

Female Genital Mutilation/Cutting and the Occurrences of Birth Complications Among Women of Reproductive Age in Gewane Woreda, Afar Regional State, Ethiopia

Bayush Gizachew Chuluko¹, Sileshi Garoma Abeya^{2,*}

¹Department of Public Health, Adama General Hospital and Medical College, Adama, Ethiopia

²Department of Public Health, Adama Hospital Medical College, Adama, Ethiopia

Email address:

bayugize@gmail.com (B. G. Chuluko), garomaabe@gmail.com (S. G. Abeya), garomaabe@yahoo.com (S. G. Abeya)

*Corresponding author

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Abstract: Female genital mutilation/cutting (FGM/C), one of the most deeply rooted, harmful traditional practices, is still highly prevalent in many African countries, including Ethiopia. The reproductive health complications of FGM/C include acute hemorrhage, painful sexual life, the inability-to-conceive, fistula, and death secondary to birth complications. This study was aimed to assess the magnitude, associated factors and birth outcomes of FGM/C among women of reproductive age groups (15-49 years) in Gewane, Woreda from July 4 to 17, 2016. A population-based, cross-sectional survey was conducted using quantitative data collection methods. A sample of 792 women who ever gave birth was selected using systematic random methods. Data was collected using pretested questionnaire and analyzed using SPSS Version 21. Chi-square and logistic regression models were used to analyze and find the associations between the study variables. The prevalence of FGM/C among childbearing women was 90.8%. Infibulations (WHO Type III) was the predominantly (86.1%) practiced type of FGM/C. Higher age (AOR, 11.56; 95% CI: 2.56, 48.39), Afar Ethnic group (AOR, 4.55; 95% CI: 1.95-10.61), literate (AOR, 0.35; 95% CI: 0.15, 0.81) were factors significantly associated with FGM/C. A statistically significant association ($P \leq 0.05$) was found between FGM/C and perineal lacerations, episiotomy, postpartum complications, postpartum hemorrhage, wound infection, and stillbirth. FGM/C was highly prevalent in the study area. Infibulation, WHO Type III was the most severe form of FGM/C widely practiced. Age, ethnicity and literacy were associated with FGM/C. Women with Type III FGM/C was at higher risk of having birth and postpartum complications. Education, culturally sound community awareness raising programs, and enforcing legislation are recommended to reduce the adverse outcomes associated with FGM/C.

Keywords: Afar Region, Ethiopia, Female Genital Mutilation/Cutting

1. Background

Female Genital Mutilation/Cutting (FGM/C), also known as female circumcision is a deeply rooted traditional practice, in which the external female genitalia is either partially or totally removed [1]. FGM/C is commonly carried out by traditional circumcisers using a blade in girls from a few days after birth to puberty or beyond, but usually before the first birth [2]. In more than 50% of the countries for which national figures are available, most girls were cut before the age of five [2, 3]. FGM/C is usually done without anesthesia,

but some reports indicate that local or general anesthetic drugs were used in countries where health professionals are involved, such as Egypt and Indonesia in which 77% and 50% respectively of FGM/C procedures were performed by medical professionals as of 2008 and 2016 [3, 4].

Even if the exact date and reason for the start of the practice is not well known, various reasons such as socio-cultural, psychosexual, hygienic, aesthetic and religious, are given for maintaining FGM/C were mentioned by those who practice it [1]. The procedure differs depending on the country or ethnic group and it can involve the removal of the clitoral hood and

glans removal of the inner labia; and removal of both inner and outer labia and closure of the vulva by leaving a small opening for urine and menstrual flow and later on opening the vagina for intercourse and childbirth [5].

FGM/C is often associated with recurrent infections, difficulty in urinating and passing menstrual flow, chronic pain, development of cysts, painful intercourse, inability to conceive, complications during childbirth and fatal bleeding depending on the type of the procedure done. There are no known health benefits [6]. According to the WHO, there are more than 40 million women with FGM/C globally, with 92 million in Africa. The same report indicates around 3 million girls are at risk of FGM/C in Africa every year [1]. Despite its harmful effects, violation of reproductive rights of girls and women and the various efforts to tackle it, the practice is still prevalent in 27 countries in Africa, Indonesia, Iraqi Kurdistan, and Yemen, with a prevalence rate ranging from 80 to 98% among reproductive age women (RAW) in Djibouti, Egypt, Eritrea, Somalia, and Sudan. Recent reports also show the practice in other parts of Asia, the Middle East and among Diaspora communities around the world [4].

