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ORIGINAL ARTICLE

DETERMINANTS OF FEMALE GENITAL MUTILATION PRACTICES IN EAST GOJJAM ZONE, WESTERN AMHARA, ETHIOPIA

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ABSTRACT

Background: *Female genital mutilation is one of the harmful traditional practices among women and girls. More than 130 million girls and women live today who have undergone female genital mutilation. In Ethiopia, a high prevalence (74.3% national and 68.5% in Amhara region) has been reported. This study was aimed to identify determinant factors of female genital mutilation practices in East Gojjam Zone, Western Amhara, Ethiopia.*
Methods: *A community based cross sectional study was conducted among 730 women aged 15-49 years and having children < 5 years old in September, 2014. Data were collected using a pretested interviewer administered questionnaire. Descriptive statistics were used to describe study objectives, and bivariate and multivariate analysis to identify determinant factors to female genital mutilation.*
Results*: 718 women and 805 daughters participated in the study. FGM prevalence was 689 (96%) and 403 (49%) among women and daughters< 5 years of age, respectively. Type1 and type 2 FGMs were common and daughters <1 years of age exhibited 91% female genital mutilation. Daughters' age, parent education level, residence, women circumcision history, culture, health education, frequent health extension workers follow up and participation in anti FGM interventions were risk factors to female genital mutilation practice.*
Conclusions*: Female genital mutilation practices continues to be a major problem to women and daughter <5 years of age in the study area. A number of factors were associated with FGM practices including daughters' age, parent education level, residence, health education, culture, mothers circumcision history, frequent health extensions workers follow up and participation in anti FGM interventions were determinants to higher FGM practices.*

Key words*: Female genital mutilation, determinant factors, Goncha District, Ethiopia*

INTRODUCTION

Female genital mutilation (FGM) is a collective term used for a range of practices involving the removal/ alteration of parts of healthy female genitalia for non-therapeutic reasons (1-3).There are three types of FGM: Type1 (Clitoridectomy): partial or total removal of the clitoris, Type2 (Excision): partial or total removal of the clitoris and labia minora, Type3 (Infundibulations): narrowing of the vaginal opening through the creation of a covering seal, and Type4 (other): all other harmful procedures to female genitalia for non-medical purposes (1,4). FGM is a very painful procedure often performed without aesthesia and associated with many complications: haemorrhage, urine retention, HIV/AIDS infection, anaemia due to high bleeding, irreversible genital lesions, depression, shock, swelling, painful sexual intercourse, sexual dysfunction, difficulties during child birth and infertility (1-9).

Despite several interventions to reduce FGM globally, it has continued as a major health problem to women and girls (3-8). Worldwide, up to 140 million women and girls have experience FGM and about 3 million girls are at risk of FGM every year (7). Larger proportion of FGM prevalence is a man/culture made problem worldwide, particularly in poor socio economic countries. Most women and girls with FGM have lived in 28 sub-Saharan African countries followed by Asia and the Middle East. However, to varying degrees, it has become a worldwide problem as a result of population migration (4,7-13).

Evidence has shown a broad range of FGM prevalence among African countries and immigrants from African countries into European countries, ranging from 25% to 95%. Common attitudes justifying the practice include: cultural pressure, ease to get husband, increased sexual arousal and educational status (14-20). In Ethiopia, a national prevalence of 74% has been reported, with local percentages reported from

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28% in Tigray and Southern regions to 65% in Addis, and greater than 85% in Oromia, Afar, Somali, and Harrar, and more recently up to 95% in the Somali region and Kersa district (22,23), where most procedures made by traditional practitioners who do not know health complications (21-24).

Despite these multiple studies throughout Ethiopia, limited research has been documented in the Amhara region especially in rural districts. The objective of the current study therefore was to identify determinant factors of FGM practice in Goncha Siso-Enessie District, Western Amhara, Ethiopia and plan appropriate interventions against FGM practices.

