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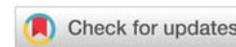
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Research Article

Prevalence and associated factors of Female Genital Mutilation among reproductive age women's of Wolayita Zone, Southern Ethiopia: A cross-sectional study

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Abstract

Background: Female Genital Mutilation (FGM) is estimated to have been practiced on at least 200 million girls and women in 30 countries around the world. Clitoridectomy is the most common type of FGM in Ethiopia.

Objectives: The aim of the study was to assess the magnitude of Female Genital Mutilation and associated factors among women's of Wolayita zone.

Methods: A community-based quantitative cross-sectional study was used. Face-to-face interviews with prepared questionnaires were used to collect data. SPSS version 20 software was used to analyze the data. The prevalence of FGM was determined using descriptive statistics. The researchers utilized a bivariate and multivariate logistic regression model to find independent determinants of FGM.

Result: 296 women were undergone FGM out of a total of 333, indicating that FGM is prevalent in the research area (88.9%). Age (AOR-1.86, 95% CI: 0.42-0.98) and support to reduce sexual due to hyperactivity (AOR: 14.595, 95% CI: 3.391-6.807) were all independently linked to FGM.

Conclusion: An integrated effort administrative and surrounding community intervention to be initiated to alleviate FGM practices through empowering women, discouraging risky factors like traditions; and sensitizing parents, community members and the public focusing on the rejecting of FGM.

Introduction

Female Genital Mutilation (FGM) is defined by the World Health Organization as any procedure that involves partial or entire removal of the external female genitalia, or other harm to the female genital organs for no medical reason. The practice is usually carried out by women who are often involved in other important aspects of their communities, such as attending childbirths. Health care providers, on the other hand, execute more than 18 percent of all FGM, and the tendency toward medicalization is growing [1]. At least 200 million girls and

women worldwide have been subjected to Female Genital Mutilation (FGM) mostly among immigrants from cultures where Female Genital Mutilation (FGM) is a common practice [2].

FGM is a type of gender-based violence that has been identified as a harmful practice and a violation of girls' and women's human rights. In the African nations and Yemen where FGM is widely performed, over 125 million girls and women have had FGM, and 3 million girls are projected to be at danger of FGM each year [3]. According to an Ethiopian

demographic and health survey, 65 percent of women between the ages of 15 and 49 are circumcised. Out of a total population of 205 683 girls aged 0-18 originating from countries where female genital mutilation is prevalent, it is estimated that 12 to 21% of girls in France are at danger of female genital mutilation [4].

The practice is founded in traditional beliefs, values, and attitudes, and is regarded as a rite of passage into femininity and child marriage in many nations [5]. The most severe form of FGM (infibulations), which involves the sewing and narrowing of the vaginal hole, is estimated to have been performed on 15% of all circumcised women. Clitoridectomy is the most common kind of FGM in Ethiopia. Without having their vaginal area sowed, 96.2 percent of women and 96.5 percent of daughters have undergone some sort of circumcision. Infibulations is the most extreme type of FGM/C, involving the excision of genitalia and the closing of the vaginal hole with stitching. It has been experienced by 2.9 percent of Ethiopian women and 3.4 percent of daughters. This is concerning because it suggests that some women who have never had infibulations want to have their daughters circumcised in the most severe way possible. Ethiopia has one of the highest rates of infant girls who are subjected to any type of female genital mutilation [3].

The goal of this study was determine the prevalence of female genital mutilation in the study area, as well as the factors that contribute to the continuation of female genital mutilation. Therefore, the information derived from this study can be used to improve the high prevalence and modifiable factors. Furthermore, it has a significant importance for planners and policy makers to adopt proper design, implementation and monitoring strategies at national level to reduce the challenges related to high prevalence of FGM in Wolayita zone and overall to the country.

Methodology

Study area and period

The research was carried out in Damot Gale Woreda, in the Wolayita zone of Southern Ethiopia. Damote Gale was around 302 kilometers south of Addis Ababa, through Butajira's major road, and 138 kilometers from Hawassa. There are 30 rural kebeles in the woreda. The population of Damot gale Woreda was estimated to be 154,610 in the 2008 E.C census (Damot Gale Wored Static bureau, 2008). The research was carried out between the months of June and August. Area map of Damot Gale was shown in the Figure 1.

