

Magnitude of and driving factors for female genital cutting in schoolgirls in Addis Ababa, Ethiopia: A cross-sectional study

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Background. Female genital cutting (FGC) is practised throughout the world, and is common in many Asian and African countries. Although FGC in Ethiopia has decreased, the practice is still very widespread.

Methods. A cross-sectional study design with an analytical component was used to study girls attending randomly sampled primary schools in Addis Ababa between August and June 2008. A total of 407 girls, selected from four primary schools, and their respective families were recruited. Data were collected through self-administered and open-ended questionnaires and analysed using bivariate and multivariate models.

Results. In this group of schoolgirls, 26.0% had undergone FGC at a median age of 4 years. FGC had most commonly been performed at age 1 - 5 years, when 50.9% of the total group had been circumcised. Of the girls attending government schools, 36.6% had undergone FGC. The majority of the procedures had been performed by traditional circumcisers (62.3%), followed by health workers (22.6%). The decision to subject the girl to FGC was most frequently made by mothers (38.7% of the FGC group), the remainder of the decisions being made by fathers (24.5%), both parents (22.6%) and relatives (14.2%). There was a significantly higher prevalence of FGC among girls attending government schools, girls of Guraghe ethnicity, and girls whose mothers had no knowledge about the harm of FGC. A smaller proportion of girls living with both parents than of those living with relatives had undergone FGC.

Conclusions. FGC is prevalent in primary schoolgirls in the capital city of Ethiopia, despite improved availability of health information. This situation underscores the need to reinforce the national law against FGC. Creation of awareness should be focused on parents of Guraghe ethnicity and on government schools. Parental education should be promoted, and empowerment of women is required to fight FGC.

Female genital cutting (FGC) is practised throughout the world, but is commonest in Asia and Africa. Although it occurs in most developing countries, there is no definitive evidence documenting when or why this ritual began.¹ In spite of many years of effort on the part of both international bodies and individual countries, about 8 - 10 million women and girls in the Middle East and Africa are at risk of undergoing some form of genital cutting.²⁻³ Each year worldwide about 2 million girls are circumcised in their early years.⁴ FGC is practised in both Muslim and non-Muslim countries and is known to occur among the Coptic Christians of Egypt, several Christian groups in Kenya and the Falasha Jews of Ethiopia, suggesting that there is no definite link between religion and prevalence.⁵

Despite a global campaign highlighting the harmful effects of FGC, as many as 93% of girls in developing countries such as Yemen, Nigeria and particularly Sudan are circumcised.⁶ On

the other hand, some African countries such as Burkina Faso have managed to lower the incidence of FGC through multiple interventions such as media broadcasting and use of mobile police and army forces.⁷

Some countries perform FGC for a variety of cultural reasons such as maintaining cleanliness and discouraging promiscuity, for aesthetic reasons, and as a means of preservation and proof of virginity. In many societies FGC is regarded as a prerequisite for honourable marriage⁸⁻⁹ In Ethiopia a girl who is not circumcised is considered 'unclean' by some, and uncircumcised girls have a reduced chance of getting married.¹⁰

In Ethiopia the origin of FGC is rooted in the social structure and the set of traditions, habits and beliefs related to gender. The practice therefore continues, although some recent studies

have shown changes in attitude¹¹⁻¹⁵ and a lower prevalence of FGC than the previously reported figure of 65.7%. Even this is unacceptable in places where the health information system is reasonably good. While there are some reports on the magnitude of FGC in reproductive-age women aged 15 - 49 years, there is a scarcity of information on the younger age group living in the capital city. The present study aimed to fill this gap and provide evidence-based information on the prevalence of and driving factors behind FGC among girls currently attending primary school. We hoped that our findings would help improve Ethiopia's reproductive health programme.

Methods

Study area and population

A descriptive cross-sectional design with an analytical component was used to study primary school girls from heterogeneous school communities in Addis Ababa. Addis Ababa was selected because it is the capital city, and because the principal investigator had noted the existence of this problem while practising in one of city's health centres.

Addis Ababa is a cosmopolitan city that is home to people from all ethnic groups and races in Ethiopia. The city is clustered into 10 sub-cities with an estimated population of 4 million. At the time of the study it had a total of 656 primary schools, distributed as follows: 262 government, 195 public community, 113 private and 86 faith-based schools.

Sample size and sampling method

A list of all primary schools together with their respective numbers of students was prepared to constitute the sampling frame. The sample size was estimated to be 442 subjects based on a single population proportion formula. The schools with eligible study subjects were randomly selected through lottery methods. Accordingly, 215 subjects from a government school, 109 from a public school, 80 from a private school and 38 from a faith-based school were recruited and their respective families were identified by household numbers.