Ethiopia outlawed FGM/C in 2004 and practitioners could be penalized with a minimum of three months to life in prison or monetary fines; however, the practice is deeply rooted and almost universal with a national prevalence of 74% among RAW [4]. Ethiopia was among the countries with high prevalence of FGM/C with 23.8 million women and girls underwent the procedure [7]. Reports showed the prevalence rates of 81% among women ages 35 to 39, 62% among women ages 15-19, and only 24% of girls under 14, which could indicate either behavioral change or that

FGM/C, are occurring after puberty [7, 8]. The same report revealed the highest proportion of FGM/C in several regions of the country [8]. The Afar National, Regional State (ANRS) of Ethiopia is one of the regions that practice the most severe forms of FGM/C is highly prevalent [4].

Reports have demonstrated the increased risk of occurrence of birth complications among women with FGM/C [9-14]. A study in Jijjiga town of the Somali region in Ethiopia showed an increased risk of postpartum haemorrhage, and stillbirth in mutilated women [10]. However, no similar studies were found from the ANRS despite the high prevalence of FGM/C. This study was conducted to demonstrate the type of FGM/C and its association with birth complications among women who ever gave birth in the study area.

2. Methods and Materials

2.1. Study Area

The study was conducted in Gewane Woreda (the lower level of administration in the government structure) of ANRS of Ethiopia from July 4 to 14, 2016. The ANRS is found in the Northern east part of Ethiopia and mainly a home for a rural pastoralist population of 1.4 million [15]. The region has two hospitals, 14 health centers, 42 clinics and 78 health posts. Gewane Woreda is found in Zone three in the region around 400 km east of Addis Abeba (the capital of Ethiopia). The Woreda is divided into 11 rural *Kebeles* (the lowest level of administrative unit in government structure). The Woreda has three health centers and six Health posts (Figure 1).



Source: <http://www.ocha-eth.org/Maps/downloadables/AFAR.pdf>.

Figure 1. Map of Afar National Regional State (ANRS), Ethiopia, July 2016.

2.2. Study Design

A community based cross-sectional study design was conducted using quantitative data collection method. All reproductive age women in Gewane Woreda were the source population, while, the study population was all reproductive age women who are residing in the selected *Kebeles*. All reproductive age women (15-49 years) who ever gave birth and live for at least 6 months before the survey within the study area were included, while those who were mentally ill, unable to communicate or those who never gave birth were excluded from the study.

2.3. Sample Size Determination and Sampling Procedure

2.3.1. Sample Size Determination

The optimum sample size was determined using single population proportion formula with the assumption of the prevalence of FGM/C (p) of 50%, 95% of confidence level and margin of error between sample size and population parameter of 5%. Considering the 10% non-response rate and design effect of two. The following formula was used to calculate the required sample size:

$$n = \left[\frac{[Z_{\alpha/2}]^2 * P(1-P)}{(d)^2} \right] * 2 + 10\%$$

$$n = \left[\frac{[1.96]^2 * 0.5(1-0.5)}{(0.05)^2} \right] * 2 + 10\%$$

$$n = (384 * 2) + 10\% = 845$$

2.3.2. Sampling Procedure

To select the sample two stage sampling procedure was used. Gewane Woreda is composed of one urban and 10 rural *Kebeles*. In the first stage one urban and five out of 10 rural *Kebeles* were selected by lottery method. These *Kebeles* were Gewane 01, Meteka, Egile, Gelila Dura, Gebayabora and Urafit. All the selected *Kebeles* were almost equally populated thus equal proportion of the sample size was allocated for each of them (141 subjects per *Kebele*). In each of the selected *Kebeles* the eligible women in the household were selected until the required sample size was achieved. In case there were two or more eligible in the same household only one was included randomly to control intra-household correlation (Figure 2).

