

Wrong Perceptions Towards Health Consequences of Female Genital Mutilation and Associated Factors Among Women in Adama District, Oromia, Ethiopia

Chala Diriba Feyissa (✉ c.diriba0397@gmail.com)

Adama Hospital Medical College <https://orcid.org/0000-0002-8459-1156>

Myerema Abdo Komicha

Department of Public Health, Adama Hospital Medical College

Ephrem Mannekulih Habtewold

Department of Public Health, Adama Hospital Medical College

Research

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Abstract

Background: Wrong perceptions towards health consequences of female genital mutilation among women can contribute to the continuation of this harmful practice. So this study was aimed at determining the prevalence of wrong perception towards health consequences of female genital mutilation and associated factors among women at Adama District.

Objectives: to determine the prevalence of wrong perceptions towards health consequences of female genital mutilation and associated factors among women in Adama District from October 15 to 20, 2019.

Method: Community based cross sectional study design and stratified sampling techniques were used. Semi structured interviewer administered questionnaire translated to Amharic and Afan Oromo was used. A pretest of 10% was done on women at non-selected kebeles. Data were planned to be collected from a sample of 554 women by 4 female health extension workers. Its completeness was checked daily by supervisor and principal investigator. Data entered to Epi info version 7 were exported to SPSS version 20 for cleaning, recoding and analysis. Descriptive statistics and binary logistic regression was employed with 95% CI and p-value <0.25. Multi co- linearity was checked with variance inflation factor >10 and multivariable logistic regression was used to determine the association between wrong perception towards health consequences of female genital mutilation among women and associated factors with 95% CI, p-value <0.05.

Result: the response rate, median age and inter quartile range were 91.52%, 30 years and 18 years respectively. About 31% (95% CI: 27, 35.5) of women had wrong perceptions towards health consequences of female genital mutilation. Rural residence (AOR= 1.76; 95% CI: 1.03, 3.01), not having any maternal care service (AOR= 2.61, 95% CI: 1.45, 4.69), no mass media exposure (AOR=2.79, 95%CI: 1.23, 6.32) and age at circumcision ≥ 11 years (AOR=0.39, 95% CI: 0.19, 0.80) were statistically significant variables associated with wrong perception towards health consequences of female genital mutilations.

Conclusion and recommendation: 31% of women had wrong perceptions towards health consequences of female genital mutilation. Rural residence, no mass media exposure, having no maternal care service and age at circumcision ≥ 11 years were significant variables. Increased maternal care service and health education were recommended to improve women's wrong perceptions towards health consequences of female genital mutilation.

Plain English Summary

Female genital mutilation is one of the harmful practices performed on girls and women in different parts of the world especially 29 countries of Africa including Ethiopia. It has immediate and long term health problems on mutilated girls and women. Women's wrong perception towards health consequences of female genital mutilation/cutting can contribute to the continuation of this harmful practice.

So, this study was aimed at determining the magnitude of wrong perception towards health problems of female genital mutilation and associated factors among women which can help in designing intervention programs so that girls and women shall be free from this gender based violence.

Community based survey was conducted among ≥ 15 years old women living in Adama district, Oromia region, Ethiopia from October 15 to 20, 2019. Their perception (feeling, understanding/awareness, cognition) towards health consequences or problems of female genital mutilation was determined based on 10 questions with short term and long term health consequences. Out of 507 respondents, 158 women had wrong perception towards health consequences of female genital mutilation.

Residence, no mass media exposure, no maternal care and age at circumcision were the factors associated with women's wrong perception towards health consequences of female genital mutilation.

In conclusion: nearly one in three women had wrong perceptions towards health problems of female genital mutilation which can contribute to the continuation of this practice in their community. Thus, if similar researches shall be conducted, girls and women will benefit from the interventions done based on the findings.

Background

Female genital mutilation/cutting refers to all procedures involving the removal of part or total female external genitalia & injuries to female external genitalia for non-medical reasons(1). World Health Organization (WHO) classified female genital mutilations/ cutting (FGM/C) in to four types: Type I is named as Sunna and Clitoridectomy. Type II (excision), Type III (infibulations) and Type IV is unclassified FGM(2).

Any type of FGM is internationally recognized as violence against human rights of girls & women which violets the right to physical integrity, right to life, the right to freedom from torture or cruel act & right to health(1, 3).