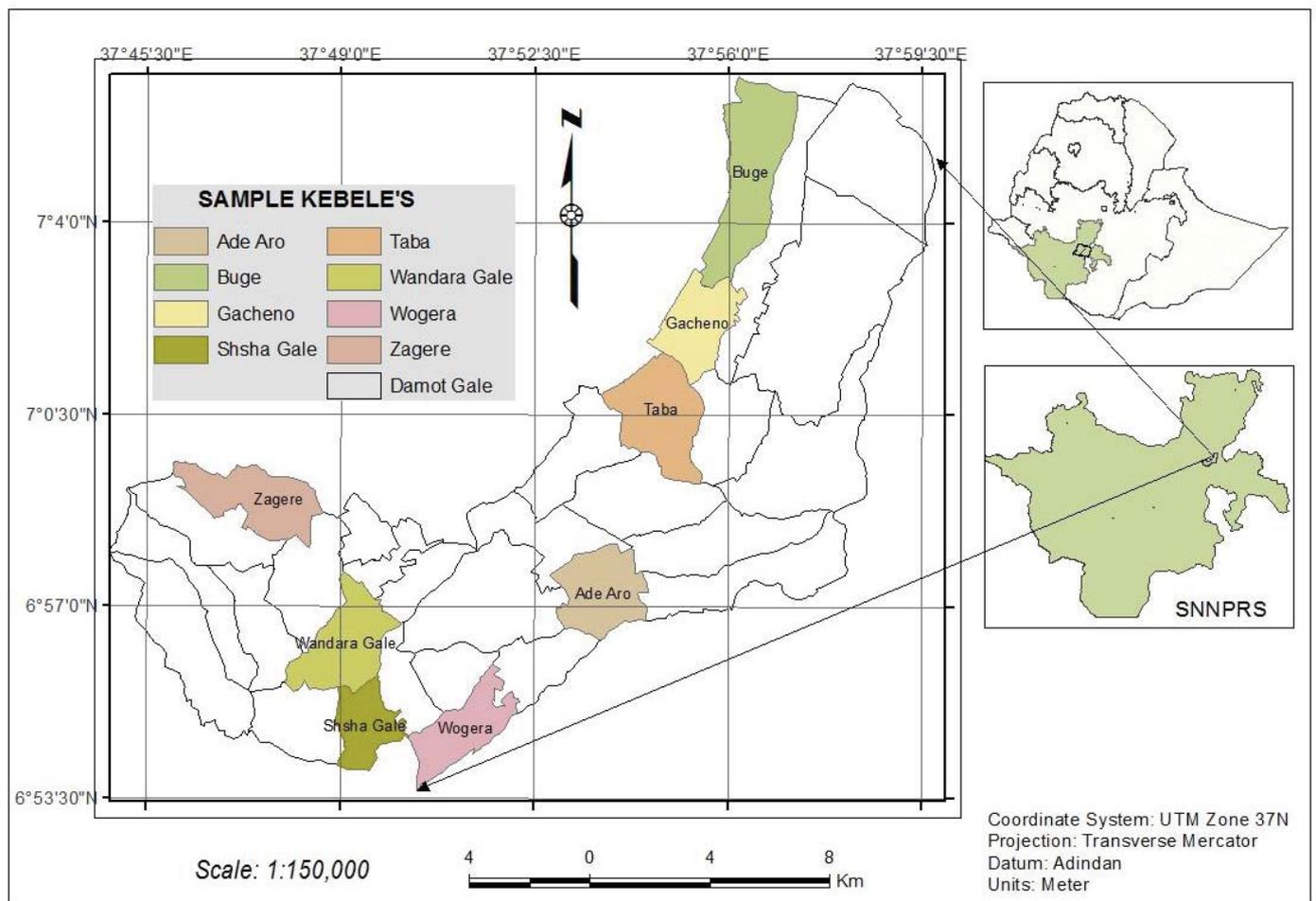


Figure 1: The Map of study area (source; Ethiopian GIS and RS team WWDSE, 2013).



Research design

A community-based analytic cross-sectional quantitative design was conducted at Damot Gale Woreda, Wolayita Zone.

Source population

Women residing in Damote Gala Woreda served as the source population.

Study population

The study population was drawn from all reproductive age (18–49) women in study area.

