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KNOWLEDGE AND PERCEPTIONS OF COMPLICATIONS ASSOCIATED WITH FEMALE GENITAL MUTILATION/CUTTING AMONG THE SOMALI COMMUNITY IN WAJIR COUNTY, KENYA

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**ABSTRACT**

**Objective:** To assess knowledge and perceptions of complications associated with female genital mutilation/cutting (FGM/C) and why it is practiced.

**Design:** Cross-sectional study using mixed methods. Structured questionnaires, focus group discussions (FGDs), and key informant interviews (KIIs) were used to collect data.

**Setting:** Waqberi Ward, Wajir County, Kenya.

**Participants:** Adult members of the Somali community and staff of community based, and non-governmental organisations involved in the fight against FGM/C

**Main Outcome Measures:** For quantitative data, frequencies and proportions were computed, and chi-square tests used to assess associations. Qualitative data were organised into relevant sub-themes.

**Results:** Six FGDs each with an average of seven participants, and 14 KIIs were conducted. Of the 240 participants in the quantitative component, 85.4% were aware of complications of FGM/C. Female, married and rural participants were more aware. Complications were attributed to bad luck, breach of cultural/religious requirements, the will of God and circumciser negligence, but not FGM/C. An increase in type II FGM/C was observed. Reasons for the practice included culture, a rite of passage, religion, fear of being ostracised, lack of political goodwill and that it improves marriageability. Among those

aged 18-44 years, 53.7% intend to continue with the practice, citing culture and religion.

**Conclusion:** There is a shift from type III to type II FGM/C but not abandonment of the practice altogether despite widespread awareness of associated complications. Main reasons for the practice are religion and culture; therefore, religious and community leaders can positively contribute in eradicating the practice if engaged.

## INTRODUCTION

Globally, over 200 million girls and women live with female genital mutilation/cutting (FGM/C) and, every year, 3.6 million are at risk of FGM/C (1). FGM/C is classified into four types (I, II, III and IV) depending on the extent of structures of the female external genitalia involved, with type III being the most severe (2). FGM/C is associated with a number of health complications whose severity varies according to the type of FGM/C (3).

Despite efforts to eradicate FGM/C and the associated negative health effects, the practice remains a deep-seated and broadly supported cultural practice within the Somali community (4). FGM/C is almost universal in the Somali community, with a prevalence of 93.6% among women of reproductive age (5). Whereas many studies on FGM/C have been conducted, the knowledge and perception of complications associated with FGM/C in the practicing communities and the reasons for its continuation have not been fully explored. This study, therefore, sought to understand the community's perceptions and level of knowledge with respect to complications associated with FGM/C and the underlying reasons for its perpetuation.

## METHODS

This was a descriptive cross-sectional study that used mixed methods in data collection. Quantitative techniques were suitable in describing the current state of FGM/C

practice and knowledge levels of girls and women relating to FGM/C and the underlying reasons for its continuation. Qualitative approach was used to gain a deeper understanding of the community's perceptions and reasons for the perpetuation of the practice. The study was conducted in Waqberri Ward, Wajir County (located in the former North Eastern Province, Kenya) which is largely inhabited by the Somali community. This site was selected because not only is the prevalence of FGM/C high (94%) among the Somalis (5), but also the most severe type (type III FGM/C) is practiced in about 75% of the cases (4). The study participants were members of the Somali community aged 18 years and above, capable of providing informed consent and individuals working in Non-Governmental Organizations (NGOs) and community based organizations (CBOs) involved in the promotion of abandonment of FGM/C. Community members took part in both the qualitative and quantitative arms of the study, whereas individuals working with NGOs and CBOs were only involved in KIIs.

Multistage sampling technique was used to identify potential participants. A list of sub-locations within Waqberri Ward was drawn followed by villages in each sub-location. Three sub-locations - one urban, one peri-urban and one rural - were then selected. Three villages were then randomly selected from each of the three sub-locations. Participants for the quantitative and qualitative studies were drawn from the selected villages. Approval to conduct the study was obtained from Kenyatta National

Hospital/University of Nairobi Ethics and Research Committee (Ref: KNH-ERC/A/447).

