its continuation. Similarly, 55.1% disagree with the notion that FGM prevents premarital sex, and 75.4% reject the idea that FGM is a religious requirement. Additionally, 82.9% oppose the social rejection of uncircumcised females, and 74.0% disagree that women are forced to undergo FGM in their locality. Overall, the mean attitude score of 2.41, which is below the neutral point of 2.50, signifies a predominantly negative stance towards FGM. However, the data also shows that 48.1% of respondents still hold positive views towards certain aspects of the practice, indicating a divided public opinion. This necessitates continued education and intervention efforts to further reduce support for FGM.

In relation to the present study, the research done Obi, Obarisiagbon, Igbinadolor, Fatai, Adesoye (2019) found that among respondents, 82% reported that FGM/C is a good tradition which must be maintained while 18% reported that it was inappropriate, 88.5% reported that FGM/C is a religious obligation which must be met by the religious groups while 11.5% reported otherwise, 92.5% reported that women should be educated on the consequences of FGM/C while 6.5% reported that it was inappropriate to educate women on the consequences of FGM/C, 87.3% reported that FGM/C is a requirement for the girl-child to be inducted into female social group while 11.7% reported that it was not necessary for acceptance into social groups, 91% reported that they will recommend FGM/C to another woman while 9.0% reported that they will not recommend it, 78.3% reported that they will allow their daughters to be cut while 21.7% reported that their daughters will not be mutilated, 77.8% reported that FGM/C should be encouraged by the community leader while 22.2% reported that the practice should not be encouraged by community leaders. The study reported that 75.5% of the respondents had negative attitude towards FGM/C while 24.5% had positive attitude towards FGM/C. Ethnic group and knowledge were found to be significantly associated with attitude towards FGM/C. Walelign, Toru, Yeshambel, Mesele (2020) found that among respondents in Oromia Region, Ethiopia 71.22% of the respondents had positive attitude to FGM/C, 11.36% had negative attitude and 17.42% had neutral attitude. Abdou, Wahdan, El-Nimr (2020) revealed that among respondents in Egypt, 65.3% of the respondents had good attitude towards FGM/C, 23.6% had fair attitude and 11.1% had poor attitude to FGM/C. Ibrahim, Ahmed, Ado, Mohammed, Abubakar, Balogun, Gidado and Nguku (2017) in their study in Kano State, Nigeria found that among respondents, 29.07% of the respondents were of the opinion that performing FGM/C violates the rights of a girl child, 11.75% did not agree, and 59.17% are indifferent. Also 54.67% of the respondents reported that FGM/C practices should be discontinued in their households, while 45.33% indicated that they want it to continue.

Extent of practice of female genital mutilation

Evaluation of the extent of practice of female genital mutilation among respondents showed that majority (57.0%) have low level of practice, while less than half (35.4%) have moderate level of practice, and less than one third (7.6%) have high level of practice. Female Genital Mutilation (FGM) remains prevalent,

with 57.3% reporting its practice in their community. However, only 20.6% say it occurs in hospitals and 23.7% by health professionals, indicating limited medicalization. Laws against FGM are known by 32.0%, suggesting gaps in legal awareness or enforcement.

A significant portion (34.8%) believe FGM is performed in a clean environment, and the same percentage report parental support for the practice. Personal experience is high, with 54.1% having undergone FGM, mainly at birth (64.9%). Despite this, 66.5% would not circumcise their daughters, reflecting a generational shift in attitudes.

