ACR Original Article

Health workers' perception and practice of female genital mutilation in a rural community in Edo State, Nigeria.

Oriaifo N, Eifediyi RA, Eigbefoh J, Aigbonoga M,

Department of Obstetrics and Gynaecology, Irrua Specialist Teaching Hospital, Irrua, Edo State, Nigeria.

Abstract

Introduction*: Female genital mutilation (FGM) and cutting is a subject of global interest, with many countries of the world still practising it despite efforts by the WHO and other agencies to discourage the practice. In Edo State, the practice of FGM is illegal.*
Objective*: To determine the perception and practice of FGM among health care professionals (HCPs) in public health institutions in Esan Central Local Government Area, where FGM is illegal.*
Methods*: A sample of 90 HCPs in Esan Central Local Government Area, completed the pretested semi structured questionnaire. Data analysis was carried out using descriptive statistics and a chi – square test was used to test for association between variables.*
Results*: The average age of respondents was 30.2 years. Most respondents are of Esan (96.7%). Most respondents (86.7%) identified at all forms of FGM/C, and no respondent was unable to identify at least one form. The harmful effects of FGM/C identified by most respondents include infections, hemorrhage and difficult labor/childbirth. Eighteen (20%) of respondents believed FGM/C has no adverse health effects. Respondents reported culture as the major reason for the performance of FGM/C and 20% of respondents would encourage the continuation of the practice. Eleven respondents (12.2%) admitted having carried out the procedure in the past and twenty-eight respondents (31.1%) supported its medicalisation as a way of making it safer, while sixteen (17.8%) respondents would have their daughters circumcised.*
Conclusion*: The respondents in this study displayed good knowledge of the problem of FGM/C and the associated adverse health effects. However, some still support its continuation and even medicalisation. Health education campaigns in the area have been proven to be every effective but; a lot still needs to be done to ensure that this dark practice is completely eradicated.*

Keywords*: Female genital mutilation/cutting (FGM/C), harmful traditional practice, Nigeria.*

Introduction

Female genital mutilation, defines all procedures that involve partial or total removal of the external female genitalia, or injury to the female genital organs, for cultural or other non-therapeutic reasons [1]. FGM is globally recognised as a violation of the human rights of girls and women, hence its name. An estimated 140 million women and girls in the world have been victims of some form of FGM, and each year, about 3 million more are subjected to, or are at risk of being subjected to, this harmful practice [2].

The exact origin of FGM remains unclear, but it has remained an age long practise in Egypt and a number of sub-Saharan countries, notably Sudan, Nigeria, and Gambia and in parts of the Middle East and Asia [5]. Cases of FGM have also been reported in Europe, Australia, and the USA, which are mostly as a result of migration. The reason for this harmful practice has remained shrouded in a complex web of tradition and religion. The various traditional names that represent this practice tend to justify it and trivialise the associated harms. In eastern Nigeria, the Igbos call it 'Isa aru,' which means cleansing, signifying that a woman must be cleansed before marriage and child bearing. The Gishiri and Angusya cuts common in northern Nigeria and Niger are believed to preserve the virginity of young girls as well as increase sexual satisfaction, after marriage. In Esan, South South Nigeria, the practice is called 'Iruan' which represents

Corresponding Author Dr. Eifediyi RA
Department of Obstetrics and Gynaecology,
Irrua Specialist Teaching Hospital,Irrua, Edo State,
Nigeria.
agbonsreuben@yahoo.com

a rite of passage into womanhood. The supporters of the practise FGM argue that it is critical to preserve ethnic and gender identity, protect femininity, ensure purity and virginity, prevent premarital sexual promiscuity, and ensure marital fidelity [6]. FGM is even considered as a component of the process of socialisation and essential in the distinction between sexes as necessary opposites in the community[7].

The widespread oppression of women in African societies has been considered as a major reason for the emergence and continuation of the harmful practice of FGM. In Nigeria, FGM was banned by the Federal Government in May 2015 even though the practice had already been outlawed in many states including Edo state since the 1990s. Despite the strict laws against the practice of FGM however, due to very poor law enforcement, and the subordinate position most girls and women find themselves, there is hardly any prosecution of offenders.

Four types of FGM are recognised as classified by WHO, and include; type I (clitoridectomy), type II (excision), type III (infibulation) and type IV which comprises all other harmful procedures performed on the external female genitalia for non-medical purposes (e.g. pricking, piercing, incising, scraping, and cauterisation) [1]. FGM is associated with a wide array of deleterious consequences, hence its global notoriety. Acute complications will include haemorrhage, shock, sepsis, severe pain and psychological trauma. And in the long-term, it can result in chronic pain, sepsis, keloids/ hypertrophic scars, fibrosis, primary infertility, difficult deliveries and the attendant complications, and psychological sequela/trauma (eg post traumatic stress disorder) [3,4]. Considering the magnitude of possible complications; it is not surprising that despite the huge resources that have been devoted to eradicating this menace, there are still calls for more.

FGM is performed on girls of all ages, ranging from 7 days after birth up to pre-adolescence, before the first menstruation and marriage [8]. Occasionally, adult women also subject themselves to this practice, as a consequence of peer pressure and intermarriage [9]. Prevalence rates of FGM/C are significantly different between ethnic groups and also between rural and urban communities, in countries where it is practised.

The practice of FGM/C is wide spread in Nigeria, and with a population of over 160million, Nigeria has the highest absolute number of cases of FGM worldwide, accounting for about one-quarter of the estimated 115–130 million circumcised women worldwide[12]. The practice tends to be more prevalent in the south-south region (77% among adult women), followed by south-east (68%) and south-west (65%) where mainly types 1 and 2 are performed, the practice is relatively rare in Northern Nigeria, where the more advanced forms dominate[12].