Data collection was conducted in the month of August 2016. Assistant chiefs of the selected sub-locations were contacted by telephone and the objectives of the study explained. The assistant chiefs then introduced the study team to village elders of the selected villages as well as the major stakeholders in the fight against FGM/C. To these groups, the process and purpose of the study were explained. These stakeholders mobilised potential study participants. Two research assistants, trained on data collection in the local dialect and on ethical consideration in research involving human subjects, visited all the households in the selected villages to seek consent and interview all those found in the households who qualified to participate. For the qualitative study, participants who took part in the focus group discussions (FGDs) were purposively selected based on their age, gender, economic and education status. Participants for the key informant interviews (KIIs) were purposively selected based on their positions in the community. KIIs and FGDs were conducted until thematic saturation of information sought was reached.

Before the interviews, the purpose and process of the study were explained to each participant and signed consent obtained. The consent forms were available both in Somali and English. To ensure confidentiality, no names were used, instead data from KIIs and FGDs were coded, with transcripts and questionnaires serialised for data entry. During the study period, no case requiring referral was encountered.

Quantitative data were collected using structured interviewer-administered questionnaires seeking information on socio-demographic characteristics of the participants and their knowledge and perception of the complications associated

with FGM/C. Qualitative data were collected using interview guides and proceedings were tape recorded. The information sought included knowledge on, and perceptions of the complications associated with FGM/C, interventions by stakeholders for FGM/C complications and the reasons for the perpetuation of the practice despite the associated complications. KIIs targeted circumcisers, religious leaders, and individuals leading initiatives against FGM/C (NGOs/CBOs), whereas FGDs involved community members.

Quantitative data analysis was done using IBM Statistical Package for Social Sciences (IBM SPSS Version 22). Descriptive statistics were used to calculate frequencies and proportions. Chi-square tests were used to assess associations between socio-demographic characteristics and knowledge and perceptions of the participants. Associations were considered statistically significant at a P-value of  $< 0.05$ . For the qualitative data, the voices captured in the KIIs and FGDs were transcribed and the information translated into English before coding into word processors. The information was coded and then systematically organised into relevant sub-themes. Data were managed using QSR Nvivo 10 Software © (International Pty 2012, Australia).

## RESULTS

The quantitative survey involved 240 participants. As shown in Table 1, majority were female (75.0%), aged 18 to 34 years (70.8%), rural (69.9%), and married (67.1%). Almost all participants (99.6%) were Muslim. All female participants had undergone FGM/C with 55.0% having had type III and 45.0% type II FGM/C. Of these, 89.0% had forced FGM/C, with the decision being made by parents in 98.7% of the cases. In KIIs, 14 participants were involved including circumcisers, high school teachers,

religious leaders, politicians, health care providers, law enforcers, elders, human rights and FGM/C activists. Forty-five participants took part in six FGDs conducted with high school girls and boys, elderly and women of childbearing age, and old and middle-aged men.

**Table 1**  
*Socio-demographic characteristics of study participants*

Socio Demographic Characteristics		Participants (n = 240)	
		No.	(%)
<b>Sex</b>			
	Male	60	(25.0)
	Female	180	(75.0)
<b>Age-group (years)</b>			
	18-24	72	(30.0)
	25-34	98	(40.8)
	35-44	67	(27.9)
	≥ 45	3	(1.3)
<b>Marital status</b>			
	Single	65	(27.1)
	Married	161	(67.1)
	Widowed	10	(4.2)
	Divorced	4	(1.7)
<b>Religion</b>			
	Muslim	239	(99.6)
	Christian	1	(0.4)
<b>Level of education</b>			
	None	115	(47.9)
	Primary (complete)	44	(18.3)
	Primary (incomplete)	22	(9.2)
	Secondary (complete)	8	(3.3)
	Secondary (incomplete)	25	(10.4)
	College diploma	14	(5.8)
	Bachelor's degree	1	(0.4)
	Informal education (madrassa)	11	(4.6)
<b>Residence</b>			
	Urban	31	(12.9)
	Rural	167	(69.6)
	Peri-Urban	42	(17.5)
<b>Occupation</b>			
	None	5	(2.1)
	Formal employment	29	(12.1)
	Home maker	147	(61.3)
	Business enterprise	23	(9.6)
	Livestock rearing	23	(9.6)
	Others	13	(5.4)
<b>Type of FGM/C</b>		<b>(n = 100)</b>	
	Type II FGM/C	45	(45.0)
	Type III FGM/C	55	(55.0)