In study conducted in Oromia Region, Ethiopia by Walelign, Toru, Yeshambel, Mesele (2020), among respondents, 91.28% reported that they had undergone FGM/C with 43.93% reporting that they had type 2, 30.68% having clitoridectomy, and 16.28% having suni. Practitioners of FGM/C were found to be TBAs (75.37%) and other village women other than TBAs (15.9%). The decision to have FGM/C performed was made by mothers (74%), both mother and father (19.6%), village women (4.1%) and father (2.3%). Majority (43.9%) of the respondents reported that they underwent FGM/C when they were 6-10 years old. In a study conducted in Egypt, 74.2% had undergone FGM/C out of which 70.5% reported that the mutilation was done when they were about 10 and 15 years old. Mothers (49.4%) and both mother and father (30.1%) were implicated as responsible for the decision to engage in FGM/C. Mutilation was found to be performed by TBAs (40.1%) and physicians (30.5%). Furthermore, 31.8% of respondents reported that they were interested in performing FGM/C on their daughters, 80.3% reported that they knew someone who had the intention of mutilating their daughter, 41.1% reported that they were facing pressure from a family member to perform FGM/C, 23.1% reported that they were facing pressure from a neighbor to perform FGM/C, and 31% reported that their husbands wanted to perform FGM/C on their daughters (Abdou, Wahdan, El-Nimr (2020). Ibrahim, Ahmed, Ado, Mohammed, Abubakar, Balogun, Gidado and Nguku (2017) in their study in Kan, Nigeria, found that among respondents, (59.20%) were victims of FGM/C and underwent it in childhood and (79.9%) had subjected their daughters to FGM/C out of which 91% had undergone type-1 FGM/C (Clitoridectomy) while 9% had undergone Type-4. Traditional barbers (91%) and TBAs (9%) were found to be responsible for carrying out FGM/C while grandparents (62.98%), fathers of the children (27.34%) and mothers of the children (9.68%) were reported as

responsible for the decision to engage in FGM/C. Obi, Obarisiagbon, Igbinador, Fatai, Adesoye (2019) found that among respondents, 80.2% reported that FGM/C is still being practiced stating reasons for practice to include means of ensuring virginity (52.2%), to avoid social stigma (10.2%), compliance to religious instructions (32.9%), good for prospective marriages (4.7%). Traditional Birth Attendants (88.1%), nurse (10%), and old women (1.9%) were reported as persons performing in the study area while home (98.6%) and relatives/friends home (1.4%) were reported as locations where FGM/C was carried out. The respondents further reported that knives (78%), razors (14.2%), and scissors (9.7%) were instruments used to carry out FGM/C while parents (64%) and all members of the family (36%) influenced the FGM/C decision.

Factors influencing the practice of female genital mutilation

In this study, the major factors from the mean score is FGM is aimed at ensuring premarital virginity and marital fidelity by reducing her desire for extramarital sexual acts with a mean of 3.15 and 76.9% agreement, while the least factor is because of the harmful physical and psychological effects of the practice, it prevents most girls from finishing their education with a mean of 2.09. Additionally, 78.5% see FGM as an initiation rite into womanhood, with a mean score of 2.99. Many also believe FGM helps avoid social consequences like difficulty in finding a husband and stigmatization, reflected by a mean score of 2.96. In contrast, fewer respondents see FGM as reducing girls' passion for education (mean score of 2.70) or preventing them from finishing school due to its harmful effects (mean score of 2.09). Lastly, 74.4% agree that FGM prepares girls for marriage and adulthood, with a mean score of 2.17.

In most communities, factors that influence the practice of FGM range from ethnic, family relations, tribal connections and culture, class, economic and social circumstances and education (Ahmadi, 2018). A study carried out by Abeya, et al (2017) revealed that there is a statistically significant relationship between literacy level and female genital mutilation as the literate individuals were at lesser odds of having had female genital mutilation. Sometimes FGM is performed on girls as young as 12 or 13 years old, who most often then drop out of school to marry and start a family. Abdisa, et al (2017) revealed in his study that the highest proportion of female genital mutilation was found among women with the least education while only one-third of women with tertiary education have undergone female genital mutilation.

Because of the harmful physical and psychological effects of the practice it prevents most girls who undergo it from finishing their education.

Research hypotheses show that Marital status, Religion, Tribe, Level of education and parity show significant association with level of practice, while age didn't show significant association ($p < 0.05$) with level of practice. It was therefore noted that there was no significant association between sociodemographic characteristics and level of practice. Findings in a study by Melese, Tesfa, Sharew and Mehare (2020) also showed that Marital status, monthly income, custom, belief, value and attitude towards female genital mutilation had significant association with female genital mutilation practice.

Research hypotheses two which states that there is no significant relationship between attitude and practice of female genital mutilation was rejected. It was observed that attitude actually influenced the practice of FGM. This finding is in agreement with a study by Melese, Tesfa, Sharew and Mehare (2020) who reported a significant association (positive) between attitude of mothers towards FGM and practice in a community in Northwest Ethiopia. However, it is contrary to Alemu and Haile (2021) who reported a negative significant association (inverse) between attitude and practice of FGM.