Sample size determination

The investigation Woreda Damot Gale was chosen or randomly from Wolayita zone because FGM is a widely performed area. Then, at random, eight rural Kebeles from the Woreda's 30 Kebles were chosen. The sample size was then proportionally allocated to each of the selected Kebeles based on the number of homes in each. The computed sample size was then proportionally allocated to each of the eight Kebeles based on the number of households in each Keble. Finally, the Keble lottery method was used to choose study subjects using family folder numbers. Women from chosen families were eligible to participate in the interview as respondents. The sample size was calculated using a single population proportion formula. According to the EDHS, the current prevalence of FGM in Southern Ethiopia was 62 percent [6].

$d = \text{Margin of error } 5\% - Z = 1.96 \text{ at desired confidence level } 95\%$

$n = (z_{\alpha/2})^2 P(1-P)/d^2 - 10\% \text{ of non-response rate}$

$n = [1.96 * 1.96] 0.62 [1 - 0.62] / 0.05^2 * 0.05$

$n = 315$ then add 10% non-response rate gives

Final sample size is 347 respondents.

Data collection procedures

Data was obtained by face-to-face interviews using prepared questionnaires after two-day training for four female nurses with at least a diploma. The majority of the training included the goal of the study, each portion of the questionnaire, consents, the right to participate or not participate, the ability to withdraw at any moment, confidentiality, and how to approach the study. The data collection method was overseen by two trained supervisors and the primary investigator at each step daily to assure data quality. The data was gathered between March 1 and March 15, 2018.

The primary data sources were responses from married women aged 18 to 49 who were interviewed in their homes. To ensure that the data was of good quality, the following actions were done. The surveys were composed entirely in English. A fifth of the sample size was pre-tested for the questionnaire in another woreda near Damot gale. Woreda (sodo zuriya) was done prior to data collection, and equipment changes

were made as appropriate. On a daily basis, the supervisors and the lead investigator checked the data for completeness, clarity, and consistency. The total activity was overseen by the principal investigator, who was also in charge of data collection. Finally, data was double-entered into Epi-data 3.1 program for verification.

Data analysis

At the end of each data collection day, the collected data was reviewed for completeness and consistency. It was also cleaned, edited, coded, and entered into Epi data program version 3.1. The data is then exported to SPSS 20.0 for analysis. The frequency distribution and percentage of different variables were generated during the analysis phase to define and summarize the main socio-demographic chasm.

To give a fast overview of the variables, the results were presented in the form of frequency tables, pie charts, and graphs. To describe the prevalence of FGM in the Woreda study population in relation to pertinent variables, descriptive statistics such as frequencies, proportions, and summary statistics were utilized. To assess the relationship between different predictor factors and the dependent variable, researchers performed bivariate and multivariate analysis with logistic regression models.

A binary logistic regression analysis was used to evaluate the bivariate association between each independent variable and the outcome variable. For multivariate logistic regression, variables that exhibited a significant correlation on bivariate analysis with a p-value of 0.25 were employed. To reduce the impact of confounding variables and identify FGM factors, multivariate logistic regression analysis was employed. The adjusted odds ratio with 95 percent confidence interval and p-value 0.05 as cut point were used to analyze the strength of the link between dependent and independent variables.

Ethical consideration

At initial Ethical review (IRB) later was taken from Hawassa university school of Gender studies. Then the nature and purpose of the study were explained to the respondents and Woreda administration. Following ethical permission from the Damot Gale Woreda administrative office, the Woreda delivered an official letter to the sampled Kebeles and concerned offices. After all, verbal informed consent to participate in the study was gained from the respondents. The survey participants were given an open and honest explanation of the survey's goal, a description of the benefits, and the opportunity to ask any questions they had. They were also told that they might withdraw their agreement and quit participation at any time without fear of being labeled chauvinists. The privacy and confidentiality of the information acquired were ensured throughout the operation.

Results

Socio-demographic characteristics of respondents

A total of 333 women took part in the survey, with a 96 percent response rate. Due to incompleteness, fourteen questionnaires



(3.4%) were rejected. Daughters in this study ranged in age from 18 to 49 years old. The average age was 34.05 years (SD 7.9). In terms of religious affiliation, 166 respondents (49.8%) were Protestant, 111 (33.3%) were Orthodox, and 42 (12.6%) were Muslims. The ethnicity of almost all of the interviewees was Wolayita (270). (81.1 percent). In terms of education, 208 (62.5%) of respondents were literate, while 125 (37.5%) had no formal education. In terms of familial educational background, the vast majority of research participants were uneducated. Formal schooling was followed by 212 (63.6%) and 121 (36.4%). Husbands of respondents 143 (42.9 percent) had some level of education, while others had no formal education (Table 1).