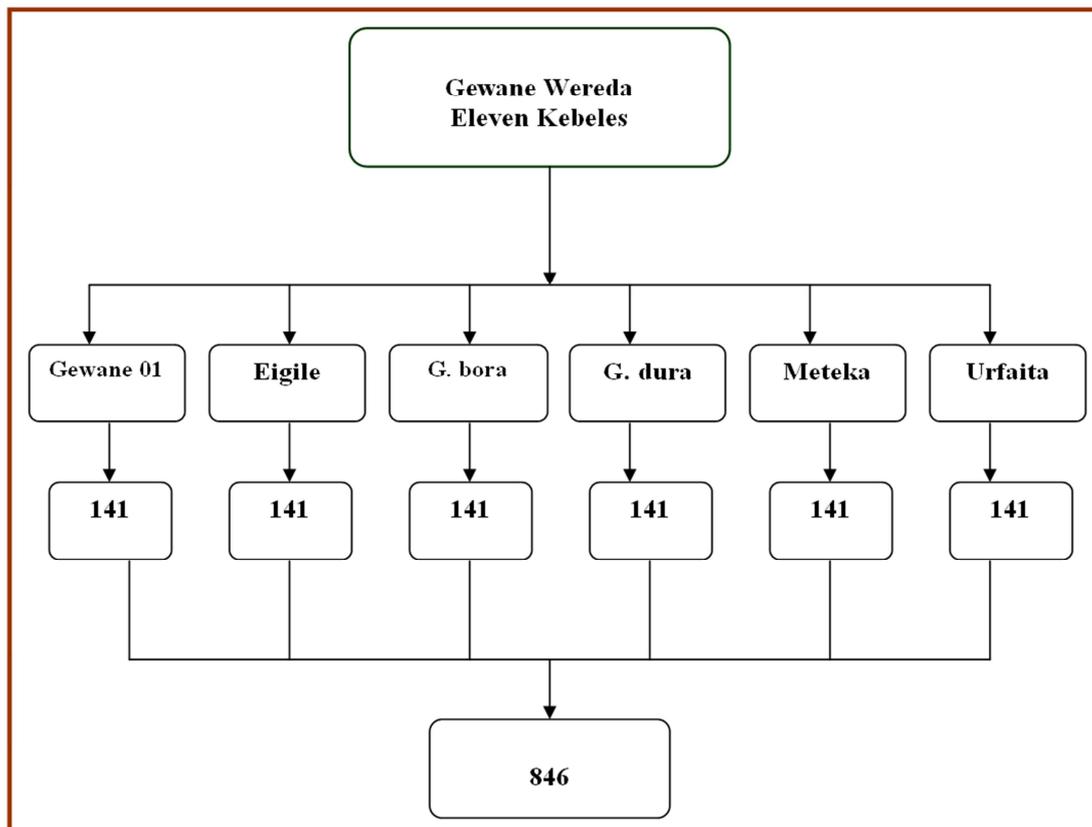


Figure 2. The sampling procedure of the study, Gewane woreda, Afar National Regional State (ANRS), Ethiopia, July 2016.

2.4. Data Collection

Data was collected using a structured questionnaire. The questionnaire had items used to assess the socio-demographic, reproductive and obstetric history. The data

were collected by development agents selected from their respective *Kebeles* to ensure its quality. Training was given for three consecutive days. The questionnaire was pretested on 10% of the sample size in *Kebele* not selected for the study.

2.5. Data Management and Analysis

The collected data were checked, cleared, entered into SPSS software windows version 21. Descriptive statistics were computed to determine the prevalence of FGM/C. Both bivariate and multivariate analyses were employed to identify the associated factors of FGM/C. Forward stepwise selection of variables was used for multivariable logistic regression analysis. Odds ratio with 95% confidence interval was used to identify the associated factors among the study variables and *P*-values of less or equal to 0.05 were considered to be statistically significant. The normality of the distribution of continuous variables (respondent’s age) was assessed using various options including statistical tests (Kolmogorov-Smirnov and Shapiro-Wilk tests) and visual evaluation of the histogram. Age of the respondents was found normally distributed. Multi-Collinearity of independent predictor variables was also assessed using Pearson correlation and those with *r*-value of less than 0.6 were used in model fitting. Co-linearity between categorical variables was assessed by looking at the values of variance inflation factor (VIF) and those larger than 10 were excluded from the fitted model. To identify the associated factors for the outcomes of FGM/C the χ^2 test and *P*-values were used.

2.6. Operational Definitions

FGM/C: All procedures involving partial or total removal of the external female genital or other injury to the female genital organs whether for cultural or other non-therapeutic reasons were considered as FGM/C (1). For the purpose of this study, women with Type III and IV WHO FGM/C classification as Infibulated and those with Type I and II as Non-Infibulated.