Conclusion and recommendation

In conclusion, this study conducted at a tertiary health facility in Benin City, Edo State, found that the majority of women of reproductive age held negative attitudes towards female genital mutilation (FGM), with fewer expressing positive views. Significant associations were observed between sociodemographic characteristics and the prevalence of FGM practice, as well as between attitudes and actual FGM practices. The study recommends that governmental and international organizations should intensify efforts to educate communities about the risks associated with FGM. Furthermore, suggestions for future research include broader studies on the prevalence and impacts of FGM across Nigeria, investigations into healthcare professionals' knowledge and attitudes towards FGM, and prospective surveys on the psychosexual effects of FGM. These efforts are crucial in developing targeted interventions to eradicate this harmful practice and protect the health and rights of women and girls.

Consent and Ethical Approval

Consent was obtained from each participant in line with Helsinki's declaration. Ethical approval for this work was obtained from UBTH ethical review committee.

Disclaimer (Artificial intelligence)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of manuscripts.

References

Abathun AD, Sundby J, Gele AA. Attitude toward female genital mutilation among Somali and Harari people, Eastern Ethiopia. *Int J Womens Health*. 2016 Oct 6;8:557-569. doi: 10.2147/IJWH.S112226. PMID: 27785105; PMCID: PMC5065096.

Abdisa B, Desalegn M, Tesew A (2017) Assessment of the Prevalence of FGM and Associated Factors among Women's of Reproductive Age Group in Kebirbeyah Town, Somali Region Eastern Ethiopia, 2017. *Health Sci J*. Vol. 11 No. 4: 517.

Abeya SG, Chuluko BG, Gemeda DD (2017). Factors Associated with Female Genital Mutilation among Women of Reproductive Age in Gewane Woreda, Afar. *Rem Open Access-Womens Heal* 2:1-5.

Adeniran AS, Ijaiya MA, Fawole AA, Balogun OR, Adesina KT, Olatinwo AW, Olarinoye AO, Adeniran PI. Attitudes to female genital mutilation/cutting among male adolescents in Ilorin, Nigeria. *S Afr Med J*. 2016 Jul 4;106(8):822-3. doi: 10.7196/SAMJ.2016.v106i8.10124. PMID: 27499413.

Ahmadi BA. An analytical approach to female genital mutilation in West Africa. *Int J Women's Res* 2013; 2(1): 37–56, https://ijwr.ut.ac.ir/article_30589.html14.

Alemu DG, Haile ZT. Association between maternal attitude towards female circumcision and daughter's circumcision status. *Int J Gynecol Obstet*. 2022; 156: 546–551. <https://doi.org/10.1002/ijgo.13772>

Anmut, Walelign & Toru, Tigistu & Yeshambel, Addisu & Mesele, Molalegn. (2020). Knowledge, Attitude and Practice Towards Female Genital Mutilation Among Reproductive Age Women in Amad Imam Town, Jarso District, East Hararge Zone, Oromia Region , Ethiopia: A Community Based Study. 2020. 10.7176/JMPB/66-02.

Avén, J., & Jacobson, C.-A. (2011). Nursing students' knowledge of and attitudes towards female genital mutilation : a quantitative study in Ghana (Dissertation). Retrieved from <https://urn.kb.se/resolve?urn=urn:nbn:se:rkh:diva-193>

Cappa C, Thomson C, Murray C. Understanding the association between parental attitudes and the practice of female genital mutilation among daughters. PLoS One. 2020 May 21;15(5):e0233344. doi: 10.1371/journal.pone.0233344. PMID: 32437387; PMCID: PMC7241784.

Changing a Harmful Social Convention: Female genital mutilation/cutting', Innocenti Digest, UNICEF, Florence, Italy, 2005.

Chizoma Millicent Ndikom, Feyintoluwa Anne Ogungbenro, Olajumoke Adetoun Ojeleye. Perception and Practice of Female Genital Cutting Among Mothers in Ibadan, Nigeria. International Journal of Nursing and Health Science. Vol. 4, No. 6, 2017, pp. 71-80.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16, 297–334.

Ibrahim, Baffa & Ahmed, Zainab & Ado, Ado & Mohammed, Yahaya & Abubakar, Aisha & Balogun, Muhammad & Gidado, Saheed & Nguku, Patrick. (2017). Prevalence and Determinants of Female Genital Mutilation among Women in a Rural Settlement of Kano State Nigeria, 2016.. Merit Research Journal of Medicine and Medical Sciences. 5. 072-077.