Of significant importance however, is the fact that healthcare providers are involved in this practice, despite the widespread campaign against it by governmental and non-governmental agencies alike[13]. FGM/C is traditionally carried out by traditional circumcisers and birth attendants however, with increasing awareness of the adverse health consequences, health care professionals have become increasingly involved in the practice. This trend of 'medicalizing' FGM/C has been embraced in some countries eg Egypt[14]. This is however not the case in Nigeria where the Government has always supported other non-governmental agencies in discouraging FGM/C. In 1994, a decree was issued by the Federal Government, outlawing FGM/C under the advice of the department of women affairs which was then headed by a female minister. Similarly, in 1999, a bill to abolish FGM was passed into law in Edo State and more recently in May 2015 a similar bill was passed into law by the Federal parliament. Despite this however, FGM/C is still known to be carried out by health care professionals in Nigeria, albeit clandestinely and this has been proven by a study in southwest Nigeria that showed that hospitals were the most popular location for performing FGM/C, and nurses/dispensers were the circumcisers in 39% of cases[15].

There exists a gap in the body of knowledge available to various health professionals on FGM/C as a result of which health education on the subject may require a more streamlined and targeted approach for the various cadres of professionals.

There have been widespread enlightenment campaigns on FGM/C and its attendant adverse health consequences in Nigeria and several studies have been

carried out to assess the knowledge and attitudes of nurses towards FGM/C mainly in urban centres[16].

This formed the basis of this study, which aims to explore the knowledge and attitudes of health care professionals in a rural community towards FGM/C and relate these to their practices. The study will also assess the differences in knowledge base as well as attitudes and practices among the different cadres of health care professionals. This will facilitate the development of targeted strategies in the bid to eradicate this public health problem.

Aims and Objectives

This study aimed to examine the perception and practice of FGM/C among health care providers (HCPs) in a rural community in Nigeria. To assess differences in perception and practise of FGM/C among the different cadres of HCPs in the study area and to establish the reasons for these differences.

Method

Study Setting

The study was conducted from June 2015 to September 2015 in Esan Central Local Government Area of Edo State, Nigeria. Esan Central Local Government Area, in Edo Central Senatorial District (ESAN LAND) has its administrative headquarters in IRRUA. The Area has a population of 105,242 mainly Esan people, although quite recently some people from other Ethnicities have migrated to the Area along with new Government Establishments in the Area. The Area is home to 14 public primary health centres, which are uniformly spread across the 14 communities that constitute the area.

Study Design

Population

The source population comprised of all health care professionals working in public primary health care centres in Esan Central Local Government Area. These included Doctors, midwives, nurses, community health extension workers (CHEWS), health educators, pharmacists, pharmacy technicians, laboratory scientists and health attendants.

Sampling method

The total number of public primary health institutions in Esan Central LGA is 14 with a total of 90 health care professionals.

The sample size in this cross-sectional survey was determined using a finite population correction fraction $n = N / 1+Ne^2$. The minimum sample size required for the study was estimated to be 73 using the above formula where n is the sample size,N is the population size, e is the desired degree of accuracy (taken as 0.05).

Given the minimum sample size above, and the willingness of the care givers to participate in the study, all 90 care givers were recruited.

Data Collection

Instrument

The questionnaire was designed for the sole purpose of carrying out this study, with contributions from Community Health physicians with interest on the subject matter. Questionnaires were in English, the official language in the country. Four open and 25 close-ended questions were used to collect socio-demographic data (name of institution, occupation, age, sex, ethnic group, and date of interview) and on information regarding the KAP of HCP. The specifics of KAP were as follows. *Knowledge* on FGM/C and its adverse health consequences and reasons given for performing this practice were examined. *Attitudes* towards the continuation of FGM/C, possible strategies for preventing it, its medicalisation, the discrimination against girls who do not undergo FGM/C, and the involvement of men in the debate were examined. *Practices* included assessing if FGM/C is practiced in the HCP's families/households, whether they would subject their own daughters to the practice, and whether they had ever performed FGM/C.

The questionnaire was validated after being administered to 50 HCPs in Irrua Specialist Teaching Hospital, Irrua.

To achieve the proposed objective, a cross-sectional descriptive study was designed to examine the KAP of Nigerian rural HCPs regarding FGM/C. The survey was conducted in 2015, in Esan Central Local Government Area of Edo state, South- south Nigeria.

The pretested, semi structured questionnaires were administered, face to face, by the author at the various public health facilities in the Study Area.

Ethical Aspects

The study was approved by The Ethics Committee of Irrua Specialist Teaching Hospital. A consent form was included in the questionnaire, and all respondents consented, before recruitment into the study. Rigorous confidentiality over participants' identity was maintained.

Data Analyses

Once collected, the data were computerised via Epidata and analysed in SPSS Version 19. Univariate and bivariate analyses with chi square tests were conducted to detect differences in KAP among HCPS of both sexes, different cadres etc. Intra-sex and inter-sex relationships were tested. Statistical significance was considered at $p < 0.05$.

Result

Table 1 shows the profile of the respondents. The sample composed of 90 HCPs (72.2% women and 27.8% men), with an average age of 30.2 years. It can also be observed that the population was almost homogenous in terms of ethnic origin of the respondents.