**Knowledge and perceptions of the necessity of FGM/C:** All participants had knowledge of FGM/C, with 84.2% terming it necessary, 6.3% unnecessary and 9.6% unsure. Whether FGM/C was considered necessary was statistically significantly associated with the

level of education ( $P = 0.007$ ), place of residence ( $P < 0.001$ ) and occupation ( $P < 0.001$ ). Participants without formal education, rural and home makers were more likely to consider FGM/C a necessary practice (Table 2).

**Table 2**

*Association between socio-demographic characteristics and perception of the necessity of FGM/C*

Socio-demographic characteristic	Is FGM/C necessary?						Chi-square test
	Yes (n = 202)		No (n = 15)		Not Sure (n = 23)		
	No.	(%)*	No.	(%)*	No.	(%)*	
Sex							
Male	49	(24.3)	5	(33.3)	9	(33.3)	$\chi^2 = 2.774$ , df = 2, P = 0.250
Female	153	(75.7)	10	(66.7)	14	(66.7)	
Age (years)							
18-24	60	(29.7)	5	(33.3)	7	(30.4)	$\chi^2 = 4.667$ , df = 6, P = 0.587
25-34	80	(39.6)	9	(60.0)	9	(39.1)	
35-44	59	(29.2)	1	(6.7)	7	(30.4)	
≥ 45	3	(1.5)	-	-	-	-	
Marital status							
Single	53	(26.2)	7	(46.7)	5	(21.7)	$\chi^2 = 4.528$ , df = 6, P = 0.606
Married	137	(67.8)	7	(46.7)	17	(73.9)	
Widowed	8	(4.0)	1	(6.7)	1	(4.3)	
Divorced	4	(2.0)	-	-	-	-	
Level of education							
None	102	(50.5)	5	(33.3)	8	(34.8)	$\chi^2 = 30.303$ , df = 14, P = 0.007
Primary (incomplete)	39	(19.3)	2	(13.3)	3	(13.0)	
Primary (complete)	17	(8.4)	1	(6.7)	4	(17.4)	
Secondary (incomplete)	6	(3.05)	1	(6.7)	1	(4.3)	
Secondary (complete)	20	(9.9)	2	(13.3)	3	(13.0)	
College diploma	10	(5.0)	3	(20.0)	1	(4.3)	
Bachelor's degree	-	-	1	(6.7)	-	-	
Informal education (madrassa)	8	(4.0)	-	-	3	(13.0)	
Residence							
Urban	23	(11.4)	7	(46.7)	1	(4.3)	$\chi^2 = 50.827$ , df = 4, P < 0.001
Rural	154	(76.2)	5	(33.3)	8	(34.8)	
Peri-Urban	25	(12.4)	3	(20.0)	14	(60.9)	
Occupation							
None	5	(2.5)	-	-	-	-	$\chi^2 = 53.490$ , df = 10, P < 0.001
Formal employment	20	(9.9)	8	(53.3)	1	(4.3)	
Home maker	132	(65.3)	3	(20.0)	12	(52.2)	
Business enterprise	21	(10.4)	1	(6.7)	1	(4.3)	
Livestock rearing	19	(9.4)	1	(6.7)	3	(13.0)	
Others	5	(2.5)	2	(13.3)	6	(26.1)	

*\*Percentages are based on the total stated*

### **Reasons for practicing FGM/C:**

The commonest reasons for practicing FGM/C were that it is a cultural practice (99.1%), a religious practice (96.0%), a rite of passage (81.4%), a sign of purity (80.5%), and that it improves marriageability (75.2%). Other reasons included insistence of fathers, husbands or older women, that FGM/C improves fertility, reduces a woman's sexual desire and maintains honour/virginity.