Data collection

Two supervisors (one male and one female, teachers) and four data collectors (from the school community) were recruited and trained for 3 days by the principal investigator. The data collectors distributed the questionnaire to the respondents of each household and assisted them when they had difficulties filling it in. The respondents were parents or families of the study subjects. Data were collected using a pre-tested self-administered questionnaire, initially prepared in English and translated into the local language at household level. In order to maintain consistency in the process of data collection, only self-reported information on FGC was recorded and no inspection of the genitalia was made, as this would have been intrusive and the issue is sensitive.¹⁶

Data analysis

Statistical Package for the Social Sciences version 15 was used for data entry and cleaning, and any inconsistencies detected were addressed. In addition, standards tabulations were generated in which the outliers were identified before subjecting the data to analysis. The chi-square test was performed to determine the differentials of FGC by explanatory variables. A stepwise backward logistic regression model was applied to test the observed significant variables in the bivariate models as contributory factors. A *p*-value of less than 0.05 denoted that a difference was significant.

Ethical considerations

The Research and Ethical Clearance Committee of the medical faculty of Addis Ababa University cleared the study with regard to its methodological and scientific merit. Permission was obtained from the Addis Ababa education bureau and the primary school heads. Informed parental consent and child assent were obtained after the nature of the study had been fully explained to the subjects in their local languages. Confidentiality and anonymity were maintained throughout.

Results

Of the 442 families, only 407 (92.1%) adequately completed the questionnaires. The socio-demographic characteristic of the girls are set out in Table I. The majority (62.2%) were in the age group 10 - 15 years, the median age being 9 years. Most (191, 46.9%) were from government schools, followed by public schools (97, 23.8%) and religious schools (80, 19.7%). Most of the girls (273, 67.1%) were Orthodox Christians, followed by Muslims (74, 18.2%). The Guraghe and Amharas ethnic groups constituted about two-thirds (62.2%) of the subjects. The majority of them (60.4%) were in Grades 5 - 8, and about half (51.6%) lived with both their parents. The overall reported prevalence of FGC was 26.0%.

TABLE I. SOCIO-DEMOGRAPHIC AND OTHER IMPORTANT CHARACTERISTICS OF 407 PRIMARY SCHOOL GIRLS IN ADDIS ABABA, 2009

Characteristics	N	%
Type of school		
Government	191	46.9
Public	97	23.8
Private	80	19.7
Religious	39	9.6
Age (yrs)		
< 5	3	0.7
5 - 10	90	22.1
10 - 15	253	62.2
15 - 20	58	14.3
>20	3	0.7
Religion		
Muslims	74	18.2
Orthodox Christians	273	67.1
Protestants	56	13.8
Catholics	3	0.7
Others	1	0.2
Ethnicity		
Guraghe	127	31.2
Amhara	126	31.0
Oromo	96	23.6
Tigray	26	6.4
Others	32	7.9
Grades		
1 - 4	161	39.6
5 - 8	246	60.4
Lives with		
Father	23	5.7
Mother	75	18.4
Both parents	210	51.6
Relative	99	24.3
FGC performed		
Yes	106	26.0
No	301	74.0

FGC = female genital cutting.

The ages at which FGC had been performed ranged from under 1 to 12 years (Fig. 1). About half (50.9%) of the 106 girls who had undergone the procedure had done so between the ages of 1 and 5 years, the next most common age being below 1 year (20.8%). The median age at FGC was 4 years. The majority of the girls who had undergone FGC (62.3%) had been circumcised by traditional circumcisers, with health workers (24, 22.6%) and close relatives (16, 15.1%) accounting for only small proportions (Fig. 2).

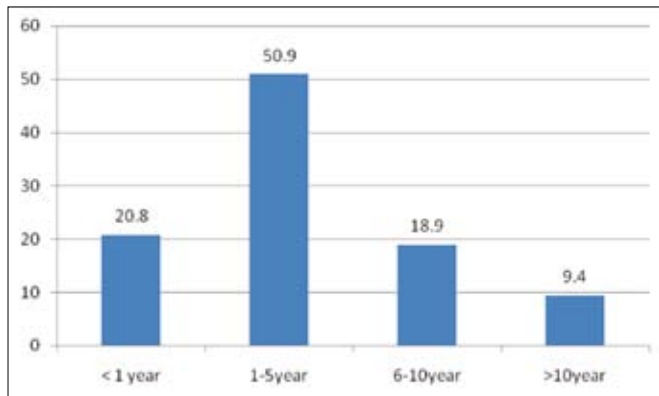


Fig. 1. Ages at which the subjects had undergone FGC (%) (N=106), Addis Ababa, 2009.