Table 1.Demographic characteristics of health care professionals

Variable	Doctors n (%)	Nurses/ midwivesn (%)	Chew n(%)	Health attendants n(%)	Pharmacists n(%)	Laboratory scientist n(%)	Health educators n(%)	Total N
Age								
20 - 29	**0 (0.0)**	**12 (31.6)**	**13(65.0)**	**4(16.7)**	**0 (0.0)**	**0(0.0)**	**1 (33.3)**	**30**
30 – 39	**1 (50.0)**	**17 (44.7)**	**7 (35.0)**	**14(58.3)**	**2 (100)**	**1(100)**	**2 (66.7)**	**44**
>=40	**1 (50.0)**	**9 (23.7)**	**0 (0.0)**	**6(25.0)**	**0 (0.0)**	**0(0.0)**	**0 (0.0)**	**16**
Sex								
Male	**2 (100)**	**4 (10.5)**	**8 (40)**	**8(33.3)**	**2(100)**	**0(0.0)**	**1(33.3)**	**25**
Female	**0 (0.0)**	**34 (89.5)**	**12(60)**	**16(66.7)**	**0(0.0)**	**1(100)**	**2(66.7)**	**65**
Marital status								
Single	**0(0.0)**	**2(5.3)**	**3(15.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**5**
Married	**2(100)**	**36(94.7)**	**17(85.0)**	**24(100)**	**2(100)**	**1(100)**	**3(100)**	**85**
Tribe								
Esan	**2 (100)**	**34 (89.5)**	**18(90)**	**23(95.8)**	**1(50.0)**	**1(100)**	**2(66.7)**	**81**
Bini	**0 (0.0)**	**2 (5.3)**	**1(5.0)**	**1(4.2)**	**0(0.0)**	**0(0.0)**	**1(33.3)**	**5**
Etsako	**0 (0.0)**	**1 (2.6)**	**1(5.0)**	**0(0.0)**	**1(50.0)**	**0(0.0)**	**0(0.0)**	**3**
Yoruba	**0 (0.0)**	**1 (2.6)**	**0(5.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**1**
Duration of practice (years)								
<=5	**1(50.0)**	**4 (10.5)**	**10(50.0)**	**7(29.6)**	**0(0.0)**	**0(0.0)**	**2(66.7)**	**24**
6 – 10	**0(0.0)**	**17 (44.7)**	**8(40.0)**	**5(20.8)**	**2(100)**	**1(100)**	**1(33.3)**	**34**
11 – 15	**1(50.0)**	**10 (26.3)**	**2(10.0)**	**5(20.8)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**18**
16 – 20	**0(0.0)**	**4 (10.5)**	**0(0.0)**	**3(12.5)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**7**
>=21	**0(0.0)**	**3 (7.9)**	**0(0.0)**	**4(16.6)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**7**
Total n(%)	**2 (2.2)**	**38 (42.2)**	**20(22.2)**	**24(26.7)**	**2(2.2)**	**1(1.1)**	**3(3.3)**	**90(100)**

Table1 displays the characteristics of the respondents. The population consists of 2 Medical Doctors, 38 nurses/ midwives, 20 community health extension workers, 24 health attendants, 2 Pharmacists, 1 Laboratory Scientist and 3 Health Educators The mean age of the respondents is 32.4 years and the mean duration of practise was 9.6years with 65% of the respondents being female and 25% male. Majority (90%) of the respondents are of Esan origin which is the Ethnicity of the study area. Considering that the above HCPs cover 14 primary health centres it can be inferred that the public health facilities in the study area are inadequately staffed especially in terms of Doctors, Pharmacists, Laboratory Scientists and Health Educators. The following three sections give details of the results in terms of KAP.

Knowledge

The assessment of HCPs' knowledge on FGM/C was performed by exploring the HCPs ability to describe the four types of FGM/C and reasons given for the practice to be performed, as well as through

acknowledging HCPs' awareness of its health consequences. The results are shown in Table 2 and 3.

TABLE 2: KNOWLEDGE SCALE 2.Knowledge of FGM/C among health care professionals

Reported types of FGM/C known by HCPS	Doctors		Nurses/ Midwives N (%)		CHEW n(%)		Health Attendants n(%)		Pharmacists n(%)		Laboratory Scientist n(%)		Health Educators n(%)		Total N
	Male n(%)	**Female n(%)**	**Male n(%)**	**Female n(%)**	**Male n(%)**	**Female n(%)**	**Male n(%)**	**Female n(%)**	**Male n(%)**	**Female n(%)**	**Male n(%)**	**Female n(%)**	**Male n(%)**	**Female n(%)**	
All four* types	**2 (100)**	**0 (0.0)**	**2(50)**	**34(100)**	**6(75)**	**11 (91.7)**	**6(75)**	**11 (68.8)**	**2(100)**	**0(0.0)**	**0(0.0)**	**1(100)**	**1(100)**	**2(100)**	**78**
three types	**0 (0.0)**	**0 (0.0)**	**2(50)**	**0(0.0)**	**1(12.5)**	**0(0.0)**	**2(25)**	**1(6.25)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**6**
Two types	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**1(12.5)**	**1(8.3)**	**0(0.0)**	**2(12.5)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**4**
One type	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**2(12.5)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**2**
No type	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0**
Total	**2(100)**	**0(0.0)**	**4(100)**	**34(100)**	**8(100)**	**12(100)**	**8(100)**	**16(100)**	**2(100)**	**0(0.0)**	**0(0.0)**	**1(100)**	**1(100)**	**2(100)**	**90**

***** For sex Chi-square = 1.37; P-value = 0.05

86.7% of the respondents described all four types of FGM/C and no respondent was unable to describe at least one type. From table 2 the female respondents displayed fairly better knowledge on the subject than the males (90% vs. 76%). This difference was found to not be statistically significant. According to the respondents, FGM/C is mainly performed because it is considered to be deeply rooted in the Nigerian culture (20%) and it is viewed as an effective measure to reduce women's sexual urges (16.7%). Other reasons given, include the fact that FGM/C is a rite of passage into womanhood (15.6%), a good practice (13.3%), it helps to preserve virginity (12.2%), it reduces the rate of sexual promiscuity among women (10%), and it helps to improve the quality of sexual intercourse (4.4%).