Melese, G., Tesfa, M., Sharew, Y. *et al.* Knowledge, attitude, practice, and predictors of female genital mutilation in Degadamot district, Amhara regional state, Northwest Ethiopia, 2018. *BMC Women's Health* 20, 178 (2020). <https://doi.org/10.1186/s12905-020-01041-2>

Nurilign Abebe Moges, Getachew Mullu, Mihiretie Gedfew, Mohammednur Redi, Mohammed Molla, Setarg Ayenew, Shegaw Fentahun, Solomon Adisie, Zewudu Dagneu. Knowledge, Attitude and Practice of Women Towards Female Genital Mutilation in Lejet Kebele, Dembecha Woreda, Amhara Regional State, Northwest, Ethiopia, 2014. Journal of Gynecology and Obstetrics. Vol. 3, No. 2, 2015, pp. 21-25. doi: 10.11648/j.jgo.20150302.11

Obi A. I, Obarisiagbon O.E, Igbinador O. L Fatai K.M, Adesoye O.O Factors associated with the knowledge and attitude towards Female Genital Mutilation among antenatal clinic attendees in Southern Nigeria *Annals of Health Research* Volume 5, Issue No 2: 183-192 July-December 2019
doi:10.30442/ahr.0502-20-50

Oringanje, C.M., Okoro, A., Nwankwo, O.N. and Meremikwu, M.M. (2017), Providing information about the consequences of female genital mutilation to healthcare providers caring for women and girls living with female genital mutilation: A systematic review. *Int J Gynecol Obstet*, 136: 65
71. <https://doi.org/10.1002/ijgo.12057>

Reisel D, Creighton SM. Long term health consequences of Female Genital Mutilation (FGM). *Maturitas*. 2015 Jan;80(1):48-51. doi: 10.1016/j.maturitas.2014.10.009. Epub 2014 Oct 24. PMID: 25466303.

Shawky, Marwa & Wahdan, Iman & El-Nimr, Nessrin. (2020). Prevalence of Female Genital Mutilation, and Women's Knowledge, Attitude, and Intention to Practice in Egypt: A Nationwide Survey. *Journal of High Institute of Public Health*. 50. 139-145. 10.21608/jhiph.2020.121424.

Titilayo, A., Palamuleni, M. E., Olaoye-Oyesola, J. O., & Owoeye, O. M. (2018). Religious Perceptions and Attitudes of Men towards Discontinuation of Female Genital Cutting in Nigeria: Evidence from the 2013 Nigeria Demographic and Health Survey. *African Journal of Reproductive Health / La Revue Africaine de La Santé Reproductive*, 22(1), 20–28. <https://www.jstor.org/stable/26493897>

Understanding and addressing violence against women: Female Genital Mutilation [Internet]. Geneva: World Health Organization; Available
https://iris.who.int/bitstream/handle/10665/77428/WHO_RHR_12.41_eng.pdf.;jsessionid=DF46B17BE1E7EAA84473B3DA438DB131?sequence=1

Walellign A, Tigistu Toru, Addisu yeshambel, Molalegn Mesele. (2020). Knowledge, Attitude and Practice Towards Female Genital Mutilation Among Reproductive Age Women in Amad Imam Town, Jarso District, East Hararge Zone, Oromia Region , Ethiopia: A Community Based Study. *Journal of Medicine, Physiology and Biophysics*, 66:14-21.

World Health Organization. The global health observatory. Women of reproductive age population
[https://www.who.int/data/gho/indicator-metadata-registry/imr-details/women-of-reproductive-age-\(15-49-
years\)-population-\(thousands\)](https://www.who.int/data/gho/indicator-metadata-registry/imr-details/women-of-reproductive-age-(15-49-years)-population-(thousands))

World Medical Association. World Medical Association Declaration of Helsinki: ethical principles for
medical research involving human subjects. JAMA. 2013 Nov 27;310(20):2191-4. doi:
10.1001/jama.2013.281053. PMID: 24141714.

Yamane, T. (1967) Statistics: An Introductory Analysis. 2nd Edition, Harper and Row, New York.

UNDER PEER REVIEW