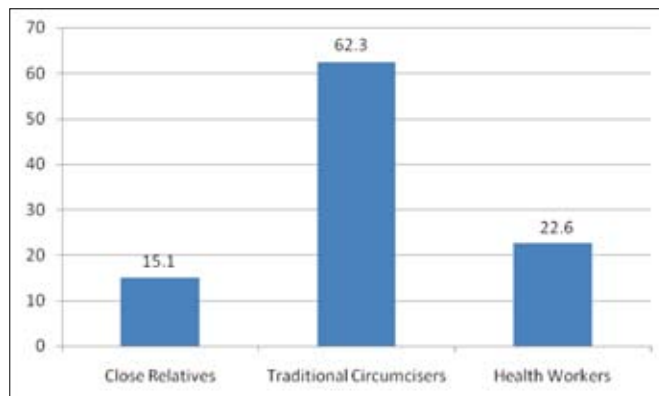


Fig. 2. People who had performed FGC on the subjects (%) (N=106), Addis Ababa, 2009.

Table II sets out the characteristics of the subjects' families, and Table III various factors associated with FGC. The prevalence of FGC was significantly higher in girls attending government schools, of Guraghe ethnicity, and from families in which the mother did not know about the harm of FGC. Of girls living with both parents 12.4% had been circumcised, compared with 48.5% of those living with relatives. The adjusted odds ratio (AOR) of FGC in girls living with relatives was 3.4 times higher than in girls living with both parents (AOR 3.4, 95% confidence interval (CI) 1.73 - 6.83), implying that living with both parents is protective (data not shown).

Discussion

Despite the various interventions that have been attempted in Ethiopia, the practice of FGC has continued. In this study in the capital, 1 in 4 schoolgirls were circumcised. Most of the subjects who had undergone FGC were below the age of 15, suggesting that the practice is continuing even in areas where reasonable health information is available. However, when the current figure is compared with the 2005 Ethiopian Demographic Health Survey report for the same region but different age groups (15 - 19 years), our study showed a better result overall (26.0% v. 65.7%).¹²

TABLE II. SOCIO-DEMOGRAPHIC AND OTHER IMPORTANT VARIABLES OF THE SCHOOLGIRLS' FAMILIES, ADDIS ABABA, 2009

Characteristics	N	%
Educational level of father		
No formal schooling	76	18.7
Grade 1 - 8	126	31.0
Grade 9 - 12	108	26.5
College and above	97	23.8
Educational level of mother		
No formal schooling	115	28.3
Grade 1 - 9	136	33.4
Grade 10 - 12	111	27.3
College and above	45	11.1
Occupation of father		
Government employee	92	22.6
Work in private organisations	210	51.6
No work	45	11.1
Daily labourer	60	14.7
Occupation of mother		
Government	55	13.5
Work in private organisations	116	28.5
No work	236	58.0
Decision about FGC was made by (N=106)		
Fathers	26	24.5
Mothers	41	38.7
Both parents	24	22.6
Relatives/neighbours	15	14.2
Support FGC		
Yes	16	3.9
No	391	96.1
Member of family supporting FGC		
Father	2	8.7
Mother	4	5.7
Both	3	1.4
Relatives	7	7.1
Reasons for supporting FGC (N=16)*		
To maintain the tradition	15	93.7
Keeps virginity	14	87.5
Keeps dignity and an opportunity to get husband	12	75.0
Hygiene and beauty	16	100.0
Oppose FGC (N=391)*		
Against human rights and harmful to girls	389	99.4
Has risk of HIV transmission	375	95.9
FGC is illegal and should be abandoned	380	97.2
Painful, decreases sexual desire and complicates delivery	346	88.5

*Because of multiple responses the numbers exceeded the sample size.
FGC = female genital cutting.

Interestingly, the prevalence of FGC was lower in religious and private schools than in government and public schools. This suggests that the reasons for FGC are traditional and cultural rather than religious. A similar observation was documented for Guinea and Sudan.¹⁷ On the other hand, another study documented Islamic faith to be the major driving motive for FGC among homogeneous Somali refugees settled in the eastern part of Ethiopia.¹⁸ The fact that over 80% of the subjects who had been subjected to FGC in our study were non-Muslim suggests that FGC was driven by cultural and traditional reasons rather than religion, and