In KIIs and FGDs, the main reasons given for persistence of the practice included first, Islamic religion, which reportedly required FGM/C to reduce sexual desire, therefore, avoid sexual sin before marriage as supported by some verbatim quotations:

*"... we practice it because our religion [Islam] and tradition as a Somali community obligate us to do so ..."* **FGD with women aged 25-40 years.**

Second, for fear of being ostracised, girls who have not undergone FGM/C coerce parents, some who may not have wanted FGM/C for their daughters. Third, there lacks political goodwill in fighting the practice, with even political leaders having their daughters secretly cut. Furthermore, even those against FGM/C do not voice it publicly fearing political backlash. The following statement is quite telling:

*"... they should stop any campaign in this community ... leave us alone... with our culture ...we are not willing to change even as leaders. In fact, ... do the severe way ...we don't want our girls to be prostitutes."* **KII male political leader.**

### **Knowledge and perceptions of complications associated with FGM/C:**

In the quantitative survey, 85.4% of participants were aware of at least one possible complication of FGM/C. The most commonly mentioned complications were related to the genital organs (87.3%), childbirth (80.5%), sexual activity (63.9%) and pregnancy (39.0%). The qualitative arm

reported similar findings. Participants in FGDs concurred that the severity of the complications varied according to type of FGM/C, with physical and more severe complications associated with type III FGM/C as reflected in the following statement

*"Of the two types [of FGM/C], only one has complications ... that is the firaun<sup>1</sup> one which leads to many complications ... even when the girl is being circumcised ... she faces a lot of problems while giving birth or after her first night of having sex ... but the other one does not have any complication ... it also leads to abdominal pain during her menstruation ..."* **FGD with women aged 25-40 years.**

Awareness of the complications associated with FGM/C was statistically significantly associated with sex of the participants ( $P = 0.045$ ), marital status ( $P = 0.032$ ) and residence ( $P = 0.009$ ). Female married and rural participants were more aware (Table 3).

<sup>1</sup> This term is used among the Somali to describe infibulation (type III FGM/C)

Table 3

*Socio-demographic determinants of awareness of complications associated with FGM/C*

Socio-demographic characteristics		Aware of complications of FGM/C				Chi-square test
		Yes (n = 205)		No (n = 35)		
		No.	(%)	No.	(%)	
Sex						
	Male	49	(23.9)	14	(40.0)	$\chi^2 = 4.002$ , df = 1, P = 0.045
	Female	156	(76.1)	21	(60.0)	
Age (years)						
	18-24	63	(30.7)	9	(25.7)	$\chi^2 = 1.008$ , df = 3, P = 0.799
	25-34	82	(40.0)	16	(45.7)	
	35-44	57	(27.8)	10	(28.6)	
	≥ 45	3	(1.5)	-	-	
Marital status						
	Single	50	(24.4)	15	(42.9)	$\chi^2 = 8.810$ , df = 3, P = 0.032
	Married	145	(70.7)	16	(45.7)	
	Widowed	7	(3.4)	3	(8.6)	
	Divorced	3	(1.5)	1	(2.9)	
Level of education						
	None	102	(49.8)	13	(37.1)	$\chi^2 = 11.870$ , df = 7, P = 0.105
	Primary (incomplete)	36	(17.6)	8	(22.9)	
	Primary (Complete)	17	(8.3)	5	(14.3)	
	Secondary (incomplete)	4	(2.0)	4	(11.4)	
	Secondary (Complete)	22	(10.7)	3	(8.6)	
	College Diploma	13	(6.3)	1	(2.9)	
	University Degree	1	(0.5)	-	-	
	Informal Education (madrasa)	10	(4.9)	1	(2.9)	
Residence						
	Urban	29	(14.1)	2	(5.7)	$\chi^2 = 9.476$ , df = 2, P = 0.009
	Peri-urban	135	(65.9)	32	(91.4)	
	Rural	41	(20.0)	1	(2.9)	
Occupation						
	None	7	(3.4)	-	-	$\chi^2 = 9.140$ , df = 5, P = 0.104
	Formal employment	28	(13.7)	1	(2.9)	
	Home maker	122	(59.5)	25	(71.4)	
	Business enterprise	17	(8.3)	6	(17.1)	
	Livestock rearing	20	(9.8)	3	(8.6)	
	Others	11	(5.4)	-	-	