MATERIALS AND METHODS

Study design and Area: A community-based cross-sectional study to determine the prevalence of and factors associated with FGM was conducted in September 2004. The study was carried out in Goncha Siso-Enessie District, Western Amhara Regional State, Ethiopia. The district is located about 345 and 135 kilometers (km) away from Addis Ababa, the capital city of Ethiopia and Bahir Dar, the capital city of the Amhara Regional State. It has an area of 2,500 square km and had an estimated total population of 141,068 (71,240 male and 69,829 female) within it's 22 Kebeles or local administrations (21). 95% of it's population is living in rural areas, and agriculture is the primary economic activity. At the time of the study, there were 6 functional health centres and 22 health posts in the District.

Sample size and sampling methods: All women in reproductive age group (ages 15-49) were residing in the district and who had daughters less than five years of age comprised the study population. A minimum sample size of 730 was calculated using Epi Info version 7 by considering 5% marginal error at the 95% confidence level, an FGM prevalence of the region at 68.5% based on previous studies (21), a 10% non-response and a design effect of 2. One fourth (5 out of 22 Kebeles) were selected randomly due to monetary and time shortage. The sample size was determined for each of the five selected Kebeles proportional to their population size. Households were selected systematically based on sampling frame of each Kebele made by health extension workers.

Data collection, Quality assurance and Analysis: Data were collected using a pretested structured interviewer administered questionnaire. The questionnaire was prepared by referring to similar studies (4,13,20-22,25,26). It was first prepared in English, translated to Amharic (local language) and then back to English to confirm it's consistency. Socio-demographic characteristics, knowledge and perceptions about FGM, complications related to FGM and information sources on FGM were major contents of the questionnaire used in this survey. It was piloted among women living in district Kebeles not included in the study to check its validity. The investigator provided a one day training course on study objectives, data quality, data collection procedures and data confidentiality issues to data collectors (five female diploma nurses) and supervisors (two BSc Nurses).

Data collectors collected data through face to face interviewing of mothers using the Amharic version of the questionnaire. Before actual data collection, data collectors informed mothers on study objectives, data collection procedures, data confidentiality and their rights. The investigator conducted daily supportive supervision to data collectors. Data collected from the study were cleaned manually and entered in to SPSS version 20 for further edition and analysis. Descriptive statistics were used to describe study participants and stated objectives. Bivariable and multivariable logistic regression analysis was employed to identify determinant factors to FGM practice in the study area. Degree of association between the study and outcome variables was described using odds ratio at 95% CI.

Ethical Clearance: The ethical clearance for this study was provided by the Amhara Regional Health Bureau Research Committee after reviewing the technical proposal. A supporting letter was taken from East Gojjam Health Department after detail explanation of study objectives, data collection procedures and data confidentiality issues. Informed consent was obtained from the local administrators and study participants after being informed in detail about the purpose of the study, participants right and data confidentiality. Participation was fully voluntary based. No one was able to access data other than the investigator to keep data confidentiality. Data were used to answer only the stated objectives of this study.

RESULTS

Socio- Demographic characteristics: A total of 718 mothers participated in the study with a response rate of 98%. The majority (97.3%) of interviewed women were Amhara in ethnicity. Nearly half (49%) of women were aged between 25-34 years. All women were orthodox Christian followers. A large number of women (88%) were married and nearly two third

(67.8%) were illiterate. The majority of women (97% and 86%) were farmers and from rural residence, respectively. Within the interviewed households, there were 820 under-five daughters. About 556 (68%) of daughters were between 1-2 years old (Table 1).