Consequences of FGM/C: bad outcomes of pregnancy and childbirth included stillbirth, episiotomies, perineal tear, lacerations, instrumental deliveries, cesarean deliveries, obstructed labor, prolonged labor, severe hemorrhage and postnatal problems (heavy bleeding, foul smelling vaginal discharge, fever, urinary and/or fecal incontinence or infection) [1, 6].

3. Results

Out of the planned sample size, 792 were participated, making the response rate of 93.7%. The mean (\pm SD) age of the respondents was 32.69 (\pm 7.53) years. Half of the respondents (50.9%) were between the age group of 25-34 years. The majority of the respondents were Muslims (94.8%) by their religion. Afar constitutes for about 86.1% of respondents Ethnicity. About 75% of the respondents did not attend school and considered illiterate. Most (89.5%) of the respondents were born in rural areas. During the study time 83.6% of the respondents were married and live together with their husbands. Regarding their occupation, about 80% were housewives. More than 61% of the respondents do not have a Radio or Television (Table 1).

Table 1. Socio-demographic Characteristics of the Study Population, Gewane wereda, Afar National Regional State (ANRS), Ethiopia, July 2016.

Variables (n=792)	Frequency	Percent	
Age of respondents (in years)	15-24	88	11.1
	25-34	403	50.9
	35-49	301	38.0
Religion	Muslim	751	94.8
	Christian	41	5.2
Ethnicity	Afar	682	86.1
	Others*	110	13.9
Educational status	Illiterate	594	75.0
	Literate	198	25.0
Birth place	Rural	709	89.5
	Urban	83	10.5
Marital status	Single	130	16.4
	Married/living together	662	83.6
Occupation	Housewives	631	79.7
	Others**	161	20.3
Ownership of TV/Radio	Yes	306	38.6
	No	486	61.4

NB: *Others includ- Somali, Oromo, Tigre and Amhara, ** merchants, farmers, housemaidOf the 792 study subjects included in the study, 719 (90.8%) reported to have genitally mutilated, while 23 (2.9%) of them do not know whether they are genitally mutilated or not (Figure 3).

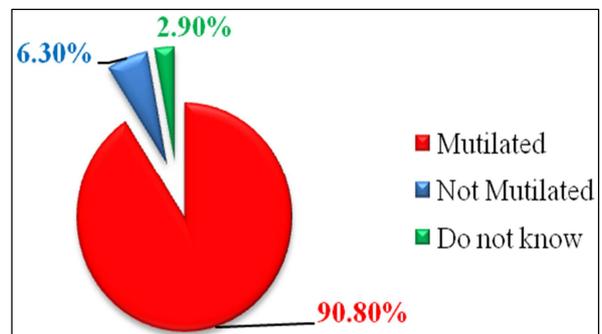


Figure 3. Proportion of FGM among Women (15-49 years) in Gewane wereda, Afar National Regional State (ANRS), Ethiopia, July, 2016.

From those who were genitally mutilated respondents almost 75% of them were reported to have mutilation/cut during their infancy, 16.8% were cut between the ages of 1-5 years, and 4.8% were cut after their 5 years of age. More than 83% of the genitally mutilated respondents reported for the type of their mutilation are infibulations (Type III of WHO classification) and 13.5% reported to have Sunna (Type I and II of WHO classification).

For the majority (93%) of the respondents the mutilation was done by traditional circumcisers and 2.6% of them were reported that they were mutilated by health professionals. More than half (58%) of them have had 2-4 pregnancies and children. During the study time, 18% of the respondents were primigravida and primiparous. About 40% of respondents

were attended antenatal care (ANC) during their first pregnancy. Of the respondents who had ANC and remember the frequency of their visit, more than 60% of them had

visited health institution more than four times in their first pregnancy (Table 2).

Table 2. Type of FGM and Reproductive Health Characteristics of the Study Population, Gewane wereda, National Regional State (ANRS), Ethiopia, July 2016.

