

Prevalence and Some Sociodemographic Predictors of Female Genital Mutilation among Mothers Attending Antenatal Clinics in Port Harcourt Local Government Area, Rivers State

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Authors' contributions

This work was carried out in collaboration between both authors. Author ABA designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Author PFA managed the analyses of the study and managed the literature searches. Both authors read and approved the final manuscript.

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ABSTRACT

This study was conducted to determine the prevalence and sociodemographic predictors of Female Genital Mutilation (FGM) among mothers attending antenatal clinics in Port Harcourt Local Government Area, Rivers State. A total of 487 respondents made up of women of childbearing age (15-49 years) randomly selected from some antenatal clinics in the area were involved in this study. A structured questionnaire, self-administered to the respondents with a reliability coefficient of 0.86 was used for the collection of data. The SPSS 22.0 was used for the analyses of the collected data. Frequency, percentage, chi-square and regression analysis were the statistical tools used to analyse the data. The mean and standard deviation of the age of the respondents and number of children were 30.1 ± 6.6 and 3.4 ± 1.9 , respectively. An FGM prevalence of 35.1% was reported. Sociodemographic factors studied included age (X^2 -value = 40.389, df = 3, $p < 0.05$), marital status (X^2 -value = 54.268, df = 4, $p < 0.05$) and educational attainment (X^2 -value = 178.67, df = 3, $p < 0.05$). There was a strong relationship between the sociodemographic factors and the practice of female genital mutilation. The results show that curbing FGM knowledge and public awareness of its short

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and long-term consequences is important in order to reduce its prevalence. Government policies should be implemented to help stop this practice. Community health-based campaigns against female genital mutilation should be increased and maintained.

Keywords: FGM; Port Harcourt; prevalence; antenatal clinic.

1. INTRODUCTION

Female genital mutilation is a harmful practice traditionally imposed on women and girls around the world and has been seen as an abuse of human rights. It is unlike male circumcision which of relatively less risky and is scientifically proven to be beneficial health-wise [1]. It is practised in Yemen, Indonesia and Iraq [2]. Its prevalence varies from one country/location to another. It is also widely practised in different ethnic groups in at least 28 countries located within the African continent including Mali, Sudan, the Northern part of Ghana, Egypt, Eritrea and Nigeria. Djibouti and Somalia however have the highest prevalence rates of FGM in Africa [3]. Worldwide, Nigeria accounts for almost one-quarter of the approximately 115-130 million women, that are circumcised. The south-south region of the country has the highest prevalence at 77%, south-east at 68% and south-west at 65%. In the northern part of the country, it had not been practised extensively; however, it is beginning to be excessively practised of recent [4].

Reasons for carrying out FGM include preservation of family honour and virginity, boosting marriage opportunities as well as sexual pleasure of her husband, prevention of promiscuity and mother and child death during delivery and enhancement of fertility. The procedure is often done without proper hygiene, exposing the girl to infections, physical and emotional pains. This process has thus been seen as a breach of women's and girls' rights as it leaves the girl with the process after it has been done and she begins to hate sex because of its perceived pain [5].

Its prevalence varies with age, educational attainment or status, place of birth and cultural beliefs of the women. This study was carried out to determine the prevalence and sociodemographic predictors such as age, educational attainment and marital status of female genital mutilation among women attending some antenatal clinics in Port Harcourt.