Female Genital Mutilation Practices: From the total interviewed women, 689 (96%) had experienced FGM and 403 (49%) of their daughters undergone the procedure. Of the circumcised daughters, 187(22.8%) and 216 (26.2%) were <1 and 1-2 years old, respectively. From the total circumcised daughters, the majority (79%) had circumcised by local circumcisers and the rest 21% were by traditional birth attendants.
About 206 (51.1%) and 197(48.9%) of circumcisions were Type II and I, respectively. A large number of circumcisions (96%) were performed at their own homes and the rest, 16 (4%), were at the circumcisers' home. Two-third of studied women (66.7%) noted they did not know the negative impacts of FGM practices. More than half of the respondents (54%) noted the occurrence of problems due to FGM. The majority of respondents, 568(78.8%) did know FGM is a criminal act. More than half (55.8%) of decisions on infants' FGM were passed through husbands. A large number of respondents, (67.4%), noted the influence of culture in the practice of FGM. Nearly three quarter (73.7%) of the respondents received supervision from the health extension workers. Only 184(25.6%) respondents participated in anti-FGM interventions (Table 2).

Table1: Socio-demographic characteristics of women in Goncha Siso-Enessie District, Ethiopia, 2014.

Variables	**Category**	**Frequency**	**Percent (%)**
Women age in years	15-24	455	63.4
	25-34	263	36.6
Daughters age in years	<1	264	32.0
	1-2	556	68.0
Religion	Orthodox	730	100.0
Marital status	Single	22	3.0
	Married	630	88.0
	Divorced	66	9.0
Ethnicity	Amhara	698	97.0
	Others	20	3.0
Women education level	Informal	487	68.0
	Primary (1-8)	198	28.0
	9 and above	33	4.0
Husbands education level	Informal	382	53.0
	Primary (1-8)	250	35.0
	9 and above	86	12.0
Occupation	Farmers	698	97.0
	Others	20	3.0
Residence	Rural	617	86.0
	Urban	101	14.0
Family size	1-2	33	4.6
	3-4	379	52.8
	5-6	183	25.5
	7+	123	17.1

Table 2: FGM practices and related variables in Goncha Siso-Enessie District, 2014.

Variables	Category	Frequency	Percent)
Women undergone FGM	Yes	689	96.0
	No	29	4.0
Less than 5 year old daughters circumcised	Yes	403	49.0
	No	417	51.0
Age distribution of circumcised daughters	<1 year	187	46.4
	1-2 years old	216	53.6
Circumcision done by	Local circumcisers	318	79.0
	Birth attendants	85	21.0
Type of Circumcision/FGM	Type I	197	48.9
	Type II	206	51.1
Place of Circumcision	At own home	387	96.0
	Circumcisers' home	16	4.0
Knew negative impacts of FGM	Yes	239	33.3
	No	479	66.7
Problems occurred due to FGM practices	No	186	46.0
	Shock	50	12.4
	Excessive bleeding	90	22.3
	Depression	17	4.3
	Wound/infection	60	15.0
Knew FGM is criminal	Yes	150	20.5
	No	568	78,8
Cultural influence to FGM	Yes	484	67.4
	No	234	32.6
Who decide FGM practices	Husband	401	55.8
	Wife	280	39.0
	Grand families	37	5.2
Health education on FGM	Yes	250	34.8
	No	468	65.2
Support to continue FGM	Yes	502	70.0
	No	216	30.0
Followed by Health extension workers	Yes	529	73.7
	No	189	26.3
Participation in anti FGM interventions	Yes	184	25.6
	No	534	74.4

A large number of women (70%) showed their support to the continuation of FGM practices (Table 2). The reasons included community acceptance (24%), respect of culture (18%), to get a husband early (19.5%), support by religion (8%), preservation of virginity (11.5%), ease of loss of virginity (7%), create stability (3.4%), means to control premarital sex (6.6%) and promote cleanliness (2%) (Figure 1).

Determinant Factors of FGM Practices: In multivariable logistic regression analysis, daughters' age, parent's education level, residence, maternal circumcision status, culture, health education, health extension worker follow up and participation in anti-FGM interventions showed significant association with FGM practices in the study area (Table 3).