Globally, more than 125 million girls & women alive today have undergone FGM in 29 countries of Africa, Yemen, Asia & Middle East where the practice is concentrated(1). Globally, more than 70 million girls under 15 years have been cut or are at risk of FGM. More than 35 million girls under 15 years are living in Egypt, Ethiopia, Indonesia & Nigeria. Among these 3.6 million girls are at risk of FGM every year (3).

Ethiopia was classified among moderately high prevalence countries with FGM of 74% (3).According to EDHS 2016 the national prevalence of FGM among girls & women aged 15–49 years is 65.2% and in Oromia region it is 76.5% (4, 5). The prevalence of FGM in under 15 years girls in Ethiopia was 16%(4, 6) whereas study done in Habobo Guduru shows that 48% of girls under 15 years have been cut(7).

Although reasons for FGM vary from country to country, from culture to culture & from ethnic to ethnic, the commonest are girls should respect, obey cultural and social norms related to sexual control, womanhood and maturity, to controls girl's hyper sexuality, promiscuity, preserves virginity, avoids

disfigurement and unhygienic environment of female genitalia(1, 3, 8–11). In Afar & Somali, it is believed that infibulations protects rape(12).

Eradication of FGM had pertinent relation to SDGs 1&2(no poverty and zero hunger), goal 3(good health and wellbeing), goal 4(quality education), goal 5(gender equality), goal 8(economic growth) etc.(12, 13).

Perception is the process by which a person interprets and organizes sensation (see, touch, feel) to produce a meaningful experience of the world. Perception is defined as the way you think about something, the way you notice things with your sense organs, the ability to understand or notice things quickly. It is also defined in philosophy, psychology and cognitive science as the process of getting awareness or understanding of sensory information. Perception is subjective interpretation and is one among components of attitude where attitude has components like perception/thoughts, feelings or belief/ and behavior/practice/(14, 15).

Perceiving the severity of health consequences of FGM affects health behavior practice. Individuals who well perceived the severity of FGM might have no likely hood of involving in the practice of FGM. In other word, wrong perception of respondents towards health consequences of FGM couldn't bring attitudinal changes which in turn makes elimination of the practice of FGM difficult(12, 13).

The health extension package launched since 2003 was one of the strategy to address harmful traditional practices like FGM etc. through health education and promotion employing more than 42,000 female health extension workers(17).

Since 2016, Ethiopia also addressed FGM in Second Growth and Transformation Plan (2015/16-2019/20), National Adolescent and Youth Health Strategy (2016–2020) and refreshed its commitment to end FGM/C and child marriage by 2025(4, 10).

Ethiopia launched strategic action plan to improve awareness or perception towards the harms of FGM on economy and health of girls and women. Among activities done, awareness raising and social mobilization to bring attitudinal changes through community conversation, empowerment of girls and women through training, skill building, sharing information, religious based interventions, 'iddir', folksong social media to increase girls' & women's perception of health problems of FGM (18, 19).

But, lacking coordination among institutional structures, non-uniformity of awareness creation activities in entire country, financial or resource constraint, unsustainable intervention activities, absence or low legal support, deep rooted cultural and religious beliefs that promote FGM in many parts of the country, low level of awareness at grass root level and rural areas are the challenges to eliminate harmful traditional practices like FGM (19).

Female genital mutilation has a direct harmful effect on reproductive health of women that is an irreversible damage to female external genitalia that has immediate & long term complications(20).

Hemorrhagic and neurogenic shocks, severe pain, urine retention, infection (HIV/AIDS infection and tetanus) are some of the immediate complications. Damage to adjacent organs, pain during sex, failure of the wound to heal, formation of abscess, dermoid cyst, keloid scar, narrowing of the opening of vagina so that difficulty in passing head of the new born, excessive bleeding during delivery, risk of caesarian section, episiotomy, and death(estimated 100, 000 teenagers death per year during child birth due to complications related from FGM etc. are the long term complications(2, 3, 21).

Degree of severity of complication depends on the type of FGM performed, cleanliness of instrument used and skill of the person who performed the procedure. Type I & II having less severe, but type III (infibulations) results in more severe complications(3).

A study conducted in Nigeria shows that 26.3% of women didn't perceive FGM has gynecological problems (22). Other study conducted in Nigeria also shows that 47.2% 36.8%, 31.1% and 36.8% of women didn't perceive FGM can result in dyspareunia, excessive bleeding during procedure, infection and incontinence respectively (23).