Inter-sex analysis showed that female and male HCPs had quite similar opinions on the main reasons given for performing FGM/C. A similar percentage of male and female respondents (20%) believed the fact that FGM/C is deeply rooted in Nigerian culture was partly responsible for its continued performance. A higher female percentage considered that support towards FGM/C derives partly from the fact that it helps to reduce female sexual urges (16.9% vs. 16%), it helps to reduce female sexual promiscuity (10.8% vs. 8%) and it assists in preservation of virginity till marriage (12.3% vs.12%), whereas a higher percentage of males believed FGM/C was still being practised because it is a rite of passage into womanhood (16% vs. 15.4%), it is a good practice (16% vs. 12.3%) and it improves the quality of sexual intercourse (8% vs. 3.1%). These intersex differences were however found to not be statistically significant.

To evaluate HCPs' knowledge of FGM/C-related complications, respondents were asked to identify five health consequences through an open-ended question. A considerable percentage of HCPs were able to recognise the negative impact of FGM/C on the health of girls and women. The transmission of infectious diseases was the most reported consequence (80%), which might be explained by the high prevalence of HIV/AIDS in Nigeria and the various campaigns that international organisations working in Nigeria have launched to increase awareness on the routes of transmission as well as the prevention and treatment of HIV/AIDS. Bleeding (80%),difficulties during delivery (66%), and reduction of sexual satisfaction (53%) were also mentioned. However, it should be noted that 18% of the respondents believed that the practice has no adverse consequences. Inter-sex analysis showed that a higher percentage of female respondents referred to future difficult deliveries (75.4% vs. 68%), while a higher percentage of male respondents pointed out the transmission of infectious diseases (84% vs. 78.5%). It was also noted that a similar percentage of female and male respondents believed FGM/C has no adverse health consequences (20% vs. 20%).

Attitudes

The following questions were used to assess the attitudes of HCPs towards FGM/C: the possibility of its eradication; the roles that can be played by HCPs in the eradication of FGM/C; medicalisation; discrimination towards those who do not undergo FGM/C; and the involvement of men in the debate. The findings are shown in Table 4.

Table 3: Knowledge scale (Reasons for performance and adverse consequences)

Reported answers of HCP about reasons/justifications given by those in support of FGM/C	Number of HCPs (%)	Doctors		Nurses/midwifes		CHEWS		Health attendants		Pharmacists		Laboratory scientist		Health educators	
		Male n(%)	**Female n(%)**	**Male n(%)**	**Female n(%)**	**Male n(%)**	**Female n(%)**	**Male n(%)**	**Female n(%)**	**Male n(%)**	**Female n(%)**	**Male n(%)**	**Female n(%)**	**Male n(%)**	**Female n(%)**
It is a deeply rooted cultural practice	**18 (20)**	**0(0.0)**	**0(0.0)**	**1(25)**	**5(13.2)**	**1(12.5)**	**4(33.3)**	**3(37.5)**	**4(25)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**
It helps to reduce sexual urges	**15(16.7)**	**0(0.0)**	**0(0.0)**	**1(25)**	**3(8.8)**	**1(12.5)**	**4(33.3)**	**2(25)**	**4(25)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**
It is a rite of passage into womanhood	**14(15.6)**	**0(0.0)**	**0(0.0)**	**1(25)**	**3(8,8)**	**1(12.5)**	**3(25)**	**2(25)**	**4(25)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**
It is a good practice	**12(13.3)**	**0(0.0)**	**0(0.0)**	**1(25)**	**2(5.9)**	**1(12.5)**	**3(25)**	**2(25)**	**3(18.8)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**
It helps to preserve the virginity of girls for their future husbands	**11(12.2)**	**0(0.0)**	**0(0.0)**	**0()**	**3(8.8)**	**1(12.5)**	**2(16.7)**	**2(25)**	**3(18.8)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**
It helps to reduce the rate of sexual promiscuity	**9 (10)**	**0(0.0)**	**0(0.0)**	**0()**	**2(5.9)**	**1(12.5)**	**2(16.7)**	**1(12.5)**	**3(18.8)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**
It improves the quality of sexual intercourse	**4 (4.4)**	**0 (0.0)**	**0(0.0)**	**1(25)**	**0(0.0)**	**1(12.5)**	**0(0.0)**	**0(0.0)**	**2(12.5)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**
Reported answers of HCP about health consequences of FGM/C															
Transmission of HIV and other infectious diseases	**72 (80)**	**2(100)**	**0(0.0)**	**3(75)**	**29(85.3)**	**7(87.5)**	**8(66.7)**	**4(50)**	**12(75)**	**2(100)**	**0(0.0)**	**0(0.0)**	**1(100)**	**1(100)**	**2(100)**
Bleeding	**72 (80)**	**2(100)**	**0(0.0)**	**3(75)**	**29(85.3)**	**7(87.5)**	**8(66.7)**	**4(50)**	**12(75)**	**2(100)**	**0(0.0)**	**0(0.0)**	**1(100)**	**1(100)**	**2(100)**
Future difficult deliveries	**66(73.3)**	**2(100)**	**0(0.0)**	**3(75)**	**29(85.3)**	**7(87.5)**	**8(66.7)**	**2(25)**	**8(50)**	**2(100)**	**0(0.0)**	**0(0.0)**	**1(100)**	**1(100)**	**2(100)**
Reduction in sexual satisfaction	**53(58.9)**	**2(100)**	**0(0.0)**	**3(75)**	**25(73.5)**	**5(62.5)**	**7(58.3)**	**2(25)**	**2(12.5)**	**2(100)**	**0(0.0)**	**0(0.0)**	**1(100)**	**1(100)**	**2(100)**
Psychological trauma	**47(52.2)**	**2(100)**	**0(0.0)**	**1(25)**	**24(70.6)**	**4(50)**	**5(41.7)**	**2(25)**	**2(12.5)**	**2(100)**	**0(0.0)**	**0(0.0)**	**1(100)**	**1(100)**	**2(100)**
Difficult penetration and coital lacerations	**34(37.8)**	**2(100)**	**0(0.0)**	**3(75)**	**16(47.1)**	**3(37.5)**	**3(25)**	**1(12.5)**	**0(0.0)**	**2(100)**	**0(0.0)**	**0(0.0)**	**1(100)**	**1(100)**	**2(100)**
No adverse consequence	**18 (20)**	**0(0.0)**	**0(0.0)**	**1(25)**	**5(14.7)**	**1(12.5)**	**4(33.3)**	**3(37.5)**	**4(25)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**
Has seen/ managed a girl with complications of FGM/C	**37(40.9)**	**2(100))**	**(0.0)**	**3(75)**	**17(50)**	**2(25)**	**4(33.3)**	**3(37.5)**	**6(37.5)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**