The majority of the respondents (324, or 97.3 percent) were married, while some (8, or 2.4 percent) were divorced, and one was widowed (0.3 %). Ninety-two percent (57.7%) of fathers were farmers, whereas 151 percent (45%) of moms worked as housewives. In terms of respondents' wealth, sixty-eight (20.4%) were judged to be in the second quintal index level, while about the same proportion (19.8%) were in the highest quintal index level. As a result, we concluded that the amount of wealth among respondents is not considerably different (Table 2).

Figure 2 depicts the frequency distribution of female genital mutilation in relation to respondents' educational status. Their educational background ranges from uneducated (no formal schooling) through grade twelve. In a nutshell, the graph showed that as educational levels rose, so did the prevalence of female genital mutilation (Figure 2).

Prevalence of the Female Genital Mutilation

Two hundred and ninety-six (88.9%) of the total responders were Undergone FGM, whereas just thirty-seven (11.1%) were not Undergone FGM. The majority of FGM were done on children aged 1 to 5, accounting for 171 FGM (51.4 %). Despite the fact that all types of FGM were used in the studied area, Clitoridectomy 286(85.8) is the most common kind of FGM. Traditional circumcisers 131 performed the majority of the circumcisions at home 282 (95.5%). When asked who made the decision to circumcise their daughters, the majority decided by moms (182 (54.6%), dads 139 (41.7%), and 12 (3.6%) by the daughter herself (Table 3).

Factor associated with FGM

FGM is regarded as a good tradition and typical practice by 154 (46.2%) of the total respondents, whereas FGM is regarded as the best practice for the cleanliness of female genitals by 24 (10.5%) of the total respondents. Eighty-one (24.3%) of the women would like to continue circumcision because they believe it is a positive custom. When asked about their plan to circumcise their daughters, the majority of respondents (84 percent) said they would continue the practice.

In terms of FGM treatment, around 183 (35.4%) and 66 (19.8%) of women believe that legislation enforcement and women's access to education are the best approaches to prevent FGM, respectively, whereas only one (0.3%) respondent believes that dads should take the effort to prevent FGM. Even

Table 1: Socio-Demographic Characteristics of women's of Wolayita Zone, Southern Ethiopia 2018.

Variables	Frequency	Percentage
Age of the respondents		
Age 18-22	30	9
Age 23-27	78	23.4
Age 28-32	95	28.5
Age 33-37	46	13.8
Age >38	84	25.2
Religion of the respondent		
Protestant	166	49.8
Orthodox	111	33.3
Muslim	42	12.6
Catholic	14	4.2
Ethnicity of the respondent		
Wolayita	270	81.1
Amhara	48	14.4
Oromo/kambata/Hadiya/Other	15	4.5
Educational status of the respondent		
Illiterate	208	62.5
Literate	125	37.5
Literacy status of the father		
Literate	143	42.9
Illiterate	190	57.1
Literacy status of the mother		
Literate	121	36.3
Illiterate	212	63.7

Table 2: Marital Status and Socio Economic Characteristics of women's of Wolayita Zone, Southern Ethiopia 2018.

Variables	Frequency	Percentage
Marital status		
Married	324	97.3
Divorced	8	2.4
Widowed	1	0.3
Occupation of the Husband		
Farmer	192	57.7
Civil servant	14	4.2
Merchant	84	25.2
Other	43	12.9
Occupation of the mother		
Housewife	151	45.5
Civil servant	9	2.7
Farmer	98	29.4
Merchant	61	18.3
Other	14	4.2
Wealth quintal		
Lowest	66	19.8
Second	68	20.4
Middle	66	19.8
Fourth	67	20.1
Highest	66	19.8

though the vast majority of respondents 216 (64.9%) are aware of the dangers of female genital mutilation, nearly half of them 154 (46.2%) confirm the practice's continuation because it is seen as a positive custom 81 (24.3%) (Table 4).

Despite the fact that several measures to prevent FGM were carried out in the research area, the prevalence of FGM remains high due to insufficient law enforcement and community resistance (Table 5). This is in line with a qualitative study in which the majority of focus group discussants stated that punishment was ineffective and that the community was resistive to anti-FGM efforts.