\*Percentages are based on the total stated

From the quantitative survey, 59.2% believed the community did not associate above complications to FGM/C, instead they attributed them to bad luck (97.9%), breach of cultural beliefs (78.2%), or religious requirements (76.1%), circumciser

negligence (67.6%) and social taboo (62.7%). The perception of correlation of complications with FGM/C was statistically significantly associated with marital status (P = 0.030), level of education (P = 0.003), residence (P < 0.001) and occupation (P <

0.001). Most of the participants who themselves were married, without formal education, rural and home makers associated the complications with FGM/C (Table 4).

**Table 4**

*Socio-demographic determinants of awareness of community's perception of complications associated with FGM/C*

Socio-demographic characteristics	Community associate's complications with FGM/C						Chi-square test
	Yes (n = 98)		No (n = 109)		Not sure (n = 33)		
	No.	(%)*	No.	(%)*	No.	(%)*	
Sex							
Male	26	(26.5)	25	(22.9)	12	(36.4)	$\chi^2 = 2.366$ , df = 2, P = 0.306
Female	72	(73.5)	84	(77.1)	21	(63.6)	
Age (years)							
18-24	26	(26.5)	34	(31.2)	12	(36.4)	$\chi^2 = 2.287$ , df = 6, P = 0.891
25-34	41	(41.8)	45	(41.3)	12	(36.4)	
35-44	30	(30.6)	28	(25.7)	9	(27.3)	
≥ 45	1	(1.0)	2	(1.8)	-	-	
Marital status							
Single	31	(31.6)	22	(20.2)	12	(36.4)	$\chi^2 = 13.973$ , df = 6, P = 0.030
Married	57	(58.2)	84	(77.1)	20	(60.6)	
Widowed	8	(8.2)	1	(0.9)	1	(3.0)	
Divorced	2	(2.0)	2	(1.8)	-	-	
Level of education							
None	44	(44.9)	61	(56.0)	10	(30.3)	$\chi^2 = 32.494$ , df = 14, P = 0.003
Primary (complete)	23	(23.5)	14	(12.8)	7	(21.2)	
Primary (incomplete)	9	(9.2)	12	(11.0)	1	(3.0)	
Secondary (complete)	3	(3.1)	2	(1.8)	3	(9.1)	
Secondary (incomplete)	11	(11.2)	10	(9.2)	4	(12.1)	
College diploma	-	-	9	(8.3)	5	(15.2)	
Bachelor's degree	1	(1.0)	-	-	-	-	
Informal education (madrassa)	7	(7.1)	1	(0.9)	3	(9.1)	
Residence							
Urban	14	(14.3)	16	(14.7)	1	(3.0)	$\chi^2 = 67.056$ , df = 4, P < 0.001
Rural	79	(80.6)	78	(71.6)	10	(30.3)	
Peri-Urban	5	(5.1)	15	(13.8)	22	(66.7)	
Occupation							
None	4	(4.1)	1	(0.9)	-	-	$\chi^2 = 51.140$ , df = 10, P < 0.001
Formal employment	7	(7.1)	17	(15.6)	5	(15.2)	
Home maker	68	(69.4)	66	(60.6)	13	(39.4)	
Business enterprise	11	(11.2)	12	(11.0)	-	-	
Livestock rearing	7	(7.1)	10	(9.2)	6	(18.2)	
Others	1	(1.0)	3	(2.8)	9	(27.3)	

\*Percentages are based on the total stated



In the qualitative study, the community generally regarded complications of FGM/C as normal occurrences, and the will of God as elaborated by the following quote:

*"It's a normal thing ... as a community it is a practice, we found our forefathers doing and in case of anything, we know it is the will of God."*  
**KII with male political leader.**

However, according to health care providers interviewed, FGM/C complications were caused by improper procedures affecting the healing process and lack of cooperation by the girl during cutting.