Table 4.Attitudes of health care professionals towards FGM/C

	Number of HCPs (%)	Doctors		Nurses/midwifes		CHEWs		Health attendants		Pharmacists		Laboratory scientist		Health educators	
		Male n(%)	**Female n(%)**	**Male n(%)**	**Female n(%)**	**Male n(%)**	**Female n(%)**	**Male n(%)**	**Female n(%)**	**Male n(%)**	**Female n(%)**	**Male n(%)**	**Female n(%)**	**Male n(%)**	**Female n(%)**
Do you think that the practice of FGM/C should continue? *															
Yes	**18(20.**	**0(0.0**	**0(0.0**	**1(25.0**	**5(14.7)**	**1(12.5**	**4(33.3**	**3(37.5**	**4(50)**	**0(0.0**	**0(0.0**	**0(0.0**	**0(0.0**	**0(0.0**	**0(0.0**
No	**72(80.**	**2(100**	**0(0.0**	**3(75.0**	**29(85.**	**7(87.5**	**8(66.7**	**5(62.5**	**12(75**	**2(100**	**0(0.0**	**0(0.0**	**1(100**	**1(100**	**2(100**
Do you think that girls that have not had FGM/C should be discriminated against?															
Yes	**13(4.4)**	**0 (0.0)**	**0 (0.0)**	**0(0.0)**	**2(5.9)**	**0(0.0)**	**3(25.0)**	**2(25.0)**	**4(25.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**
No	**77 (85.6)**	**2 (100)**	**0 (0.0)**	**4(100)**	**32(94.1)**	**8(100)**	**9(75.0)**	**6(75.0)**	**12 (75.0)**	**2(100)**	**0(0.0)**	**0(0.0)**	**1(100)**	**1(100)**	**2(100)**
Do you think the practice of FGM/C can ever be eradicated in Nigeria?															
Yes	**77(85.6)**	**2(100)**	**0(0.0)**	**4(100)**	**32(94.1)**	**8(100)**	**9(75.0)**	**6(75.0)**	**12 (75.0)**	**2(100)**	**0(0.0)**	**0(0.0)**	**1(100)**	**1(100)**	**2(100)**
No	**13(14.4)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**2(5.9)**	**0(0.0)**	**3(25.0)**	**2(25.0)**	**4(25.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**
Do you think men should be involved in the debate on FGM/C?															
Yes	**63(70)**	**2(100)**	**0(0.0)**	**3(75.0)**	**29(85.3)**	**7(87.5)**	**7(58.3)**	**3(37.5)**	**6(37.5)**	**2(100)**	**0(0.0)**	**0(0.0)**	**1(100)**	**1(100)**	**2(100)**
No	**27(30)**	**0(0.0)**	**0(0.0)**	**1(25.0)**	**5(14.7)**	**1(12.5)**	**5(41.7)**	**5(62.5)**	**10 (62.5)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**
Do you think HCPs have a role to play in eradicating FGM/C?															
Yes	**69(76.7)**	**2(100)**	**0(0.0)**	**4(50.0)**	**30(88.2)**	**7(87.5)**	**6(50.0)**	**4(50.0)**	**10 (62.5)**	**2(100)**	**0(0.0)**	**0(0.0)**	**1(100)**	**1(100)**	**2(100)**
No	**21(23.3)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**4(11.8)**	**1(12.5)**	**6(50.0)**	**4(50.0)**	**6(37.5)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**
What do you think of 'MEDICALIZING' FGM/C?															
-it will make the practice	**28 (31.1)**	**0(0.0)**	**0(0.0)**	**1(25.0)**	**6(50)**	**1(12.5)**	**5(41.7)**	**2(25.0)**	**13 (81.3)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**	**0(0.0)**
-it encourages FGM/C	**43 (47.8)**	**2(100)**	**0(0.0)**	**3(75.0)**	**19(55.9)**	**5(62.5)**	**3(25.0)**	**3(37.5)**	**2(12.5)**	**2(100)**	**0(0.0)**	**0(0.0)**	**1(100)**	**1(100)**	**2(100)**
-it should be discouraged at all levels	**67 (74.4)**	**2(100)**	**0(0.0)**	**3(75.0)**	**24(70.6)**	**7(87.5)**	**7(58.3)**	**6(75.0)**	**12 (75.0)**	**2(100)**	**0(0.0)**	**0(0.0)**	**1(100)**	**1(100)**	**2(100)**