Variables		Frequency	Percent
FGM/C (n=769)	No	50	6.5
	Yes	719	93.5
Type of FGM/C (n=699)	Sunna	97	13.9
	Infibulation	602	86.1
Age at mutilation (n= 693)	< 1 year	539	77.8
	1-5 years	121	17.5
	> 5 years	33	4.8
Circumciser (n=694)	Traditional circumciser	675	97.3
	Health professional	19	2.7
Number of pregnancy (n=792)	Only 1	139	17.6
	1-4	463	58.5
	≥ 5	190	24.0
Parity (n=792)	Only 1	149	18.8
	1-4 children	458	57.8
	≥ 5 children	185	23.4
ANC at 1 st pregnancy (n=792)	No	477	60.2
	Yes	315	39.8
Number of ANC (n=298)	< 4 times	118	39.6
	≥ 4 times	180	60.4

In multivariable analysis of the final model, age of respondents was found to be significantly associated with FGM/C. A higher age groups (35-49yrs) were more than 11 fold odds of being genitally mutilated (AOR, 11.56; 95% CI: 2.76, 48.39) compared to the lower age group of 15- 24 years. Respondents from the Afar ethnic group were found to be at higher odds of being genitally mutilated than the respondents from the other ethnic group (AOR, 4.55; 95% CI: 1.95, 10.61). The study also showed statistically significant association between literacy status and FGM/C in which literate respondents are at lesser odds of having FGM/C (AOR, 0.35; 95% CI: 0.15, 0.81) (Table 3).

Table 3. Factors Associated with Infibulation, Gewane wereda, National Regional State (ANRS), Ethiopia, July 2016.

Variable	FGM/C		COR (95% CI)	AOR (95% CI)
	Yes Number (%)	No Number (%)		
Age				
15-24yrs	72 (85.7%)	12 (14.3%)	1.00 (Reference)	1.00 (Reference)
25-34yrs	356 (91.0%)	35 (9.0%)	1.7 (0.84, 3.42)***	1.34 (0.57, 3.16)
35-49yrs	291 (99.0%)	3 (1.0%)	16.17 (4.45, 58.80)***	11.56 (2.76, 48.39)***
Religion				
Christian	27 (65.9%)	14 (34.1%)	1.00 (Reference)	1.00 (Reference)
Muslim	692 (95.1%)	36 (4.9%)	9.97 (4.82, 20.63)***	3.50 (0.69, 17.52)
Ethnicity				
Non Afar	77 (73.35%)	28 (26.7%)	1.00 (Reference)	1.00 (Reference)
Afar	642 (96.7%)	22 (3.3%)	10.61 (5.79, 19.96)***	4.55 (1.95, 10.61)***
Marital Status				
Single	112 (92.6%)	9 (7.4%)	1.00 (Reference)	
Married	607 (93.7%)	41 (6.3%)	1.19 (0.56, 2.52)	
Birth of Place				
Urban	58 (71.6%)	23 (28.4%)	1.00 (Reference)	1.00 (Reference)
Rural	661 (96.1%)	27 (3.9%)	9.71 (5.24, 18.00)***	2.09 (0.88, 4.95)
Literacy Status				
Illiterate	580 (97.6%)	14 (2.4%)	1.00 (Reference)	1.00 (Reference)
Literate	139 (79.4%)	16 (20.6%)	0.09 (0.05, 0.18)***	0.35 (0.15, 0.81)*

Variable	FGM/C		COR (95% CI)	AOR (95% CI)
	Yes Number (%)	No Number (%)		
Occupation				
House wives	587 (96.5%)	2 (3.5%)	1.00	1.00
Non House wives	132 (82.0%)	29 (18.0%)	0.16 (0.09, 0.29)***	0.48 (0.22, 1.04)
Religion				
Christian	36 (70.6%)	15 (29.4%)	1.00 (Reference)	1.00 (Reference)
Muslim	683 (95.1%)	35 (4.9%)	8.13 (4.07, 16.24)**	0.34 (0.07, 1.66)
Have TV/Radio				
Yes	216 (87.4%)	31 (12.6%)	1.00 (Reference)	1.00 (Reference)
No	507 (96.4%)	19 (3.6%)	3.8 (2.10, 6.87)**	0.65 (0.28, 1.52)

***p-value <0.001 ** p-value <0.01 *p-value <0.05.

Regarding the consequences of FGM/C, more than one in three (76.5%) of the respondents were reported to have medical problems during their first pregnancy. The prevalence of institutional delivery was found to be 19.9%. About 57% of them reported that their labour was lasted in less than 24 hours. However, for 43.2% of the respondent their labour was prolonged or lasted more than 24 hours. During their labour, 70.3% and 16.4% of them reported to have an episiotomy and

or de-infibulation and instrumentation, respectively. More than 46% has got a history of perineal tear and nearly one out of five (18.5%) of them reported to have a history of stillbirth. Also, about a quarter (24.8%) reported to have massive bleeding (PPH) and 27 (3.8%) had a history of difficulty in controlling their urine (VVF). Similarly, 23.4% of them had history of wound infections at the site of an episiotomy and/ or perineal tear (Table 4).