Studies conducted in West Shewa and Bale Zone of Ethiopia reveal that 11.6%, 63% of women didn't perceive FGM has health consequences respectively(24–26). Study conducted in West Shewa shows that 40.5% of women didn't perceive the immediate complications of FGM and study at Kersa, West Hararge shows 68.8% of women didn't perceive any health complications of FGM(24, 26). These studies show large number of women had low perception towards health consequences of FGM.

Wrong perception towards health consequences of FGM is believed to result in attitude towards continuation of FGM which makes eliminating or ending FGM programs difficult. Studies show women's perception towards complications of FGM was low in Ethiopia(19, 24) and as far as the knowledge of the investigator, there is no or scarce study done on similar topic. Thus this study was aimed to determine the prevalence of wrong perceptions towards health consequences of FGM and associated factors among women in Adama District.

Methods & Materials

Study Area and Period

Adama district is one of the district /woreda/ among East Shewa Zone which is located around Adama City 100 Km South West from Addis Ababa in Oromia regional state. According to the Adama district /Woreda/ Health Office, the district has 9 health centers and 35 health posts to serve 37 rural kebeles / the lowest administrative structure/ & 5 sub urban kebeles with an estimated population of 200,563. Among these, the total number of women 15 years and above is 44, 385 with 41,784 households. The study was conducted from October 15 to 20, 2019.

Study Design: community based cross sectional study design was used.

Source population: all women of reproductive age and above (≥ 15 years) who live in Adama district.

Study Population: all women of reproductive age and above (≥ 15 years) who lived in study area & who were selected during data collection.

Inclusion Criteria: all volunteer women of reproductive age and above (≥ 15 years) who lived in the area for more than 6 months.

Exclusion Criteria: critically ill respondents were excluded.

Sample Size Determination

Single population proportion formula was used to calculate the sample size of 358 women.

Where n = sample size, $Z = 1.96$, P = proportion of wrong perceptions towards health consequences of FGM is 37% (25), d = margin of error (0.05).

Thus, using design effect of 1.45 (519 respondents) and adding 10% non-response rate (35 respondents), the final sample size (n) was 554 women.

Sampling Procedure

Stratified sampling technique was used to homogenize kebeles of Adama district into urban and rural. Due to feasibility problem, 4 rural kebeles having 3,492 households and 2 sub urban kebeles with 2,927 households were selected with lottery method. Then, households from those 6 selected kebeles were selected randomly. Two hundred fifty three (253) and three hundred one (301) respondents were randomly selected from selected urban and rural kebeles respectively which resulted in a total of 554 respondents. Finally, only a woman (≥ 15 years) from selected households was interviewed. Where more than one woman encountered in a household, one respondent was selected by lottery method. The next household was selected where there was illegible woman in the household.

Dependent Variable: wrong perceptions towards health consequences of FGM.

Independent Variables:

Socio demographic factors: age, educational status, residence, birth place, marital status, occupation, religion, ethnicity

Gynecologic and Obstetric factors: parity, maternal care service (ANC & PNC), status of circumcision, type of FGM performed, place of delivery and age at circumcision

Behavioral factors: exposure to mass media (TV/Radio)

Health Consequences of FGM: Short and long term consequences of FGM

Operational Definition

Female Genital Mutilation: In this study, if the participant admits or gives verbal autopsy of only part of flesh cut as type I, part of flesh cut & removed classified as excision & if sewn or closed as infibulations to avoid difficulty of identifying the type of mutilation(35).

Adama District: Adama district is one among woredas in East Shewa Zone which is different from Adama town.

Wrong perception: is an individual's unperceived or not aware of or unrecognized health consequences of FGM through senses or cognition. It was aggregated from 10 Likert item questions containing immediate and long term consequences of FGM that were given scale of 1–5 where 1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree and 5 = strongly disagree were used to measure perceptions(36–38). And wrong perception was the study participants score below median score for it is categorical variable.

Data collection tool: A pre-tested, semi structured interviewer administered socio demographic and 10 Likert scale items questionnaire adapted from different literatures (3, 4, 9, 22) was prepared in English.

Data collection procedure: Questionnaire prepared in English was translated to Amharic and Afan Oromo language by university lecturers to collect primary data from respondents at selected households. Four female health extension workers and a BSc nurse who speak Amharic and Afan Oromo were used as data collectors and supervisor respectively. The data were collected during market free days at rural house hold and weekend at urban house hold to get respondents at home.

Data quality control

To ensure the quality of the data, training of the data collectors and their supervisor was under taken for half day by the principal investigator on the objectives, relevance of the study, way of interview, confidentiality of information and informed consent. Pretest was done on 10% of sample size of similar population at non selected kebele to check the errors and take correction before the actual data collection. Completeness of questionnaires was checked daily by supervisor and principal investigator.