TABLE III. FACTORS RELATED TO GENITAL CUTTING AMONG THE STUDY SUBJECTS, ADDIS ABABA, 2009

Factors	Total	FGC performed (N (%))		χ^2	p-value
		Yes	No		
School types					
Government	191	70 (36.6)	121 (63.4)	34.6	0.001
Public	97	28 (28.9)	69 (71.1)		
Private	80	6 (7.5)	74 (92.5)		
Religious	39	2 (5.1)	37 (94.9)		
Ethnicity					
Amhara	126	20 (15.9)	106 (84.1)	21.5	0.001
Oromo	96	25 (26.0)	71 (74.0)		
Tigray	26	2 (7.7)	24 (92.3)		
Guraghe	127	48 (37.8)	79 (62.2)		
Others	32	11 (34.4)	21 (65.6)		
Live with					
Father only	23	8 (34.8)	15 (65.2)	48.5	0.001
Mother only	75	24 (32.0)	51 (68.0)		
Both parents	210	26 (12.4)	184 (87.6)		
Relatives	99	48 (48.5)	51 (51.5)		
Father's education					
< Grade 10	76	39 (51.3)	37 (48.7)	30.9	0.001
\geq Grade 10 and college level	331	67 (20.2)	264 (79.8)		
Mother's education					
< Grade 10	115	51 (44.3)	64 (55.7)	27.8	0.001
\geq Grade 10 and college level	407	55 (18.8)	237 (81.2)		
Father employed					
Yes	362	87 (24.0)	275 (76.0)	6.8	0.009
No	45	19 (42.2)	26 (57.8)		
Mother employed					
Yes	171	38 (22.2)	133 (77.8)	2.2	0.08
No	236	68 (28.8)	168 (71.2)		
Mother knew FGC is harmful					
Yes	381	93 (24.4)	288 (75.6)	8.2	0.006
No	26	13 (50.0)	13 (50.0)		
Mother knew FGC has no religious grounds					
Yes	274	63 (23.0)	211 (77.0)	4.0	0.03
No	133	43 (32.3)	90 (67.7)		

FGC = female genital cutting.

furthermore when we tabulated religion against ethnicity two times more non-Moslems than Moslems of the same ethnicity had undergone FGC. This again demonstrates traditional and cultural rather than religious reasons for FGC, and suggests that legal action should be taken to fight deeply rooted traditional practices to improve the reproductive health of the community.

Another window of opportunity to minimise FGC is to focus on primary government and public schools, as the majority of the circumcised girls were found in these schools. Targeting the schools will have dual benefits, as when the students are taught that FGC is affecting their reproductive health the message will be passed on to their families, which may ultimately reduce the practice. A concerted effort of the ministries of education, health and justice is therefore needed, assisted by women's associations and legal enforcement, as the act is a form of violence against women and has debilitating and long-lasting health hazards.¹⁹

One reason for the persistence of FGC observed in our study is the dominant role played by fathers in influencing other family members. This is in concordance with another study done in

Ethiopia²⁰ and underscores the need to change attitudes among fathers as well as in the community.

In the present study, although some health workers (midwives) performed FGC, the majority of the girls were circumcised by traditional circumcisers who may be less familiar with the anatomy of female genitalia and could easily cause damage because of crude tools, poor light or poor eyesight, compounded by the struggles of the girls or women during the procedure.

The act is a form of violence against women and has debilitating and long-lasting health hazards.



Although the majority of families did not support FGC, a few families were still in favour of it because they felt that their daughter would maintain the tradition and dignity of her family and get a husband. These ideas were notably expressed by mothers who had experienced the pain and health consequences of FGC themselves. Conversely, the majority of the interviewed families who were against FGC stated that the act was harmful to girls, exposes them to HIV transmission, decreases their libido and complicates delivery. A strong campaign through all available media is necessary to eliminate incorrect perceptions and change the attitudes of mothers and other relatives involved in these ruthless acts, which are against human rights.

Some of the major factors responsible for the continuation of FGC were identified. Attending government schools, being of Guraghe ethnic origin, living with a family other than the parents, fathers with low grades of schooling and mothers who did not have knowledge about the harm of FGC were the major determining factors. However, this information should be interpreted with caution.

The association of mothers' knowledge and fathers' education with FGC once again demonstrated that education is one of the most vital factors in eradicating FGC, underlining the need for gender equality and empowering parents to aim at a higher level of schooling in successfully eliminating harmful traditional practices. This need has been expressed by others.²¹ Our finding that FGC was associated with Guraghe ethnicity provides another area of opportunity. Dialogue with community elders, thereby convincing them that FGC is a harmful tradition, could result in this information cascading and ultimately help make the anti-FGC campaign a success.

One of the limitations of this study is that our urban population is not representative of the rural population. Secondly, the fact that the findings were based on self-reporting and were not accompanied by clinical examinations may also have biased the information.

Conclusions

Despite a high level of knowledge regarding the complications of FGC and a high level of awareness, FGC continues to be prevalent in Addis Ababa. Focused creation of awareness, specifically targeting the government schools and people of Guraghe ethnicity, increased gender equity, and empowering both parents and the community through ministries such as education, health and justice, women's associations and community elders are recommended.

Competing interests. The authors declare that they have no competing interests.

Authors' contributions. TZS organised this study when he was doing his master's in public health, conducted statistical analysis and drafted the manuscript, while JH contributed to the design, data analysis and interpretation and revised the manuscript for intellectual content. Both authors read and approved the submitted manuscript. WK-M meticulously reviewed the manuscript for intellectual content.

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