Table 4. Distribution of Pregnancy and Child Birth Outcomes among Mutilated Women, Gewane woreda, National Regional State (ANRS), Ethiopia, July 2016.

Variables (n)		Frequency	Percent
Problems during first pregnancy (n=711)	No	169	23.5
	Yes	550	76.5
Age at first labour (n=711)	< 18 years	299	42.1
	≥ 18 years	412	57.9
Duration of labour (n=704)	≤24 hours	398	56.5
	>24 hours (Prolonged)	306	43.5
Place of Delivery (n=719)	Home	576	80.1
	Health institution	143	19.9
Perineal Tear (n=717)	No	384	53.6
	Yes	333	46.4
Episiotomy/de-infibulation (n=710)	No	165	23.2
	Yes	545	76.8
Problematic postpartum period (n=719)	No	169	23.5
	Yes	550	76.5
PPH (n=719)	No	541	75.2
	Yes	178	24.8
Wound Infection (n=719)	No	549	76.4
	Yes	170	23.6
VVF (n=719)	No	692	96.2
	Yes	27	3.8
Still Birth (n=719)	No	586	81.5
	Yes	133	18.5

The result of the Chi-square test showed a significant association ($P \leq 0.05$) between FGM/C and Perineal tear, episiotomy, problematic postpartum period, PPH, and still birth. However, no significant association ($P > 0.05$) was seen between FGM/C and prolonged labour and the occurrence of VVF (Table 5).

Table 5. Relationship between FGM and Birth Complications in the Study Population, Gewane wereda, National Regional State (ANRS), Ethiopia, July 2016.

Birth Complication	FGM		X ²	P-value
	Yes (%)	No (%)		
Prolonged labour				
No	34 (9.9%)	398 (92.1%)	2.51	0.07
Yes	16 (51.0%)	306 (95.0%)		
Perineal Tear				
No	42 (9.9%)	384 (90.1%)	19.21	0.0001
Yes	7 (2.1%)	333 (97.9%)		
Episiotomy				
No	46 (21.8%)	165 (78.2%)	114.00	0.0001
Yes	3 (0.5%)	545 (99.5%)		
Problematic postpartum period				
No	39 (18.8%)	169 (81.3%)	70.36	0.0001
Yes	11 (2.0%)	550 (98.0%)		
PPH				
No	48 (8.1%)	541 (92.3%)	11.23	0.001
Yes	2 (1.1%)	178 (98.9%)		
Wound Infection				
No	46 (7.7%)	549 (92.3%)	6.54	0.01
Yes	4 (2.3%)	170 (97.7%)		
Febrile Illness				
No	45 (7.9%)	526 (92.1%)	6.94	0.01
Yes	5 (2.5%)	193 (97.5%)		
VVF				
No	49 (6.9%)	692 (93.4%)	0.41	0.06
Yes	1 (3.6%)	27 (96.6%)		
Still Birth (n=769)				
No	49 (7.7%)	586 (93.3%)	8.84	0.01
Yes	1 (0.7%)	133 (99.3%)		

4. Discussion

This study was conducted to assess the prevalence of FGM/C, the associated factors and the occurrence of birth complications among childbearing age women who ever gave birth in the study population.

The overall prevalence of FGM/C in the study area was found to be 90.8%. This finding is in line with the report from a base line survey conducted around Gonder of Amhara region in Ethiopia found 94.99% during 2006 [10] and a study from Jijjiga town of Somali region during 2005 found 97% [16]. However, it is much higher than the 2013 national prevalence (74%) report by WHO [3]. The most predominant types (86%) were infibulations (Type III WHO classifications). This figure was much higher than the 2013 national prevalence (74%) report by WHO [3, 10, 16].

Despite the absence of text or verse about Female Genital Mutilation/Cutting practice both in the Koran and Bible there is a persistent misconception that it is a religious requirement especially in Islam [16]. A study done by UNICEF in Benin, Cote D'Ivoire, Ghana, Kenya and Senegal showed the prevalence of FGM/C is greater among Muslim groups [17]. However, there is no statistically significant association between religion and f FGM/C. This is corroborating the finding from UNICEF in Burkina Faso, Central African Republic, Eritrea, Ethiopia, Guinea and Mali [16, 17].