Data processing and analysis

After the data collection was completed; the data were checked visually for completeness and entered in to EPI Info version 7 and exported to SPSS version 20 for cleaning, recoding and analysis. Summary statistics like median and inter quartile range were done.

Wrong perception towards health consequences of FGM was measured by 5 point Likert Scale(36–38) and constructed by aggregate summation of scores from 10 Likert item question responses. Based on different literatures, respondent's responses were collapsed in to two to make outcome variable dichotomous (wrong or Right perception) in order to employ logistic regression analysis (37, 38). Then, individual responses were summed and those who had scored above median score were classified as having right perception, but those who scored below median score classified as having wrong perceptions.

Binary logistic regression was employed with 95% CL and p-value < 0.25 to determine the relationship between dependent and independent variables. Multi co-linearity among factors was checked with VIF > 10. Then, multivariable logistic regression was employed to determine factors associated with wrong perceptions towards health consequences of FGM with 95% CL, p-value < 0.05. Goodness of fit test was checked using Hosmer-Lemishow with p-value > 0.05.

Ethical clearance

Ethical clearance was obtained from Adama Hospital Medical College Ethical Review Board, OHB, Adama District health office and leaders of selected kebeles. Then, after explaining the objective of the study, oral consent was obtained from the respondents for interview.

Results

Socio demographic characteristics of Respondents

In this study, 554 women were included, but 507 women responded to our interview making the response rate of 91.52%. The median age of the respondents was 30 years. Then, Q1 and Q3 were 24 and 42 making IQR of 18 years old respectively. Most of the respondents 364(71.8%) and 371(73.2%) were married and born in rural areas respectively. Fifty percent of women live in rural area. Most of respondents 219(43.20%) were in elementary education, 299(59%) were house mothers, 317(62.53%) were Oromo in ethnicity and 301(59.4%) were Orthodox in religion (see Table 1 below).

Table 1
Socio-demographic factors of respondents, Adama District,
Oromia, Ethiopia, Oct, 2019

Variables	Frequency	Percentage (%)
Marital status (n = 507)		
Married	364	71.8
Divorced	34	6.7
Widow	44	8.7
Single	65	12.8
Educational status (n = 507)		
Illiterate	168	33.14
Elementary	220	43.39
Secondary	97	19.13
Diploma & above	22	4.34
Residence (n = 507)		
Urban	251	49.5
Rural	256	50.5
Place of Birth (n = 507)		
Urban	136	26.8
Rural	371	73.2
Occupation (n = 507)		
House mother	299	59
Government employee	11	2.5
Self-employee	114	22.5
Farmer	49	9.7
Student	34	6.7
Ethnicity		
Oromo	317	62.53
Amhara	135	26.63
Gurage	35	6.90

Variables	Frequency	Percentage (%)
Other/ Kambata, Hadiya/	20	3.94
Religion (n = 507)		
Muslim	31	6.1
Orthodox	301	59.4
Protestant	163	32.1
Other ('Waqefata')	12	2.4

Gynecologic and Obstetric characteristics of Respondents

Four hundred ten (80.9%) of respondents had parity, 315 (76.83%) had maternal care service, 229 (55.85%) had given the last birth at health institution. Four hundred fifty one (89%) of respondents claim currently there was no practice of FGM in their community. Prevalence of FGM was 399(78.7%) and most of the respondents 170(42.6%) didn't know their age at circumcision. Nearly 93% was type II FGM with 88% of FGM performed by female traditional circumcisers (See Table 2 below).

Table 2
Behavioral, Gynecologic and Obstetric factors of respondents in Adama District,
Oromia, Ethiopia, Oct, 2019

Variables	Frequency	Percentage (%)
Gynecologic & Obstetric factors		
Parity (n = 507)		
Yes	410	80.9
No	97	19.1
Place of delivery (n = 410)		
Home	181	44.15
Health institution	229	55.85
Maternal care service (n = 410)		
Yes	315	76.83
No	95	23.17
Currently FGM practiced in your area (n = 507)		
Yes	56	11
No	451	89
Ever circumcised		
Yes	399	78.8
No	108	21.3
Age at circumcision (n = 399)		
0–5 yrs.	210	52.63
6–10 yrs.	135	33.83
≥ 11 yrs.	54	13.54
Type of FGM performed (n = 399)		
Type I (Clitoridectomy)	25	6.27
Type II (excision)	371	92.98
Type III (infibulations)	3	0.75
Circumciser (n = 399)		
Traditional birth attendant	48	12.03

Variables	Frequency	Percentage (%)
Traditional circumciser	351	87.97
Sex of circumciser (n = 399)		
Male	4	1
Female	395	99

Behavioral characteristics of the respondent

Majority, 448(88.4%) of respondents had mass media (TV/radio) exposure. Majority 492(97%) of the respondents had heard about FGM and most of them 379(77%) heard from their family (see Fig. 1 below).