As shown in Table 3, FGM practice was higher among <1 year-old daughters compared with 1-2 years old daughters (OR=3.82, 95% CI= [2.76, 5.31]). Similarly, FGM practice on daughters was more commonly associated with illiteracy than literacy for both mothers (OR=1.8, 95% CI= [1.29, 2.50]) and husbands (OR=2.01, 95% CI= [1.48, 2.75]). Parents of rural residence showed more FGM practice on daughters than parents from urban areas (OR=1.72, 95% CI= [1.11, 2.69]). Parents who received health education on FGM and participated in anti-FGM interventions were 53% less likely (OR=0.47, 95% CI= [0.34, 0.65]) and 51% less likely (OR= 0.49, 95 % CI= [0.34, 0.69]) to practice FGM on their daughters, respectively (Table 3).

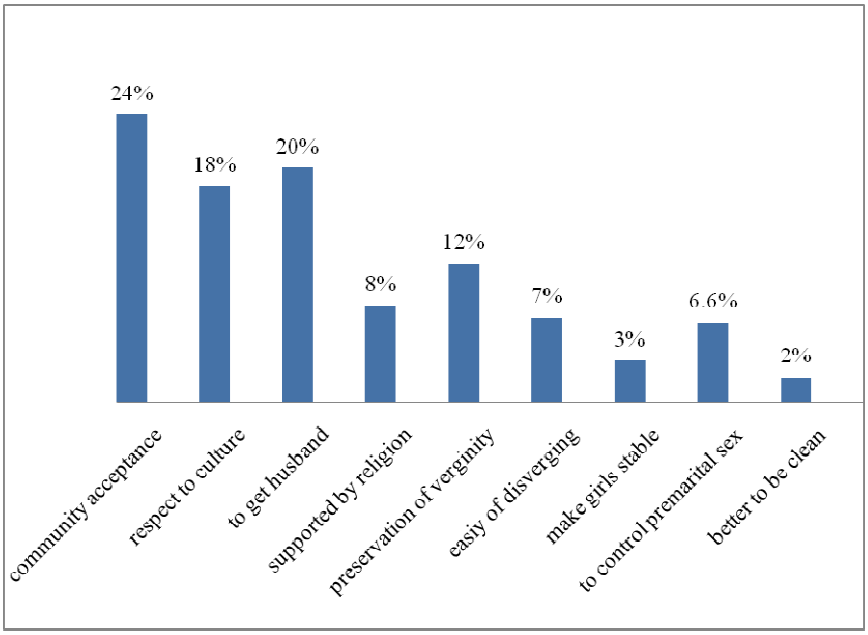

Figure1: Women's reasons to support FGM in Goncha Siso-Enessie District, 2014.

Table3: Factors to FGM practices in Goncha Siso-Enessie District, Western Amhara, 2014.