Of the 240 respondents, only 32.1% were aware of the interventions to prevent or manage FGM/C complications. The most common interventions mentioned were confinement of the victim to one place with legs bound together (67.5%), application of *malmal* (myrrh) to the genitalia (24.7%), tea leaves on the wound (11.7%) and sitting on hot coal (11.7%) to arrest bleeding. Others were use of sterilised equipment, taking the victim to hospital, application of egg and white flour, or rabbit faeces and 'opening' of the newly married. In case of complications, family members especially grandmothers took charge in 75.5% of the cases. Also involved are the circumcisers. These people helped victims access appropriate healthcare services.

In the FGDs, lack of awareness of appropriate interventions for FGM/C complications were highlighted. Generally, women intervened in case of complications. Doctors intervene when victims are taken to hospital; however, this is impeded by the fear of arrest.

*"Nowadays we are afraid of the doctors because if we reveal the complications, we can be arrested ..."*

#### **FGD with women aged $\geq 40$ years.**

FGDs with men underscored the negative effects of FGM/C on men including pain during sex due to swollen penis, stressful sexual encounters, reduced sexual desire,

risk of infection during sexual intercourse, psychological torture, stigma and low self-esteem. Seeking healthcare for these complications attracted additional costs and was strenuous for most men.

#### **Stakeholders' involvement in addressing FGM/C complications**

Only 24.6% of participants were aware of interventions or campaigns against FGM/C. From the qualitative data, the most commonly mentioned organisations included World Vision, Save the Children, Kenya National Commission on Human Rights and United States Agency for International Development (USAID). Others were local chiefs, radio stations, women and gender groups. Each of these focused on a particular intervention. Human rights organisations focused on law enforcement and access to treatment; NGOs, vernacular media stations, religious leaders and women rights groups on awareness on the dangers of FGM/C; and USAID supported agencies advocating for FGM/C abandonment. Religious leaders advocated for type II over type III FGM/C rather than eradication of the practice as highlighted in the statement below.

*"The sheikh says do it the Sunna<sup>2</sup> way ..."*  
**FGD with women aged  $\geq 40$  years.**

Some of the failures of these organisations included poor follow up, poor representation in court, lack of accountability of some supported agencies and failure to design appropriate strategies to effectively address FGM/C.

Participants suggested ways to decrease the incidence of FGM/C associated complications. From the quantitative data, about half of the respondents (48.8%) suggested men could prevent the practice by forbidding FGM/C of their daughters, participating in campaigns against the practice (44.2%) and reporting perpetrators

<sup>2</sup> In this context, this term refers to type II FGM/C.

to the police (7%). To most of the participants in the FGDs and KIIs, FGM/C was a women's affair and men only got involved in instances of complications. However, men as family heads were involved in deciding whether their daughters should undergo FGM/C. Already some men, including religious leaders, were involved in sensitizing the community on effects of FGM/C as expressed in the following statement by a participant.

*"Generally, men were not involved in the practice, but they did play a role in case of complications like excessive bleeding ...of late men refer their daughters to hospital ..."* FGD with men aged 18-25 years.

Some successes and failures of interventions to eradicate FGM/C were reported. Majority of participants in FGDs and KIIs mentioned arrest of perpetrators as decreasing the practice. A participant in KIIs stated:

*"The woman who was doing the FGM was arrested ... taken to police then to court. After facing the challenges of arresting her due to our community not being ready or fully supportive of the arrest ... they served a jail term of two ...*

*years which ... is a lesson for the rest."* KII female human rights activist.