Analysis of factors associated to Female Genital Mutilation

Bivariate analysis: Bivariate analysis revealed the following: maternal education (COR: 0.467, 95 percent CI: 0.212, 1.029), age of daughters (COR 1.92, 95 percent CI: 0.53, 1.25) house hold wealth index quintal (COR: 0.768, 95 percent CI: 0.550, 1.072), father’s educational status (COR: 1.135, 95 percent CI: 0.808, 1.595), sexual hyperactivity (COR: 1.135, 95 (COR: 9.895, 95 percent CI: 2.213, 4.251), At a p-value of 0.25, knowledge of FGM health complications (COR: 0.339, 95 percent CI: 0.134, 0.859) and knowledge of FGM law (COR: 0.042, 95 percent CI: 0.005, 0.349) were candidate variables for a multivariate logistic regression model (Table 6).

Multivariate analysis: During crude analysis to reduce confounding, factors were adjusted using multiple logistic regressions to predict variables related with Female Genital Mutilation. At a p-value of 0.05, variables such as age, maternal education, traditional FGM, and knowledge of health complications connected to FGM were significant.

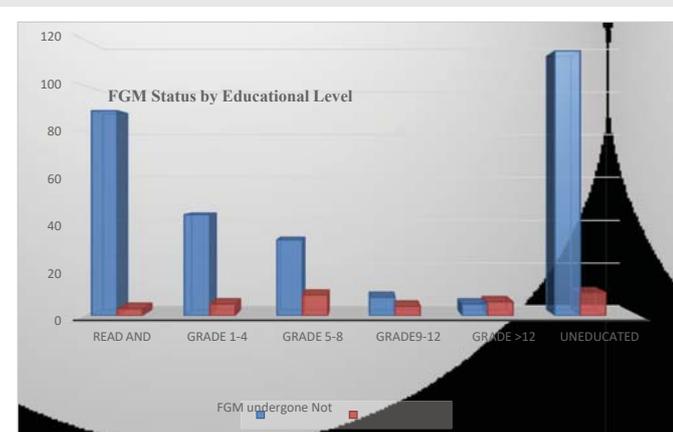


Figure 2: Circumcision statuses by educational level.

Table 3: Characteristics of Women's Genital Mutilation of women's of Wolayita Zone, Southern Ethiopia 2018.

Variables	Frequency	Percentage
FGM status		
Undergone	296	88.9
Not	37	11.1
Age at circumcision		
1-5	171	51.4
6-10	86	25.8
11-15	34	10.2
16-20	3	0.9
21-25	1	0.3
>25	1	0.3
Type of circumcision		
Clitoridoctomy	286	85.8
Infibulations	3	0.9
Other	7	2.1
Place of circumcision		
At home	282	95.5
Private clinic	3	0.6
Other	11	3.3
Decision power on FGM		
Husband	139	41.1
Wife	182	54.9
Daughter	11	3.3

Table 4: Factors associated to FGM of women's of Wolayita Zone, Southern Ethiopia 2018.

Variables	Frequency	Percentage
FGM should continue		
Yes	154	46.2
No	179	53.8
Main reasons FGM continued		
cleanness'	81	24.3
Reduction of female sexual hyper sensitivity	36	10.8
Tradition	10	3.0
Better marriage prospect	16	4.8
To prevent female from early initiation of sex	9	2.7
Prevention of virginity	2	0.6
Participate FGM intervention activity		
yes	240	72.1
no	93	27.9
Best way to stop FGM		
Enforce legislation	118	35.4
Sexual education	37	11.1
Education to women	66	19.8
Improve status of women	22	6.6
Father responsibility	1	0.3
Knew FGM cause health problems		
Yes	216	64.9
No	117	35.1
Health Problems on circumcised women		
During sexual intercourse	85	28.7
During menstrual flow	58	19.5
Obstructed labor	73	24.6
Bleeding due to procedure	74	25
Other	6	2.2
Continue to circumcise daughters		
Yes	280	84.1
No	53	15.9

The odds of experiencing FGM were about two times higher in younger daughters than in elder daughters (AOR: 1.86; 95 % CI: 0.42, 0.98). Women who accept FGM because it enhances sexual hyperactivity 14 times higher odds of performing it than women who oppose it [AOR: 14.595, 95% CI: 3.391, 6.807] Table 7.