Perceptions of respondents towards health consequences of FGM

Out of 507 women, 158(31.2%) had wrong perceptions towards health consequences of FGM. Among 507 respondents, 190(37.48%) disagreed that FGM can result in urine retention after the procedure. One hundred seventy five (34.52%) respondents disagreed FGM can be a cause for HIV/bacterial infection and 178(35.11%)of the respondents disagreed on the wound healing problem of FGM. There was disagreement of severe bleeding during the procedure of FGM among 172(33.92%) of women. Fifty percent of the respondents disagreed on FGM as a risk for prolonged labor. Similarly, 254(50.1%) of women disagreed that FGM can result in severe bleeding during delivery. About 74% of women disagreed that FGM can cause urine incontinence, 218(43%) of women disagreed FGM can lead to sexual dissatisfaction, 191(37.67%) of women disagreed that FGM can cause sexual pain and 176(34.72%) of respondents disagreed on FGM can be a risk for neonatal and maternal death. (See Table 3 below).

Table 3
Perceptions towards health consequences of FGM among respondents in Adama District, Oromia, Ethiopia, Oct, 2019

Variables	Strongly agreed	Agreed	Neutral	Disagreed	Strongly disagreed
FGM can result in urine retention after procedure	111(21.9%)	161(31.8%)	45(8.9%)	148(29.2%)	42(8.3%)
FGM can be a cause for HIV/bacterial infection	122(24.1%)	155(30.6%)	55(10.8%)	137(27%)	38(7.5%)
FGM can result in wound healing problem	45(8.9%)	238(46.9%)	46(9.1%)	131(25.8%)	47(9.3%)
FGM can result in severe bleeding during procedure	57(11.2%)	220(43.4%)	58(11.4%)	131(25.8%)	41(8.1%)
FGM is a risk for prolonged labor (> 12hours)	69(13.6%)	141(27.8%)	42(8.3%)	202(39.8%)	53(10.5%)
FGM can result in severe bleeding during delivery	61(12%)	162(32%)	30(5.9%)	189(37.3%)	65(12.8%)
FGM can cause urine incontinence	17(3.4%)	83(16.4%)	34(6.7%)	272(53.6%)	101(19.9%)
FGM leads to sexual dissatisfaction	63(12.4%)	161(31.8%)	65(12.8%)	161(31.8%)	57(11.2%)
FGM can cause sexual pain	88(17.4%)	195(38.5%)	33(6.5%)	134(26.4%)	57(11.2%)
FGM can be a risk for neonatal & maternal death	77(15.2%)	219(43.2%)	35(6.9%)	101(19.9%)	75(14.8%)
NB: FGM- Female Genital Mutilation, HIV- Human Immune Deficiency Virus					

Bivariate analysis

Extreme responses (strongly agree, agree and neutral were collapsed to agreement whereas strongly disagree and disagree were collapsed to make disagreement) to dichotomize responses for bivariate analysis. Those who scored above median (≥ 25) were coded (0) as having right perception and those who scored below median (< 25) were coded (1) as having wrong perception.

In this study, among 507 respondents, 158 (31.2%, 95% CI: 27, 35.3) of women had wrong perceptions towards health consequences of FGM.

Binary logistic regression was employed with 95% CI, p-value < 0.25 , multi-collinearity was checked with variance inflation factor (VIF > 10) and finally Logistic Regression was employed with 95% CI, p-value $<$

0.05 to assess factors associated with wrong perceptions towards health consequences of FGM among women.

Factors associated with wrong perceptions towards health consequences of FGM

Rural residence, having no mass media exposure like TV/Radio, not having maternal care service (ANC/PNC) and age at circumcision ≥ 11 years were variables that had statistically significant association with wrong perception towards health consequences of FGM in Multivariable Logistic regression analysis.

Women from rural areas had 76% more odds of having wrong perceptions towards health consequences of FGM compared to women residing in urban (AOR = 1.78, 95% CI: (1.03, 3.01)).