2. METHODOLOGY

The descriptive a cross-sectional survey design was adopted for the study. The sample size was determined using the Taro Yemen technique as shown below:

$$n = \frac{N}{1 + N(e)^2}$$

n = Sample size in the study

N = Population of women under childbearing age

e = Error margin acceptable (tolerable) in the study

$$= \frac{183,857}{1 + 183,857(0.5)^2}$$

$$= \frac{183,857}{183,858 \times 0.0025}$$

$$= 399.99 \approx 400$$

The sample size was increased to 500 to take care of any attrition, reduce the error margin in the study and create room for more significant results. For the sampling technique, five health facilities out of the 15 owned by the State Government were randomly selected in the study area, while one hundred (100) respondents from each health facility was selected, using systematic random sampling technique. This was possible by administering one hundred (100) questionnaires to the respondents in each health facility at the time of data collection. The facilities used included Model Primary Health Centres in Elekahia, Mgbudukwu and Churchill road and the Primary Health Centres in Orogbum and Amadi-Ama. The instrument used for data collection in the study was a semi-structured questionnaire that was self-administered after obtaining the permission of the health facilities and verbal consent of the respondents. A four-point Likert's scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD) with numerical values of 4,3,2,1 respectively were used for items that measured knowledge and practice of FGM with a criterion mean of 2.50 for

each of them. The data obtained were analysed using Statistical Package for Social Sciences version 22 (SPSS 22) and results presented using percentages in charts and tables while hypotheses were tested using Chi-square and correlation coefficient at 0.05 alpha level.

3. RESULTS

Table 1 shows the distribution of the demographic information of the respondents. Respondents between ages 25-34 made up 52.3% of the sample population while those within ages 45 and above were the least at 0.6%. Females aged >20 were 22.0% and those

between 35-44 years made up 25.3% of the sample. Married women made up 63.0% while widowed made up 2.7% of the respondents. Single ladies were 26.7%, divorced 3.5% and separated 4.1%. Public servants made up 27.9%, traders 27.7%, artisans 17.5%, farmers 10.5% and students 16.4%. Females with no formal education made up 13.6% while that whose highest educational qualification was tertiary made up 37.6% of the study population. With regards to the place of birth, 65.3% were born in rural areas while 34.7% were born in urban areas; Christians made up 65.8%, traditionalists 20.3% while 13.8% were Muslims.

Table 1. Frequency distribution of demographic information of respondents

Items	Frequency	Percentage
Age		
>24	107	22.0
25-34	254	52.2
35-44	123	25.3
45 and above	3	0.6
Total	487	100
Marital Status		
Single	130	26.7
Married	307	63.0
Widowed	13	2.7
Divorced	17	3.5
Separated	20	4.1
Total	487	100
Education		
No formal education	66	13.6
Primary	77	15.8
Secondary	161	33.1
Tertiary	183	37.6
Total	487	100