Discussion

The aim of this study was to access prevalence and associated factors of female genital mutilation and associated factors Wolayita Zone, and Southern Ethiopia. The study revealed that FGM in study area was very high. FGM was found to be prevalent in 89% of the sample population, and it was closely linked to women’s age, deep root traditional support, despite many interventions in Wolayita Zone, the practice of female genital mutilation (FGM) has remained. implying that the practice is still going on even if there is access to appropriate health information [6].

The prevalence was lower than that of a research conducted in Ethiopia’s East Gojjam Zone, Amhara Region, in 2012, which found a prevalence of 62.7 percent (8). When compared to EDHS in the same region report with prevalence of (71%) and lower than the same area, the present value is greater (92.3%) [6]. In comparison to a community-based survey done in Kersa district, Eastern Hararge Zone, the current finding was lower



(93%) [7]. FGM was found to be 87.1 percent (10%) in a cross-sectional survey done in Somali refugees in eastern Ethiopia in 2017, which is lower than this study. Also, a study conducted on the Bale zone of Ethiopia and the Pusiga District of northern Ghana found prevalence rates of 78.5 percent and 61 percent, respectively, which is lower than our findings. This could be due to differences in study locations and socioeconomic status [8,9].

Prevalence of Female Genital Mutilation in this study area was significantly associated with age, with magnitude decreasing as age increased. It is fact that also daughters at early age are incapable of decision about FGM; so that family can decide it due to socio cultural reasons This could be due to the fact that as daughters grow older, their thinking matures and they can identify what is best for their future lives, so they may refuse circumcision. Result shows the odds of experiencing FGM were about two times more in younger daughters than older daughter (AOR-1.86 ,95%CI; 0.42, 0.98). This result was in the same line with the research done in Bale Ethiopia [8]. But this result was in opposite to the result of the study which was conducted in Afar, Ethiopia that shows being higher age had an association to the prevalence of female Genital Mutilation at the study area (AOR, 11.56; 95%CI: 2.56,

Table 5: Knowledge about Persistence of FGM of women's of Wolayita Zone, Southern Ethiopia 2018.

Characteristics	Participants	Frequency
Heard messages on existence of FGM		
Yes	300	90.1
No	33	9.9
Sources of information about FGM		
Radio	121	36.3
Religion leader	19	5.7
Community conversation	81	24.3
Educated children	6	1.8
Anti-FGM committee	11	3.3
Health extension	61	18.3
Women's affair	1	0.3
Knowledge of circumcision as crime		
yes	250	75.1
No	83	24.9
Do you know anyone who punished by FGM		
Yes	171	51.6
No	161	48.3
Do you expose any action which promote FGM		
Yes	228	68.4
No	105	31.5
If no why		
Fear of Social exclusion	17	5.1
Good Tradition	62	18.6
Lack of commitment	11	3.3
I have no information	12	3.6
Fear of religious leader	3	0.9
Is there any activity in your community to stop FGM		
Yes	228	68.5
No	104	31.2
Why FGM exist in your community		
Weak implementation of law	135	58.2
Community resistance to anti-FGM activity	89	38.4
Other	8	3.4

Table 6: Bivariate Analysis of Factors associated with FGM of women's of Wolayita Zone, Southern Ethiopia 2018.

Characteristics	FGM		P value	COR
	Yes	No		
Maternal education				
Literate	121	36.3	1	1
Illiterate	212	63.7	0.049	0.467
Age at circumcision				
1-5	171			
6-10	86			
11-15	34		0.0482	0.92
16-20	3			
>21	2			
Wealth quintile				
Lower quintile	66	19.8		
Second quintile	67	20.2		
Middle quintile	66	19.8	0.121	0.768
Fourth quintile	67	20.2		
Highest quintile	66	19.8		
Husband Education				
Educated	143	42.	1	1
No education	190	57.1	0.165	1.135
Due sexual hyperactivity				
Yes	152	45.6	1	1
No	180	54.4	0.003	9.895
Knew FGM cause health problems				
Yes	216	64.9	1	1
No	116	34.8	0.023	0.339
Knowledge towards FGM law				
Yes	250	75.1	1	1
No	81	24.3	0.103	0.042

Table 7: Multivariate Analysis of factors associated with FGM of women's of Wolayita Zone, Southern Ethiopia 2018.