Variables		**FGM practice**		**95%CI COR**	**95%CI AOR**
		Yes (%)	**No (%)**		
Parents age (years)	<25	232(32.0)	223(31.0)	0.56 [0.40, 0.77]	0.61[0.52, 1.86]
	≥25	171(24.0)	92(13.0)	1	1
Daughters age (year)	< 1	187 (22.8)	77 (9.4)	3.82 [2.76, 5.31]	2.76 [1.78, 4.82]
	1-2	216 (26.3)	340 (41.5)	1	1
Ethnicity	Amhara	396(55.0)	302 (42.0)	2.44 [0.89,6.83]	2.13 [0.68,5.20]
	Others	7 (1.0)	13(2.0)	1	1
Marital status	Single	360(50.1)	270(37.6)	1.40 [0.87, 2.33]	0.86 [0.66, 1.96]
	Married	43(6.0)	45(6.3)	1	1
Women education level	Illiterate	296 (41.2)	191 (26.6)	1.8 [1.29, 2.50]	1.64 [1.24, 2.36]
	Literate	107 (15.0)	124 (17.2)	1	1
Husband education level	Illiterate	245 (34.0)	137 (19.0)	2.01 [1.48, 2.75]	1.78 [1.38, 2.56]
	Literate	158 (22.0)	178 (25.0)	1	1
Occupation	House wife	395 (55.0)	303 (42.2)	1.96 [0.73, 5.30]	1.54 [0.42,4.85]
	Others	8 (1.1)	12 (1.7)	1	1
Residence	Rural	358 (50.0)	259 (36.0)	1.72 [1.11, 2.69]	1.54 [1.09, 2.50]
	Urban	45 (6.2)	56 (7.8)	1	1
Women Circumcision status	Circumcised	394 (55.0)	295 (41.0)	2.97 [1.26, 7.15]	2.21 [1.20, 6.15]
	Not circumcised	9 (1.2)	20 (2.8)	1	1
Knew negative impacts of	Yes	139 (19.3)	100 (14.0)	1.13 [0.82, 1.57]	0.89 [0.68, 1.49]
FGM	No	264 (36.7)	215 (30.0)	1	1
Cultural influence	Yes	296 (41.2)	188 (26.2)	1.87 [1.35, 2.59]	1.60 [1.25, 2.53]
	No	107 (15.0)	127 (17.6)	1	1
Got health education on FGM	Yes	110 (15.3)	140 (19.5)	0.47 [0.34, 0.65]	0.39 [0.38, 0.76]
	No	293 (40.8)	175 (24.4)	1	1
Followed by health extension	Followed	275 (38.3)	252 (35.1)	0.52 [0.36, 0.75]	0.48 [0.32, 0.65]
workers	Not followed	128 (18.1)	61 (8.5)	1	1
Knew FGM is criminal	Yes	92 (13.0)	58 (8.0)	1.31 [0.89, 1.93]	0.78 [0.72, 1.74]
	No	311 (43.3)	257 (35.7)	1	1
Participation in anti FGM	Participated	79 (11.0)	105 (15.0)	0.49 [0.34, 0.69]	0.42[0.29, 0.62]
interventions	Not participated	324 (45.0)	209 (29.0)	1	1

DISCUSSION

This study was conducted mainly to identify determinant factors associated with FGM, a major traditional practice among females than can result in long lasting physical and psychological impact on the victims (23-26). In the current study, 689 (96%) women had undergone FGM. These results concur with study findings from Egypt FGM of 95.7%(16), Sudan, FGM of 99% (18), the Somali Region in Ethiopia, FGM of 97.3% (21), and 98% (23), and the Kersa district in Ethiopia, FGM of 95.2% (24). Our study suggests that the most probable reasons accounting for these high FGM rates are cultural influence, community acceptance, as well as lack of availability of interventions against FGM decades ago when these women were infants. These results are also compatible with the findings of the British Medical Association (1), reporting that 90% of world's FGM prevalence are from Asian and African countries, the latter including Djibouti, Egypt, Guinea, Sierra Leone, Somalia, Sudan, Eriteria and Mali.

However, the current FGM prevalence among women is higher than study findings from the Netherlands (14), wherein a prevalence of 40% of all immigrants and 74% at asylum centers was observed. Other studies in Burkino Faso (17,27), Nigeria (19) and Ethiopia (21,26) reported prevalence of 68-77%, 80%, and 74-78%, respectively. Factors contributing to this variation could include culture influence as we noted in the present study that 76% of those practicing FGM cited cultural impact, as well as low community knowledge on FGM (21%) and it's health impacts (33%). Persistent FGM practice may also relate to family values (70%) of respondents were supporters to the continuation of FGM) and geographic constraints which make information dissemination and regular follow up by health extension workers difficult; 86% of respondents in the present study resided in rural regions, and 26 % were not followed by health extension workers.
In the current study, 49% of daughters aged two and under had FGM, and of these, 46.4% were less than one year old. These findings are higher compared with study findings from Sierra lion (15) and Burkina Faso (27,17), where FGM practices among similar aged daughters were 23.7%, 18.7-30.2%, respectively. The aforementioned factors such as geographical variation, culture and community practices may underlay these differences. In Ethiopia, unlike other countries in Africa and other continents, most of the FGM practices are performed during infancy, usually at the 7th day after birth in the Amhara region.