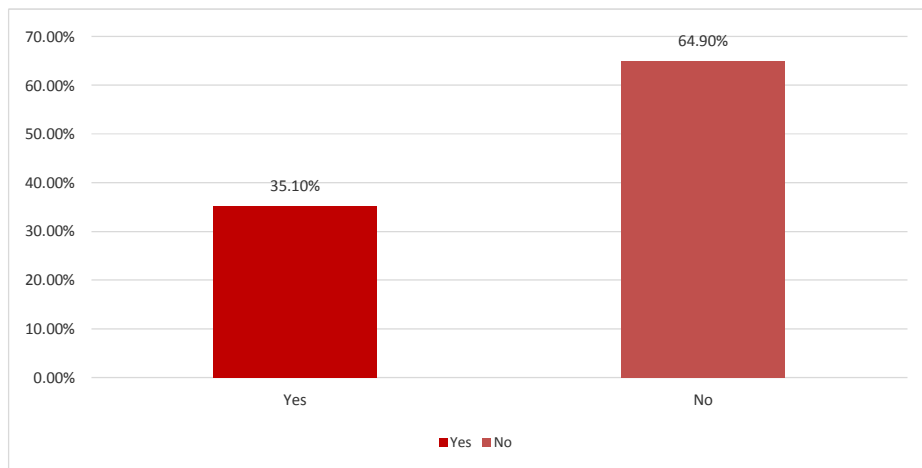


Fig. 1. Prevalence of FGM

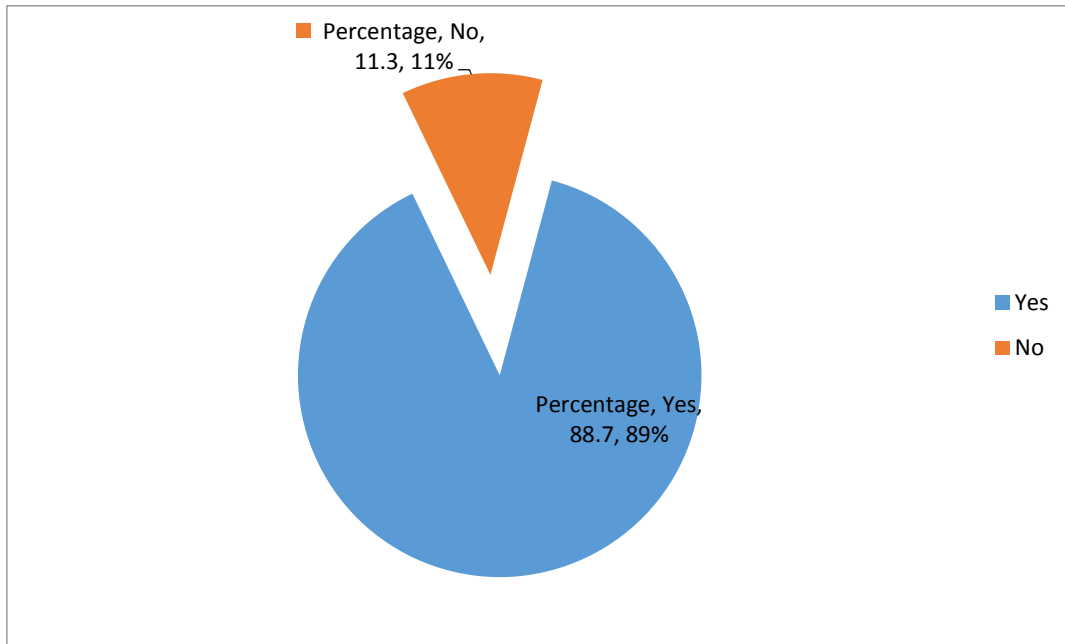


Fig. 2. Awareness of FGM by respondents

Table 2. Relationship between respondents' level of knowledge of FGM and its practice

Knowledge	Ever undergone FGM		Total	r-value	Decision
	Yes F(%)	No F(%)			
Good	70(20.1)	278(79.9)	348(100)	-.719	*HR
Poor	101(72.7)	38(27.3)	139(100)		
Total	171(35.1)	316(64.9)	487(100)		

*High negative relationship

Fig. 1 shows the percentage prevalence of FGM among women attending antenatal clinics in Port Harcourt Local Government Area. The figure shows that 171(35.1%) indicated that they had undergone FGM while 316(64.9%) had not undergone FGM. This puts the prevalence of FGM at 35.1%.

The above figure presents the percentage awareness of the respondents to female genital awareness. Of the total population, 88.7% admitted to having had knowledge of FGM. while 11.3% had no knowledge of FGM.

Table 2 shows the relationship between the respondents' level of knowledge of the consequences of FGM and its practice. The table shows that 70(20.1%) of the respondents who had good knowledge of the consequences of FGM had undergone FGM while 278(79.9%) had not undergone FGM. Also, 101(72.7%) of those who had undergone FGM and 38(27.3%) of those who had not undergone the procedure had

poor knowledge of its consequences. The result further shows that there was a high negative relationship between knowledge of consequences of FGM and its practice (r-value = -.719).

The relationship between the ages of the respondents and their practice of FGM is presented in table 3. It shows that among the respondents ≤ 20 yrs, 19(18.8%) had undergone FGM while 88(82.2%) had not; 81(31.9%) of those within ages 25-39 had undergone FGM while 173(68.1) had not; among the women within 35-44, 69(56.1%) had gone through FGM while the other 54(43.9%) had not. Among women aged ≥ 45 , 1(33.3%) had not undertaken FGM while 2(66.7%) had gone through the process. A low negative relationship (r-value= -0.284) was recorded between age and practice of FGM.