*For sex Chi-square = 3.49; P-value = 0.05

A small percentage of the respondents (20%) believed that FGM/C should continue to be practiced and a similar percentage of female and male respondents were of this opinion (20% vs. 20%). Inter-sex analysis also showed that a higher percentage of male respondents believed that it was possible to eradicate the practice (92% vs. 83.1%). Similarly, a higher percentage of, male HCPs had the opinion that HCPs have a role to play in the eradication of the practice (80% vs. 75.4%).

The above table also shows that 31.1% of all HCPs considered medicalisation as being a safer option when compared to the traditionally performed procedure and this was more popular among female respondents than males (36.9% vs. 16%). 47.8% of the respondents however viewed medicalisation as a way of encouraging FGM/C and 74.4% recommended that it should be stopped at all levels. A higher percentage of male respondents were against medicalisation of FGM/C (84% vs. 70.8%, p = 0.05).

14.4% of the respondents were found to have discriminatory attitudes against those who do not undergo FGM/C. Analysis for sex difference showed that more female respondents had this discriminatory attitude (16.9% vs. 8%). A significant percentage of HCPs (70%) considered that men should be involved in the debate on FGM/C and this opinion was welcomed more by the male respondents (72% vs. 69.2%).

Practices

The practices of FGM/C among the respondents were assessed by three close ended questions and the results obtained are as shown on table 5.

Table 5.Practices of FGM/C among health care professionals

		Number of HCPs (%)	Doctors		Nurses/ Midwives		CHEW		Health attendants		Pharmacists		Laboratory Scientists		Health Educators	
			Male n(%)	**Female n(%)**	**Male n(%)**	**Female n(%)**	**Male n(%)**	**Female n(%)**	**Male n(%)**	**Female n(%)**	**Male n(%)**	**Female n(%)**	**Male n(%)**	**Female n(%)**	**Male n(%)**	**Female n(%)**
Is FGM/C practiced in your family/household?	**Yes**	**19 (21.1)**	**0**	**0**	**2**	**5**	**1**	**5**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**
	No	**71 (78.9)**	**2**	**0**	**2**	**29**	**7**	**7**	**8**	**10**	**2**	**0**	**0**	**1**	**1**	**2**
Will you subject your daughter to circumcision?	**Yes**	**16 (17.8)**	**0**	**0**	**2**	**3**	**1**	**4**	**1**	**5**	**0**	**0**	**0**	**0**	**0**	**0**
	No	**74 (82.2)**	**2**	**0**	**2**	**31**	**7**	**8**	**7**	**11**	**2**	**0**	**0**	**1**	**1**	**2**
As a health care* provider, have you ever carried out FGM/C on a girl?	**Yes**	**11 (12.2)**	**0**	**0**	**2**	**5**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	No	**79 (87.8)**	**2**	**0**	**2**	**29**	**8**	**8**	**8**	**16**	**2**	**0**	**0**	**1**	**1**	**2**

*for profession, chi square=0.000; p-value=0.05

FGM/C was reportedly practised in the families of 21.1% of the respondents and 17.8% admitted to having the intention of subjecting their daughters to circumcision. When these practices were subjected to intersex analysis, it was discovered that a higher percentage of females had FGM/C practised in their families (12.6% vs. 12%), andsame was the case for willingness to subject their female children to circumcision (18.5% vs. 16%). It is however worthy of note that all the health care professionals that had FGM/C practised in their families or intended to circumcise their daughters were either nurses/ midwifes, CHEWs or health attendants.

Although 74.4% of the respondents were of the opinion that medicalisation of FGM/C be discouraged at all levels, 12.2% admitted to have carried out the practice in the course of their careers and more female HCPs were involved (13.8% vs. 8%). Once again it is noted that all HCPs that admitted to have carried out the procedure in the past were either nurse/ midwifes, CHEWs or health attendants and this professional difference was found to be statistically significant (p=0.000).

An association was also sought between the attitudes of the HCPs towards a continuation of the practice of FGM/C and various characteristics of the respondents via bivariate and multivariate analysis, using chi square test to seek for statistical significance. The findings are as represented on table 6.

The above findings show that although there are differences among the HCPs in terms of sex, age, duration of practice and profession, the only variables with statistically significant difference were age and profession. It can thus be inferred that willingness to continue the practice of FGM/C among HCPs is related to nurses/ midwifes, CHEWs and health attendants in the 30 – 39 age group.

Further analysis was however carried out among the nurses/midwives, CHEWs and Health attendants to determine factors that are related to their support or otherwise towards the eradication of FGM/C and the results are presented below;

The below table shows that a higher percentage of CHEWs and health attendants that have been in health service delivery for between11 and 15 years (50 and 40% respectively) and nurses that have been in public health delivery service for between 16 and 20 years (50%) show support for the continuation of FGM/C and this was the only statistically significant factors associated with support for the continuation of FGM/C among these cadres of HCPs in the study population.