The majority of the Afar ethnic group (86.1%) was found at higher odds of having FGM/C especially the severe form (Infibulations) supporting the findings of UNICEF, which

classifies the region as an area of high prevalence of FGM/C and Infibulation [17, 18].

Literacy was found to be associated with the FGM/C practices, though it is found to be low in the study population as compared to the Mini Ethiopian Demographic and Health Survey (MEDHS) 2014 report for the rural population indicated for about 33% at the national level and 17.3% for the Afar region [15]. This might be due to the overall low literacy rate within the study group and the majority of the literate individuals were found in lower grades, which is not significantly associated with the improved knowledge in the health risks of FGM/C. This analysis was also true when the literate individuals are more stratified to control confounding [15].

In this study the occurrence of FGM/C was not significantly higher in respondents born in rural areas. This might be attributed for the most respondents were born in rural areas might have resulted in less representation of those born in urban. However, the study has found that FGM/C is more common in rural areas than the urban set up [19].

In this study, the significantly associated birth complications with FGM/C were perineal tear and postnatal complications. In both cases, the findings were significantly higher for those with severe forms of Genital Mutilation/cutting corroborating other studies [10, 16]. In the same vein respondents with infibulations were at higher odds of having perineal tear. This is because of the mutilation/cut area might lack the elasticity to accommodate the passage of the foetal head. These are supported by similar studies done

in six African countries by WHO and Burkina Faso come with increased likelihood of having perineal cutting and tear if a woman is genitally mutilated [11, 12].

Problematic postpartum periods were found a statistically significant association with FGM/C and its type indicating higher odds among infibulated respondents. This finding also consistent with other study findings [3, 16].

This study found a significant association between the occurrence of PPH and FGM/C. However, it is not consistent with the study of the Jigjiga town of Somali region [16] and other studies [11, 12, 20] indicated the absence of significant association between these variables. Moreover, unlike the findings from the WHO this study couldn't find any statistically significant association between the FGM/C or its type and the length of labour. Stillbirths at their first pregnancy in the study respondents were totally from those who undergone FGM/C. However, no statistically significant association was found between these study variables supporting the findings from the studies conducted in Jigjiga town and Ghana [16, 21].

As to the limitation of the study, women in child bearing age who gave birth were included in the study. However, information about pregnancy and childbirth were restricted to their first ever pregnancy that ended in childbirth in order to reduce recall bias. Since the study used quantitative data collection method, it lacks the depth to identify the reasons behind the practice of female genital mutilation/cutting. Moreover, the study totally dependent on the respondents report, which might be highly subjected to individual recall variations and perception about their mutilation status, labour and childbirth process. Social desirability bias could be there as this practice was outlawed since 2004. Finally, due to the cross-sectional nature of the study, it might be difficult to ascertain the causal relationship between the study variables.

5. Conclusions and Recommendations

A significant percentage (90.8%) of the women were underwent FGM/C. Afar ethnicity, being higher age and illiterates has shown a higher FGM/C. Religion was not found to be significantly associated with the practice of FGM/C. Childbirth related problems such as episiotomy, perineal tear, PPH and problems after delivery were associated with FGM/C.

Education is the most significant and powerful tool to bring about behavioural change within a community. Hence it is recommended that improved and sustainable adult learning should be fostered and maintained within society to ensure that individuals make informed decisions about their reproductive rights.

Tougher decision making and enforcing legislation should be in place in order to prevent the persistent violation of anti FGM/C law within the society. Finally, Qualitative studies are recommended to assess communities' reasons for the continuation of FGM/C and suggestions for potential necessary conditions to help them abandon it.

Abbreviations

FGM/C: Female genital mutilation/cutting; WHO: World Health Organization

Availability of Data and Materials

Data are available on request.

Authors' Contributions

Conception of the work. Data collection, analysis, interpretation and drafting the article: GB and GS. Critical revision of the article and final approval of the version to be published: GS.

Competing Interests

The authors declare that they have no competing interests.

Ethics Approval and Consent to Participate

Our study was approved by the Adama General Hospital and Medical College and Gewane Woreda council. Informed verbal consent was taken from study participants.

Author Details

GS is an associate professor of Public Health and is working in the department of Social and Population Health, Adama Hospital Medical College, Adama, Ethiopia. GB is a public health specialist working in the department of Reproductive Health, Adama General Hospital and Medical College, Adama, Ethiopia.

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