The relationship between educational attainment and the practice of FGM is shown in table 4.

Those with no formal educational qualification but had undergone FGM were 58(87.9%) while those had not undergone the process were 8(12.1%). Among women whose highest educational attainment was primary, 23(29.9) had not undergone FGM while 54(70.1%) had gone through the procedure; 121(75.2%) of women whose highest educational status was secondary school had not gone through the process while 40(24.8%) had. For those who had attended tertiary institutions, 164(89.6%) not been circumcised while 19(10.4%) had been circumcised. A moderate positive relationship was observed between educational attainment and the practice of FGM ($r=0.589$).

Table 3. Relationship between age and practice of FGM

Age	Ever undergone FGM		Total	r-value	Decision
	Yes F(%)	No F(%)			
≤20 yrs	19(17.8)	88(82.2)	107(100)	-.284	*LR
25-34 yrs	81(31.9)	173(68.1)	254(100)		
35-44 yrs	69(56.1)	54(43.9)	123(100)		
45 and above	2(66.7)	1(33.3)	3(100)		
Total	171(35.1)	316(64.9)	487(100)		

*Low negative relationship

Table 4. Relationship between educational attainment and practice of FGM

Education	Ever undergone FGM		Total	r-value	Decision
	Yes F(%)	No F(%)			
None	58(87.9)	8(12.1)	66(100)	.589	*MR
Primary	54(70.1)	23(29.9)	77(100)		
Secondary	40(24.8)	121(75.2)	161(100)		
Tertiary	19(10.4)	164(89.6)	183(100)		
Total	171(35.1)	316(64.9)	487(100)		

*Moderate relationship

Table 5. Relationship between marital status and practice of FGM

Marital status	Ever undergone FGM		Total	r-value	Decision
	Yes F(%)	No F(%)			
Single	29(22.3)	101(77.7)	130(100)	-.308	*MR
Married	102(33.2)	205(66.8)	307(100)		
Widowed	11(84.6)	2(15.4)	13(100)		
Divorced	13(76.5)	4(23.5)	17(100)		
Separated	16(80.0)	4(20.0)	20(100)		
Total	171(35.1)	316(64.9)	487(100)		

*Moderate negative relationship

Table 6. Summary of Chi-square showing the significant relationship between the respondents' age and practice of FGM

Age	Ever undergone FGM		Total	df	X ² - value	p- value	Decision
	Yes F(%)	No F(%)					
>20 years	19(17.8)	88(82.2)	107(100)	3	40.389	.000	Rejected
25-34 years	81(31.9)	173(68.1)	254(100)				
35-44 years	69(56.1)	54(43.9)	123(100)				
45 and above	2(66.7)	1(33.3)	3(100)				
Total	171(35.1)	316(64.9)	487(100)				

Marital status and the practice of FGM were matched to see the relationship between both. Among the respondents who were single, 101(77.7%) had not experienced FGM while 29(22.3%) had; 102(33.2%) of the married respondents had undertaken FGM while 205(66.8%) had not. Among the widowed, 11(84.6%) had been circumcised while 2(15.4%) had not been circumcised; 13(76.5%) of the divorced respondents had undergone FGM while 4(23.5%) had not; 16(0.0%) of the respondents who had separated from their spouses had undergone FGM while 4(20.0%) had not. A moderate negative relationship ($r=-0.308$) was observed between marital status and practice of FGM among the women attending antenatal clinics in Port Harcourt.

Table 6 shows the summary of Chi-square of the significant relationship between the respondents' age and practice of FGM. The result shows that there was a significant relationship between age and practice of FGM (X^2 -value = 40.389, $df = 3$, $p<0.05$). Therefore, the null hypothesis which states that there is no significant relationship between the respondents' age and practice of FGM was not accepted.