In addition to cultural influence, other reasons for FGM practice cited by the women in this study included 67.4% need to get married/husband (20%), religion (8%), virginity preservation (12%) and for control of pre-marital sex (6.6%). This agrees with findings from Egypt (16), Nigeria (19), Ethiopia (23, 24,26).

Type 1 and 2 FGMs were commonly practiced traditions in the study area, different from Somali (23) where types 1, 2, and 3 are common. It is known that type 3 is commonly practiced in Somalia to constrain any sexual intercourses by women even after marriage. The majority, 318 (79%) of FGM practices were performed by the traditional birth attendants, which is in line with EDHS 2005 (21), Somalia (21, 23), Burkina Faso (27), Egypt (16), Sudan (18) and Ethiopia (24, 26), where 92%, 100%, 82.4%, 98%, 99%, and 98% of FGMs were performed by traditional attendants, respectively. This is not surprising given the current study rural setting in which traditional attendants also reside. These findings contrast with those of a study conducted in Egypt (25) in which 72% of FGM procedures were predominantly performed by physicians in the urban area (25).

Parents' education level was predictor to FGM practices in the study area. Husbands with no or informal education were twice as likely to practice FGM compared with literate or formally educated husbands. This finding is supported by evidence from the WHO (1), the Netherlands (13), Egypt (16,25), Burkina Faso (17), Sudan (18), Nigeria (19) and other studies in Ethiopia (21-24,26), which collectedly demonstrated that no or lower parents' education level was an independent predictor for FGM practices. This association with lack of education may reflect difficulty in understanding the impact of FGM and in adherence to tradition without justification. Increased education may increase access to information and the ability to make informed decisions after consideration of the merits and demerits of FGM.

Women from rural areas were almost twice more likely to practice FGM than their urban counter parts, in agreement with previous evidence (1,14,25-27). Reasons may include cultural variability, gaps in knowledge, lack of access to relevant information, increased availability of traditional practitioners, inadequate health education and dominant decision making by husbands.

Women who experienced FGM were nearly three times as likely to be supportive of the practice than those had not experienced FGM again compatible with previous studies (1,3,4,14 -17,19,21).

Cultural influences such as adherence accepted community standards may account for this. In rural areas, most males prefer to marry circumcised, virgin and community accepted girls (5), and this may further compel mothers to oblige FGM practice in their daughters. These possibilities compatible with the present finding that culture was a significant predictor for high FGM practice, also observed in may previous studies (4,13,14,16,17,20,23,24,27). This reflects the need to respect one's culture which is perceived to be right, and to avoid non-conformist behaviour which otherwise risks ostracism.

Mothers did not get health education and follow up from health extension workers were significantly more likely to practice FGM compared with their counter parts, respectively. Similarly, women who participated in interventions opposing FGM were less participants in FGM procedures on their daughters as women who did not participate. A similar finding was reported from the Somali region of Ethiopia (23). These findings support the contention that when individuals have adequate knowledge and evidence of the negative impact of FGM, they will analyse it and act counter to their traditional beliefs and values.

Conclusions: Female genital mutilation represents a physical health problem and may contribute to mental health problem of in females, including infants. Type1 and Type2 were the commonest types of FGM practices in this study. Traditional practitioners were the primary performers of FGM practice. Most women did not know the health impacts of FGM practice. Daughters' age, parents' education level, residence, women circumcision history, culture, health education access, health extension worker follow-up and participation in anti FGM interventions were determinants to higher FGM practices in the study area. Improving health education, information resources, female education, supportive health extension workers' follow up and community counselling are important to reduce FGM practices.

Limitation of the study: Being only quantitative study, using only women participants/ not including male parents/ and being cross sectional study/unable to show the cause effect relations/ were acknowledged limitations to this study. To some extent there may also be interviewer bias since data collection was interviewer administered type.

Competing interests: The author declared as there is no any competing interest to this paper.

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