The KIIs attributed failure of the interventions to deeply rooted cultural practices, hostility to those who advocate against them, lack of cooperation, support of FGM/C by political and religious leaders, poor law enforcement and lack of funding. Location of the Anti-FGM board in the central government, and its composition of only women living with FGM/C, locking out other activists, negatively affected the fight against FGM/C.

#### ***Will the practice continue?***

More than half (53.7% [29/54]) of participants aged 18 to 44 years planned to have their daughters cut. Among these, a majority (96.6%) would have them undergo type II FGM/C and the remaining (3.4%) type III FGM/C. In this age-group, whether one will have their daughters cut was statistically significantly associated with age ( $P = 0.033$ ), place of residence ( $P < 0.001$ ) and occupation ( $P = 0.014$ ). Those who were aged 18-34 years, home makers and the rural were more likely to cut their daughters (Table 5).

**Table 5**  
*Socio-demographic determinants of intention to have daughters undergo FGM/C*

Socio-demographic characteristics	Intention to have daughters undergo FGM/C						Chi-square test
	Yes (n = 29)		No (n = 11)		Not sure (n = 14)		
	No.	(%)*	No.	(%)*	No.	(%)*	
Sex							
Male	17	(58.6)	4	(36.4)	3	(21.4)	$\chi^2 = 5.655$ , df = 2, P = 0.059
Female	12	(41.4)	7	(63.6)	11	(78.5)	
Age (years)							
18-24	22	(75.9)	8	(72.7)	6	(42.9)	$\chi^2 = 10.460$ , df = 4, P = 0.033
25-34	7	(24.1)	1	(9.1)	7	(50.0)	
35-44	-	-	2	(18.2)	1	(7.1)	
Marital status							
Single	26	(89.7)	8	(72.7)	10	(71.4)	$\chi^2 = 2.780$ , df = 2, P = 0.249
Married	3	(10.3)	3	(27.3)	4	(28.6)	
Level of education							
None	8	(27.6)	1	(9.1)	3	(21.4)	$\chi^2 = 16.981$ , df = 12, P = 0.150
Primary (incomplete)	4	(13.8)	3	(27.3)	-	-	
Primary (Complete)	5	(17.2)	-	-	1	(7.1)	
Secondary (incomplete)	3	(10.3)	2	(18.2)	1	(7.1)	
Secondary (Complete)	4	(13.8)	2	(18.2)	6	(42.9)	
College Diploma	2	(6.9)	3	(27.3)	3	(21.4)	
Informal Education (madrassa)	3	(10.3)	-	-	-	-	
Residence							
Urban	5	(17.2)	-	-	4	(28.6)	$\chi^2 = 20.344$ , df = 4, P < 0.001
Rural	23	(79.3)	4	(36.4)	5	(35.7)	
Peri-urban	1	(3.4)	7	(63.6)	5	(35.7)	
Occupation							
None	4	(13.8)	-	-	-	-	$\chi^2 = 22.216$ , df = 10, P = 0.014
Formal employment	2	(6.9)	2	(18.2)	4	(28.6)	
Home maker	16	(55.2)	2	(18.2)	6	(42.9)	
Business	4	(13.8)	-	-	1	(7.1)	
Livestock rearing	2	(6.9)	2	(18.2)	-	-	
Others	1	(3.4)	5	(45.5)	3	(21.4)	

\*Percentages are based on the total stated

These findings were comparable to those of the qualitative study. A few youth, based on awareness of complications, reported they would not cut their daughters. However, majority of the youth intended to cut their daughters, with most advocating for type II, perceived to have less complications compared to type III FGM/C. Notably, those who intended to proceed with the practice used culture to justify continuance as

exemplified by the following statement during an FGD:

*"I will cut her the severe type; I will cut everything because I don't want her to be hyper[active] and follow men. I believe in what our people used to do and I will follow the footsteps of my great grandparents ... Yes but fraun method." FGD with women aged 18-25 years.*

Recommendations to reduce the incidence of complications of FGM/C included awareness, engaging religious leaders in the campaign against FGM/C, a complete shift to type II FGM/C, enforcement of laws against FGM/C, and support of human right groups campaigning against FGM/C, with the latter coupling efforts with healthcare providers and family members to assist victims with complications access healthcare services.