Table 7 shows the summary of Chi-square of the significant relationship between the respondents' educational attainment and practice of FGM. The result shows that there was a significant relationship between educational attainment and practice of FGM (X^2 -value = 178.67, $df = 3$, $p<0.05$). Therefore, the null hypothesis which states that there is no significant relationship between respondents' educational attainment and practice of FGM was not accepted.

Table 8 shows the summary of Chi-square of the significant relationship between the respondents' marital status and practice of FGM. The result shows that there was a significant relationship between marital status and practice of FGM (X^2 -value = 54.268, $df = 4$, $p<0.05$). Therefore, the null hypothesis which states that there is no significant relationship between respondents' marital status and practice of FGM was not accepted.

4. DISCUSSION

Prevalence of female genital mutilation among women attending antenatal clinics in Port Harcourt Local Government Area was 35.1%. This value is close to that obtained by Dattjo, Nyango & Osagie who obtained a prevalence of

31.3% among women attending antenatal clinic in Jos [6]. It is however at disparity and lower than that obtained by Asekun-Olarinmoye & Amusan, Feyi-Waboso & Akinbiyi and Ezenyeaku Okeke, Chigbu & Ikeako whose studies were carried out in Kwara, Akwa Ibom and a South East state, respectively [7-9]. Similarly, it is lower than the 81.4% and 95.5% obtained in studies in Sierra Leone and Egypt, respectively [10,11]. This result was however higher than that obtained by Garba *et al.* in Kano [12].

4.1 Relationship between Knowledge Level of Respondents to FGM and its Practice

The respondents had good knowledge of FGM with 348(71.5%) of the total study population saying they had heard and known of FGM while 139(28.5%) had poor knowledge of FGM. Out of those who had good knowledge, 70(20.1%) had been circumcised. Although they had knowledge of FGM, however as reported by Okeke *et al.* [5], the process is often carried out at a tender age and since their informed consent is not given, the process had been done without allowing them decisions on their own [13,14]. Consequently, 73.9% of the population said they would not allow their daughters to be circumcised, which points to the fact that if allowed to decide they would not have accepted undergoing the procedure.

The correlation analysis carried showed a strong negative relationship between practice and knowledge of FGM ($r=-0.719$) indicating that an increase in knowledge of FGM would lead to a corresponding decrease in the practice of FGM. Therefore, a tool for reducing the prevalence of FGM is public awareness on consequence of the practice of FGM. Chi-square analysis of the two factors also showed a significant relationship between the two factors. Among the respondents, 73.9% said they would not allow their daughters to be circumcised which points to their high knowledge of its consequences.

4.2 Relationship between the Practice of FGM and Age

Among the age groups studied, ages 25-34 made up 254(52.2%) of the sample population while ≥ 45 made up 3(0.6%). However, 2(66.7%), 69(66.1%), 81(31.9) and 19(17.2%) of those aged ≥ 45 , 35-44, 25-34 and >20 ,

respectively, admitted to have undergone FGM. The result shows that there is a decline in the ages of women who has been circumcised as reduced number of persons aged >20 had been circumcised compared with that of older age groups. This decline may have attributed to awareness, legislative laws prohibiting this procedure as well as implementation of this laws that have helped in reducing the rate at which FGM is carried out. This study is similar to that of Ojo & Ijadunola who reported that more women of older ages (45-49) had undergone FGM compared with those of ages 15-19 [15]. They stated that females of younger ages may not have experienced FGM which is probably because of the awareness of mothers who are older. The studies by NDHS [16,17], also reported a decline in the percentage of women who had undergone FGM with decrease in age [16,17]. Abeya et al. and Van Rossem et al. also reported a decline in FGM prevalence with decrease in age [11,18].