Characteristics	FGM		P value	COR	AOR
	Yes	No			
Maternal education					
Literate	121	36.3		1	1
Illiterate	212	63.7	0.045	0.467	0.454
Age at circumcision					
1-5	171				
6-10	86				
11-15	34		0.0423	1.92	1.86*
16-20	3				
21-25	1				
>25	1				
Due to sexual hyperactivity					
Yes	152	45.6	0.000	9.895	14.595*
No	180	54.4		1	1
Knew FGM cause health problems:					
Yes	216	64.9	0.025	1	1
No	116	34.8		0.339	0.356

48.39) and also similar result was seen in a research at Bawku municipality and Pusiga District of northern Ghana with result of (AOR: 4.24; 95% CI: 2.62–6.85) [9–11]. This variation with the current finding was due to inhabitants are from a different country which could have a different socio cultural differences. According to Ethiopian Demographic and Health Survey circumcised women at the age category of 15–49 nearly half of women (49%) reported that they were circumcised when they were younger than age 5, 22% between ages 5–9, 18% between ages 10–14, and 6% at age 15 or older [6] this shows that prevalence decrease with the age [12–20].



Another reason in this study for the higher prevalence of FGM in this study is that the perception of community members about FGM practice as to reduce sexual hyperactivity of women's as culture. The long persistence of FGM is partly ascribed to the dominant role of men played in influencing the society as a whole. In which majority of participants claimed a women sexual hyperactivity is due to undergone FGM was the main reason for a long term persistence of FGM in this study area supported due to driving tradition; sexual hyperactivity us a FGM shows that women's who was support FGM as a sexual hyperactivity was 14 times more likely circumcised than women's who oppose the practice. Which is also supported by a community-based cross-sectional survey was conducted in Kersa district Eastern Hararge in which societal beliefs played a major role from this was the main reason given for Genital Cutting was to reduce "female hyperactivity" in sexual practice, and was the response of 60% of the women, while a quarter of the women responded that it was done to prevent early initiation of sexual activity 201 [7].

Conclusion

This study was set up to assess the level of Female Genital Mutilation and associated factors among women's of Wolayita zone, Southern Ethiopia. The results of the present study revealed that the practice of FGM is widespread among the Wolayita community, and there was a considerable support for the continuation of the practice. Based on the finding Female Genital Mutilation was commonly practiced by most respondents even though it was the major health and human rights issue. FGM could be decreased by interventions aimed to educate mothers and increase awareness about FGM.

Therefore, extension education should be strengthened and should provide comprehensive, accurate and timely information on the consequence of female genital mutilation. An integrated effort between Woreda administrative and the surrounding community need to be initiated to alleviate FGM practices through empowering women, discouraging risky factors like sexual reasons for FGM and traditions that push them to engaged to FGM; and sensitizing parents, community members and the public focusing on the rejecting of FGM.

Strength and limitation of the study

The strength of this study is being a community based study and large sample size. The limitation of the study is due to cross-sectional it cannot measure cause effect relationship and that the study relied on participants' self-reported data, which was prone to social desirability bias due custom and tradition influence on FGM. But, close monitoring by supervisor and principal investigator was made to minimize such biases, clarification of potential ambiguities and misunderstandings, maintaining privacy of participants and proving for answers were carried out by interviewers.

Acknowledgment

We would like to say thank you very much for all women's who are involved as study participant in this study.

Declarations

Availability of data and materials: For those who are interested the datasets analyzed during the current study are available from the corresponding author on reasonable request.

Ethics approval and consent to participate

The study was conducted after getting approval from Hawassa University Institutional Review Board (IRB) to conduct the study. A formal support letter was written to Damot Gale Woreda administrative office and the Woreda wrote the official letter to the sampled Kebeles and concerned offices, where the study conducted. Both verbal and written informed consents were obtained from the study participants. For those who are unable to read and write verbal consent were obtained after explaining the purpose of the study while for those who are able to write and read, written consent were obtained. During the consent process first IRB-approved version of consent form in Amharic (the local language) language prepared. All participants were assured that their name will not be stated, data will be kept confidential and anonymous and it will be used only for research purpose.

Authors contribution

BB, AF, conceived, designed and developed the data collection instruments. BB and AF performed the statistical analysis and wrote all versions of the manuscript. All authors critically revised and approved the final manuscript.

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