## DISCUSSION

All female participants had undergone FGM/C, 89.0% forced. All participants were aware of FGM/C with 84.2% terming it necessary. These findings agree with previously reported high prevalence (93.6%) of FGM/C among the Somali (5). Participants without formal education, rural and home makers were more likely to consider FGM/C a necessary practice. This mirrors earlier findings that the prevalence of FGM/C is negatively associated with level of education and wealth, but increases with age, and is more prevalent in rural areas (5).

In this study, 85.4% of those interviewed were aware of the complications associated with FGM/C, partly explained by the high prevalence of FGM/C and the effect of awareness campaigns. Female, married and rural participants were more aware. This demography is also the most affected by FGM/C (5). Unfortunately, these complications are not attributed to FGM/C by most, as earlier reported by Jaldesa *et al.* (6). This may explain the high prevalence and intention to continue with the practice despite widespread awareness of the complications. A striking finding is that even health care providers do not attribute the complications to FGM/C. However, those who intend to discontinue the practice base their decision on the associated complications. Another significant finding is that anti-FGM laws have led to hesitancy by

community members to seek FGM/C related health services, resorting to interventions that cause more harm to the victims.

It is notable that, although the prevalence of FGM/C remains high among the Somali, there is a shift from type III to type II FGM/C. In this study, 55.0% of women had type III FGM/C. Among the Somali, in 2014, 32.3% of those who had undergone FGM/C had type III FGM/C (5) compared to 75.1% in 2008/2009 (7). Similar findings have been reported in other studies (8,9). Advocacy by religious leaders for type II FGM/C, as well as the need to maintain culture while avoiding complications (type II FGM/C is perceived to have fewer complications compared to type III FGM/C), may have contributed to this change. Unless effective interventions are implemented, this trend is likely to continue. This is informed by the finding that 96.6% of those who intend to continue with the practice stated that they will opt for type II FGM/C.

Reasons for continuation of the practice including culture, religious requirement, fear of being ostracised and lack of political goodwill have also been reported in other studies (4,6,10,11). Based on these reasons, the negative health effects of FGM/C are not perceived as critical. Type III FGM/C is a cultural practice among the Somali (9). Some who practice FGM/C (especially type II) wrongly believe that it is mandated by Islam, the predominant religion locally. Closer analysis of Islamic teachings might help counter the practice by showing that it actually is a violation of Islamic law (12,13).

The strengths of this study include use of mixed methods in data collection. Findings were validated through triangulation of results from the qualitative and quantitative components. To harness diverse opinions, qualitative and quantitative data collection was conducted concurrently to ensure that respondents for the survey and the participants for FGDs and KIIs were not the same individuals. However, there were a

few limitations. Because of the sensitivity of FGM/C, the fact that the practice is illegal as well as because FGM/C is held in high regard by the community, participants may not have been willing to openly talk about it, which may have led to information bias. To mitigate this, participants were assured of confidentiality and the investigators took time to clarify concerns raised by the participants. In addition, for the FGDs, participants were separated into culturally acceptable homogenous groups.

### CONCLUSION

Despite widespread awareness of complications associated with FGM/C, its prevalence remains high. However, there is a shift from type III to type II FGM/C. This trend is mainly informed by culture, religion and awareness of complications of FGM/C. The influence of Islam should be exploited in eradicating the practice by promoting the correct Islamic teachings and use of religious leaders as agents of change. In addition, parents and guardians are the main decision makers regarding FGM/C, thus, critical enablers of continuation of the practice. They should, therefore, be targeted with behaviour and attitude change interventions. Political leaders should also be brought on board in the fight against FGM/C.

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