Table 6: Bivariate and Multivariate Analysis of Factors Associated with Support For FGM/C

Variable	FGM/C should be eradicated n(%)	FGM/C should continue n(%)	P – value
Sex			**0.606**
Male	**20(80)**	**5(20)**	
Female	**52(80)**	**13(20)**	
Age in years			
20 – 29	**27(90)**	**3(10)**	**0.011**
30 – 39	**33(75)**	**11(25)**	
>=40	**12(75)**	**4(25)**	
Profession			
Doctor	**2(100)**	**0(0.0)**	**0.000**
Nurse/Midwife	**32(84.2)**	**6(15.8)**	
CHEW	**15(75)**	**5(25)**	
Health Attendants	**17(70.8)**	**7(29.2)**	
Pharmacists	**2(100)**	**0(0.0)**	
Laboratory Scientist	**1(100)**	**0(0.0)**	
Health Educators	**3(100)**	**0(0.0)**	
Duration of Practice			***0.425***
<=5	**23(95.8)**	**1(4.2)**	
6 – 10	**27(79.4)**	**7(20.6)**	
11 – 15	**12(66.7)**	**6(33.3)**	
16 – 20	**5(71.4)**	**2(28.6)**	
>=21	**5(28.6)**	**2(28.6)**	

TABLE 7: Factors Affecting Support For FGM/C Among Nurses/midwifes, CHEWs and Health Attendants in Esan Central LGA.

	Sex				Age						Duration of service										
	Male		**female**		**20 - 29**		**30 - 39**		**>=40**		**<=5**		**6-10**		**11-15**		**16-20**		**>=21**		
FGM/C should be eradicated?	**Yes n (%)**	**No n (%)**	**Yes n (%)**	**No n (%)**	**Yes n (%)**	**No n (%)**	**Yes n (%)**	**No n (%)**	**Yes n (%)**	**No n(%)**	**yes n(%)**	**No n(%)**	**Yes n(%)**	**No n(%)**	**Yes n(%)**	**No n(%)**	**Yes n(%)**	**No n(%)**	**Yes n(%)**	**No n(%)**	**No n(%)**
Nurses/ midwifes	**3 (75.0)**	**1 (25.0)**	**29 (85.3)**	**5 (14.7)**	**10 (83.3)**	**2 (16.7)**	**14 (82.4)**	**3 (17.6)**	**8 (88.9)**	**1 (11.1)**	**4 (100)**	**0 (0.0)**	**14 (82.4)**	**3 (17.6)**	**9 (90.0)**	**1 (10.0)**	**2 (50.0)**	**2 (50.0)**	**3 (100)**		**0(0.0)**
CHEWs	**7 (87.5)**	**1 12.5)**	**8 (66.7)**	**4 (33.3)**	**11 (84.6)**	**2 (15.4)**	**4 (57.1)**	**3 (42.9)**	**0 (0.0)**	**0 (0.0)**	**8 (80.0)**	**2 (20.0)**	**6 (75.0)**	**2 (25.0)**	**1 (50.0)**	**1 (50.0)**	**0 (0.0)**	**0 (0.0)**	**0 (0.0)**		**0(0.0)**
Health attendants	**5 (62.5)**	**3 (37.5)**	**12 (75.0)**	**4 (25.0)**	**3 (75.0)**	**1 (25.0)**	**10 (71.4)**	**4 (28.6)**	**4 (66.7)**	**2 (33.3)**	**5 (71.4)**	**2 (28.6)**	**4 (80.0)**	**1 (20.0)**	**3 (60.0)**	**2 (40.0)**	**2 (66.7)**	**1 (33.3)**	**3 (75.0)**		**1 (25.0)**
p-value	**0.723**				**0.081**						**0.033**										

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Discussion

FGM/C has continued to attract far reaching global interest, with significant governmental and nongovernmental commitments to eradicate it and it attendant adverse consequences. It is however still practiced in many countries with Nigeria having the highest prevalence despite the magnitude of resources that have been invested into its eradication.

Esan Central Local Government Area, is a rural area in Edo State Nigeria, where the practice of FGM/C is known to exist. It is known as 'IRUEN' by the locals, which is interpreted as an act of transition to womanhood.

The findings of this study indicate a high level of awareness of FGM/C among the HCPs in this rural area and majority (80%) of them are against the

continuation of the practice. This may not be unrelated to widespread health education campaigns carried out by various governmental and non-governmental bodies in the area, most notable of which are; Society of Obstetricians and Gynaecologists of Nigeria (SOGON), Edo State Chapter, and more recently the Medical Women Association (MWAN).

There was also wide spread good knowledge on the classification of FGM/C across all cadres of the HCPs in this study. This was unlike a study in Benin, south-south Nigeria on Nurses where only 6.6% of respondents could describe all four types of FGM/C[16]. This may reflect improvements in school curriculums in the intervening period between these studies.

Majority of the respondents rightly identified transmission of infections and hemorrhage as being major complications of FGM/C and this was similar to the study in Benin where 97.8% of the respondents identified hemorrhage as a complication of FGM/C.[16] other complications outlined by the respondents were not unlike those that have been previously documented by other authors.[18,19,20]

It has been demonstrated in existing studies that FGM/C may have a causal relationship with prolonged/ obstructed labour[17] and 73.3% of the respondents in this study believed future difficult deliveries were a complication of FGM/C.

Despite the generally good knowledge of FGM/C displayed by the respondents, it was shocking that 20% of the respondents believed FGM/C has no adverse health consequences and 13.3% believe it is a good practice. This contrasts with the conclusion by the WHO that FGM/C has no known health benefits only adverse effects[14]. These findings were notably limited to a subset of HCPs that included nurses/midwifes, CHEWs and health attendants and this brings to fore the knowledge gap that exists between various cadres of HCPs.