A very weak negative relationship was seen to exist between age and the practice of FGM ($r = -0.284$); although the prevalence of FGM decreased with decrease in age, the ages of the respondents contributed to their practice of FGM. Matching age and practice proved a significant relationship between the two.

4.3 Relationship between the Practice of FGM and Educational Attainment

Females with no educational attainment had a higher FGM practice rate of 58(87.9%) compared with those who had attained primary, secondary and tertiary educations whose practice rates were 54(70.1%), 40(24.8) and 19(10.4), respectively. This is in contrast to the study by Ojo & Ijadunola who reported a higher FGM prevalence among females whose highest educational qualification was primary school with 30.7% [15]. This finding is however similar to that obtained by Abiodun et al. and Odoi who reported decrease in FGM practice as educational qualification increased [3,19]. Studies by Nigeria Demographic and Health Survey (NDHS) 2013 also reports decreasing prevalence of female circumcision with increase educational qualification [16]. Owolabi et al. and Abeya *et al.* also reported similar trend persons with no educational qualification had higher prevalence (91%) compared with those who had tertiary education (86.7%) [10,18]. This however is different from the high (39%) reported among females whose highest educational grade was secondary compared with 34.9% obtained among women with no formal education (Van Rossem *et al.*, 2015). Statistically, a strong relationship exists between educational qualification and the practice of FGM (X^2 -value = 178.67, $df = 3$, $p < 0.05$).

Table 7. Summary of Chi-square showing the significant relationship between educational attainment and practice of FGM

Education	Ever undergone FGM		Total	df	X ² -value	p-value	Decision
	Yes F(%)	No F(%)					
None	58(87.9)	8(12.1)	66(100)	3	178.67	.000	Rejected
Primary	54(70.1)	23(29.9)	77(100)				
Secondary	40(24.8)	121(75.2)	161(100)				
Tertiary	19(10.4)	164(89.6)	183(100)				
Total	171(35.1)	316(64.9)	487(100)				

Table 8. Summary of Chi-square showing the significant relationship between marital status and practice of FGM

Marital status	Ever undergone FGM		Total	df	X ² -value	p-value	Decision
	Yes F(%)	No F(%)					
Single	29(22.3)	101(77.7)	130(100)	4	54.268	.000	Rejected
Married	102(33.2)	205(66.8)	307(100)				
Widowed	11(84.6)	2(15.4)	13(100)				
Divorced	13(76.5)	4(23.5)	17(100)				
Separated	16(80.0)	4(20.0)	20(100)				
Total	171(35.1)	316(64.9)	487(100)				

4.4 Relationship between Marital Status and Practice of FGM among Respondents

Married respondents made up more than 50% of the study population, but only 33.2% of them had practised FGM. However, 80% of those who were separated and 84.6% of those who were widowed had undergone the process. This is in contrast to the report by Osuorah where 95.4% of those who had undergone FGM were married and the remaining 4.6% were unmarried [20]. The report by Abeya et al. is in contrast to this result as 607(93.7%) of married respondents and 112(92.6%) of unmarried respondents had undergone female genital mutilation [18].

A weak relationship ($r=-0.308$) exists between the marital status of respondents and their practice of FGM which means that the marital status of the respondents contributed little to their practice of female genital mutilation. From the chi-square result, a significant relationship however exists between the two factors.

5. CONCLUSION

Based on the findings obtained from this research, the prevalence of FGM in Port Harcourt local government area was 35.1% and sociodemographic factors such as age, marital status, and educational qualification predicts its prevalence. Findings were mostly in harmony with past studies as reviewed in this work. Establishment of appropriate laws and implementation especially in rural areas are recommended as valid means of reducing and/or stopping the practice of female genital mutilation.

CONSENT

Participants' written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

Ethical approval was obtained from the management of the clinics prior to questionnaire administration.

COMPETING INTERESTS

The authors have declared that no competing interests exist.

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