Respondents who had no maternal care service (ANC/PNC) had 2.61 times higher odds of having wrong perceptions towards health consequences of FGM compared to those who had maternal care service during last pregnancy or child birth (AOR = 2.61, 95% CI: (1.45, 4.69)).

Those respondents who had no mass media exposure (TV/Radio) had 2.79 times higher odds of having wrong perception towards health consequences of FGM compared to women who had mass media at home (AOR = 2.79, 95% CI: 1.23, 6.32).

Finally, respondents who had been circumcised at age ≥ 11 years had 61% lesser odds of having wrong perception towards health consequences of FGM compared to those who had been circumcised at age less than or equal to 5 years (AOR = 0.39, 95% CI: 0.19, 0.80). (See Table 4 below)

Table 4

Factors associated with wrong perceptions towards health consequences of FGM among women of reproductive age and above, Adama District, Oromia, October, 2019

Variable	Perceptions towards health consequences of FGM		COR,95%CI	AOR,95%CI
	Wrong(coded 1)	Right(coded 0)		
Residence (n = 507)				
Urban	58(23.1%)	193(76.9%)	1:00	1:00
Rural	100(39.1%)	156(60.9%)	1.88 (1.32,2.67)	1.76 (1.03, 3.00)*
Educational status(n = 507)				
Illiterate	68(40.2%)	101(59.8%)	1:00	
Elementary	68(31.1%)	151(68.9%)	0.65 (0.44, 0.98)	1.04(0.62,1.74)
Secondary	20(20.6%)	77(79.4%)	0.31 (0.18, 0.53)	0.57(0.28,1.160)
Diploma and above	2(9.1%)	20(90.9%)	0.29 (0.11, 0.76)	1.32(0.26,6.68)
Occupation (n = 507)				
House mother	92(30.8%)	207(69.2%)	1:00	
Gov't employee	4(36.4%)	7(63.6%)	0.71/0.21, 2.39	1.59(0.41,6.10)
Self-employee	41(36%)	73(64%)	0.92/0.59, 1.42	1.35(0.77,2.38)
Farmer	19(38.8%)	30(61.2%)	0.89/0.49,1.63	0.67(0.32,1.38)
Other (Student/pension)	2(5.9%)	32(94.1%)	0.11/0.04,0.33	0.000(0.000)
Religion (n = 507)				
Muslim	8(25.8%)	23(74.2%)	1:00	
Orthodox	108(35.9%)	193(64.1%)	1.47 (0.7,3.12)	1.58(0.61,4.12)
Protestant	41(25.2%)	122(74.8%)	1.51(0.70,3.30)	1.28(0.46,3.60)
Other	1(8.3%)	11(91.7%)	0.13 (0.014,1.10)	0.25(0.02,2.72)
Had maternal care service (n = 410)				

NB: * shows statistically significant, COR- Crude Odds Ratio, AOR- Adjusted Odds Ratio

Variable	Perceptions towards health consequences of FGM		COR,95%CI	AOR,95%CI
	Wrong(coded 1)	Right(coded 0)		
Yes	84(26.7%)	231(73.3%)	1:00	1:00
No	53(55.8%)	42(44.2%)	3.4 (2.02, 5.7)	2.61 (1.45, 4.69)*
Had mass media exposure (n = 507)				
Yes	128(28.6%)	320(71.4%)	1:00	1:00
No	30(50.8%)	29(49.2%)	2.11 (1.20, 3.74)	2.79 (1.23, 6.32)*
Age at circumcision (n = 399)				
0–5 years	79(37.6%)	131(62.4%)	1:00	1:00
6–10 years	48(35.6%)	87(64.4%)	0.77 (0.50,1.19)	0.78 (0.47,1.28)
≥11 years	10(18.5%)	44(81.5%)	0.51 (0.28,0.93)	0.39 (0.19, 0.80)*
NB: * shows statistically significant, COR- Crude Odds Ratio, AOR- Adjusted Odds Ratio				

Discussions

This study showed that about 31% (95% CI: 27, 35.5) of women had wrong perceptions towards health consequences of FGM which was higher than 26.3% of study conducted in Nigeria(22). Similarly, the finding of this study was higher compared to 10.6% of study conducted in West Shewa(26), lower compared to 63% of study conducted at Bale Zone(25) and 68.8% of West Hararge.

These differences could be due to differences in age at circumcision, mass media exposure and difference in study population which resulted in differences in wrong perception. Girls and women who had been circumcised at earlier age may not recall immediate consequences and circumcised women who experienced health problems during delivery might not also relate the problem with FGM which resulted in differences of wrong perceptions towards health consequences of FGM(39).