This study also demonstrated that while majority of the respondents were in support of abandoning the practice of FGM/C (80%), a significant minority (20%) embraced its continuation. And it should be noted that the respondents in support of the continuation of this practice were again restricted to a subset of the respondents (nurses/midwifes, CHEWs and health attendants), a finding that was found to be statistically significant. Similarly, only a minority (17.8%) intended to carry out FGM/C on their daughters, while 12.2% of respondents have in the past carried out FGM/C. And yet again these findings were limited to the same subset of HCPs that support the continuation of FGM/C. It was however discovered on further analysis that support for the continuation of FGM/C among these subset of HCPs is related to their duration of practise in the public health care delivery system.

The above is evidence that FGM/C is already being medicalized. These are surprising findings considering the available knowledge on FGM/C and this may point to the fact education alone may not be sufficient to eradicate bad health practices. However, the findings have been able to stream line the subset of HCPs who support the continuation of FGM/c and who are also responsible for its medicalisation thus, providing a target for future interventions in terms of health education and enlightenment campaigns.

A lot of intersex differences were present in the responses by the HCPs however; these differences were not statistically significant. FGM/C had similar support from women and men as demonstrated by the percentage of respondents that believed the practise FGM/C be allowed to continue. However, male HCPs showed more confidence in the possibility of its eradication (92% vs. 83.1%), higher endorsement of the role of HCPs in the eradication (80% vs. 75.4%), and lower intention to have it performed on their own daughters (16% vs. 18.55%) than female HCPs. It was also discovered that females displayed a more discriminatory attitude towards other females that had not undergone FGM/C than males (16.9% vs. 8%) and were similarly aware of the deep cultural roots of FGM as the males. These findings demonstrated the unwillingness of the rural woman to be liberated from male domination in society, and how tenaciously some people will hold on to so–called societal norms.

These findings can be explained by the fact that women have contributed to the inculcation of FGM/C into womanhood and culture. In male dominated societies, women tend to add value and importance to practices that characterise their subordination as a coping mechanism and eventually these practices become their

identity. FGM/C is one of such practices, and over the years has given those who practise it a sense of belonging. This value is lacking in those who do not undergo FGM/C, hence their discrimination.

The finding that 72% of male HCPs considered that men should participate in the debate surrounding FGM/C and 84% want it discouraged at all levels, suggests their willingness to be involved in eradicating the practice and its attendant harmful consequences. However, this may not reflect general male attitude toward FGM as the respondents are HCPs who have objective knowledge of the adverse health consequences of FGM/C. It should also be noted that even among these HCPs who have some medical training, 20% still consider FGM/C to have no adverse consequences. Further investigation will however be needed in the area of male attitudes, toward this 'female' practice.

This study showed that medicalisation is already a reality in Nigeria, as it is in some other African countries, with 12.2% of HCPs mainly nurses/midwifes, CHEWs and health attendants confirming to have performed FGM/C on girls. Although a higher percentage of female HCPs (13.8%) admitted to indulging in the practice, 8% of male respondents also did, which shows that in the medical setting there are no sexual barriers in the practise of FGM/C. It was also noted that 31.1% HCPs supported the idea of medicalizing FGM/C to make it a safer practice as opposed to what is presently obtainable. Although it has been demonstrated that medicalisation reduces the occurrence of adverse consequences[21], FGM/c is not associated with any known health benefits and is globally discouraged.[22]

It should however be noted that, medicalisation has been publicly condemned by WHO as it creates a sense of legitimacy, gives the erroneous impression that the practice is harmless, and represents a break in medical professionalism and ethical responsibility [3]. FGM in all forms has been formally outlawed in Nigeria, following the May 2015 nationwide ban of the procedure by the Federal Government.

Conclusions

The findings of this study suggest that HCPs in Esan Central Local Government Area have a good knowledge of FGM/C, the reasons for its practise and the attendant complications. This is a good testament to the efforts that have been put into enlightenment campaigns and health education on the subject matter in rural areas in Nigeria. However, although low, the percentage of respondents that support the practice of FGM/C is still concerning. And although this support was equally distributed among the sexes, there were statistically significant differences in terms of profession (nurses/midwifes, CHEWs and health attendants) and age (30 - 39). This indicates the need for even more effort to be put in to driving home the magnitude of the consequences that can result from this barbaric practice, with particular attention to be paid to the subset of HCPs who support its continuation and contribute to its medicalization.

It is pertinent to note that a higher percentage of females supported discrimination against women who are not circumcised, and supported medicalizing the practice to make it safer and similarly, less females believe that the practice can be eradicated and that HCPs have a role to play in its eradication. These findings are pointers to the fact that females are major contributors to the propagation of discrimination against women and practices that characterize it.

Majority of the HCPs in Esan Central Local Government Area do not support the practice of FGM/C. However, 21.2% of the respondents reported that the practice is still being carried out in their families, 17.8% plan to circumcise their daughters and 12.2% have actually carried out the practice in the past and these were mainly nurses/midwifes, CHEWs and health attendants. These findings show that though on a small scale, this dark practice of FGM/C is still being carried among the inhabitants of the study area and unfortunately is being supported and medicalized by a subset of HCPs.

Recommendations

Similar studies should be conducted on a larger scale in order to circumvent the limitations from this study and get a more universal picture of the KAP of FGM/C among HCPs.

FGM/C is a crime under Nigerian law but enforcement of the law remains a problem and efforts to draw the attention of law enforcement agencies to this lingering

health problem and other similar issues must be heightened and HCPs have to be awake to their responsibility of curbing these menaces.

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