In this study, respondents who had no mass media exposure to TV/Radio had 2.79 times higher odds of having wrong perceptions towards health consequences of FGM compared to those who had mass media at home.

This is because having mass media exposure can help in increasing awareness or understanding of health consequences of FGM which could help to bring healthy behavior in the community.

In this study, women from rural had 76% more odds of having wrong perceptions towards health consequences of FGM compared to those living in urban areas. Women living in urban also have more access to information about health consequences of FGM than those women living in rural area. Women residing in denser urban area have more relation with different women having better educational status and different experiences through neighborhood, work place and social interaction. Thus, woman's perception towards health consequences of FGM can be affected by other women's perception towards health consequences of FGM. This could be the reason for rural women to have wrong perceptions towards health consequences of FGM.

In this study educational status of respondents didn't associate with wrong perception towards health consequences of FGM. But as educational level of respondent increases, through educational discussions with teachers and peers about FGM, the perception towards health consequences of FGM increases (29).

This study revealed that women who had no maternal care services during their last pregnancy or child birth had 2.61 times higher odds of having wrong perception towards health consequences of FGM compared to those who had maternal care services. It is believed that women who have maternal care service can have a chance to get some health educations and have a chance to see posters related to harms or consequences of FGM which can improve their perception towards health consequences of FGM.

In this study, respondents who underwent mutilation at age of ≥ 11 years had 61% lesser odds of having wrong perceptions towards health consequences of FGM compared to those who underwent circumcision at under 5 years of age. Respondents who underwent mutilation at early childhood can have wrong perception towards health consequences of FGM due to immature mental status compared to older age. Consequences due to FGM during early age can be undermined or unrecalled. To the contrary, those who underwent FGM at older age can have better perception towards health consequences of FGM.

Because of the absence of similar qualitative and quantitative literatures, the results of this study were not compared or discussed further. Thus, qualitative and quantitative studies were recommended.

Strength of the study:

The title of this study was new and employed stratification sampling method to increase representativeness from urban and rural areas. It also used primary data which helps to make generalization and can help in intervention programs.

Limitation of the study:

Since cross sectional study design was used, there could be interviewer information bias, social desirability bias and couldn't detect cause and effect temporal relationship.

Conclusions

Nearly one third of respondents had wrong perceptions towards health consequences of FGM in the study area. Rural residence, having no maternal care service, having no mass media exposure and being circumcised at age ≥ 11 years were factors that had statistically significant association with wrong perception towards health consequences of FGM in multivariable logistic regression analysis.

RECOMMENDATIONS

Based on the result of this study, the following recommendation was forwarded:

To PHCU: Health centers and health posts in the study area shall increase maternal health care services like ANC, PNC and institutional delivery. Health education about FGM and its health consequences shall be given to women in the study area to decrease women's wrong perception towards health consequences of FGM.

To Adama District Health Office: Shall provide campaigns, health education at schools, and awareness creation to women during meeting days etc. in collaboration with NGOs in the area to decrease women's wrong perception towards health consequences of FGM.

To regional health Bureau: Oromia region health bureau shall design behavior change intervention programs through health education in health extension program and provide training to women to improve wrong perceptions of women towards health consequences of FGM.

To NGOs: Concerned NGOs shall also set programs like awareness creation campaigns and distribute health education leaflets prepared in local language to address wrong perceptions towards health consequences of FGM.

To Researchers: I recommend qualitative and quantitative studies on similar topic.

List Of Acronym

ANC – Antenatal Care

AOR- Adjusted Odds Ratio

CI- Confidence Interval

CL- Confidence Level

COR- Crude Odds Ratio

EDHS- Ethiopian Demographic Health Survey

EPI info- Epidemiological Software

FGM/C- Female Genital Mutilation/Cutting

HIV/AIDS- Human Immune Virus/ Acquired Immune Deficiency Syndrome

IQR- Inter Quartile Range

NGOs- Non Governmental Organizations

OHB- Oromia region Health Bureau

OR- Odds Ratio

PHCU- Primary Health Care Unit

PNC- Postnatal Care

Q1- First Quartile

Q3- Third Quartile

SDG- Sustainable Development Goals

SPSS- Statistical Product and Service Solution

UNFPA- United Nations Family Planning Association/ United Nations Population Fund

UNICEF- United Nations Children's Fund

VIF- Variance Inflation Factor

WHO- World Health Organization

Declarations

Ethical approval:

Letter of support was obtained from ethical review board committee of Adama Hospital Medical College and Oromia Regional Health Bureau. Oral consent was obtained from respondents before interview.

Consent for publication:

Not applicable since there are no individual images or videos.

Availability of data:

Original data (entered to SPSS) with syntax will be available on request

Competing interest:

There is no competing conflict of interest.

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Author's contribution:

Chala Diriba Feyissa (principal investigator and corresponding author) conceived, designed, analyzed, interpreted the result and prepared the manuscript. Mrs. Myerema Abdo Komicha and Mr. Ephrem Mannekulih Habtewold reviewed the final manuscript.

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Figures

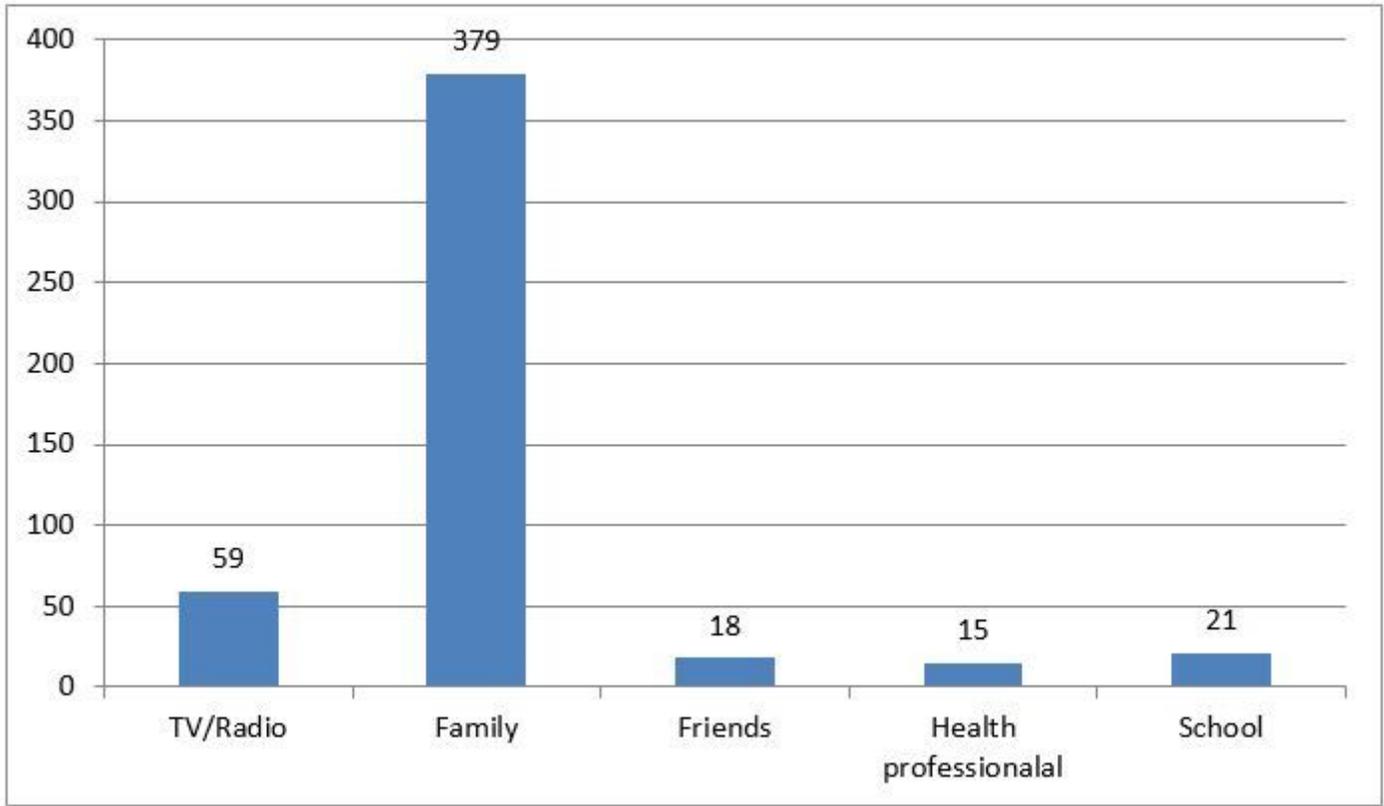


Figure 1

Source of information about FGM among respondents in Adama District, Oromia, Ethiopia, Oct, 2019