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ORIGINAL ARTICLE

FEMALE GENITAL MUTILATION/CUTTING IN JIMMA, ETHIOPIA: A STUDY OF THE KNOWLEDGE, ATTITUDE, AND PRACTICE AMONG HEALTHCARE PRACTITIONERS

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ABSTRACT

Background: *Female genital mutilation/cutting is a traditional practice that affects more than 23 million females in Ethiopia. It is a violation of human rights and healthcare practitioners are expected to identify and manage this condition. Our objective was to assess the knowledge, attitude and practice of healthcare practitioners.*
Methods: *An interviewer-administered survey was distributed to a total of 427 practitioners at Jimma University Hospital and four local health clinics. Convenience sampling was used to recruit participants from June to August of 2013. Respondents were physicians, health officers, nurses, midwives, and medical students. Bivariate analyses with Fischer's exact test and linear regressions were used to determine associations.*
Results: *The study consisted of 72% male and 28% female practitioners. Respondent knowledge about the complications of female genital mutilation/cutting was poor. More than a quarter of practitioners (28.6%) believed there were health benefits from the practice. Respondents who held an attitude that their medical training for female genital mutilation/cutting was sufficient were more likely to discuss the topic with patients. Attitudes were primarily to educate and sensitize patients (77.5%) or ignore the issue (12.2%).*
Conclusions: *The majority of practitioners felt their medical training on female genital mutilation/cutting was inadequate. An attitude of sufficient training increases the likelihood healthcare practitioners will discuss female genital mutilation/cutting. With the high proportion of males in the healthcare system, it is necessary for future interventions to educate healthcare providers, particularly males, on female genital mutilation/cutting. Open discussion may serve to increase awareness and communication about the prevailing social expectations around female genital mutilation/cutting.*

Keywords: *Female genital mutilation/cutting, healthcare provider knowledge, Ethiopia*

INTRODUCTION

The World Health Organization (WHO) defines female genital mutilation/cutting (FGM/C) as "all procedures involving partial or total removal of the external female genitalia or other injury to the female genital organs for nonmedical reasons" (1). FGM/C is recognized as a violation of the human rights of girls, constituting an extreme form of gender discrimination. Estimates predict more than 140 million females worldwide have undergone the procedure (2).

The Innocenti Insight on The Dynamics of Social Change describes how FGM/C abandonment typically begins with "an initial core group of individuals who set in motion a dynamic of change" (3). The members of this critical mass spread the knowledge of their intention to abandon the act through their social networks. Several methods have been implemented to discourage FGM/C, including legislation strategies to ban the act, community outreach programs, public debates, and women empowerment programs. The effectiveness of legislature has shown to be poor (4,5); however education protocols have been met with greater success (6-8). In particular, educating and engaging men has come into focus. According to the United Nations Children's Fund (UNICEF), a large portion of wives do not even know their husbands' opinions of the practice (9).

The lack of open communication between men and women on this sensitive issue is a major barrier in the abandonment of FGM/C(7,10). Men in their roles as fathers, husbands, religious and healthcare leaders

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play a pivotal role. Studies that have examined male preferences found the strongest indicator of male opinions against FGM/C was education (7,11). The knowledge, attitudes, and practices of healthcare practitioners (HCPs) with regard to FGM/C have been examined in several studies (12-19). A meta-analysis of 8 African and 10 high-income country studies showed that knowledge among HCPs is poor (12). A study on Egyptian medical students reported that "communication rather than passive learning was needed" to inform future HCPs of the negative consequences of FGM/C (13).

In Ethiopia, 74% of women have undergone some form of FGM/C (20,21). The prevalence of FGM/C in the Somali and Afar regions is reported to be 99% with rates of 60% in the southern districts (22). The Oromia region, which includes Jimma, was found to have a prevalence of 88.4%. Of the 2,221 women surveyed in the Ethiopian Demographic and Health Survey (23), 63.7% favored the discontinuation of FGM/C, while 29.7% favored its continuation. There was no difference among Christian and Islam women, but education strongly correlated with a stance against the practice. A study in the Hadiya Zone, which borders Jimma, found high school girls were circumcised at a mean age of 11 years (24). Traditional circumcisers performed 60% of the FGM/C procedures while healthcare practitioners performed 30% of them.

One of the effects of campaigns about the health risks of FGM/C has been an increased trend towards "medicalization" of the procedure. This refers to the shift from traditional practitioners to HCPs performing FGM/C in the setting of antibiotics and anesthesia. Egypt has had the greatest increase in this trend over the past few decades, but there is no evidence that medicalization reduces obstetric or other long-term complications(9). An Ethiopian study that found 30% of high school girls had FGM/C performed by a healthcare practitioner is the first to acknowledge this trend in Ethiopia (24). The present study sought to assess the knowledge, attitude, and practice of Ethiopian HCPs in Jimma to expand the existing body of knowledge in this area which otherwise represents a major public health challenge.

PATIENTS AND METHODS

Study design: A cross-sectional descriptive study was designed to examine the KAP of Ethiopian HCPs regarding FGM/C. A questionnaire was developed following an extensive literature review. The questionnaire was first prepared in English then assessed by two physicians for content validity. It was translated by the principal investigator into Amharic, the official language of Jimma University and spoken/written by all study participants. A second Ethiopian physician researcher translated the questionnaire back to English. The questionnaire was administered to small groups of participants and completed in the presence of the medical student and the principal investigator.

The participants were recruited using a convenience sampling technique from June to August of 2013. Four community health clinics (Jimma Health Center, Higher 2 Health Clinic, Seto Health Clinic, and Family Guidance Association of Ethiopia), all within the Jimma Zone and close to the university were selected for the study. Study participants included senior physicians, residents, health officers, nurses, midwives, and selected medical students at the university hospital and health officers, nurses and midwives at the community clinics. The inclusion criteria for medical students consisted of completion of a clinical rotation in Obstetrics and Gynecology; clinical rotations begin in the last three years of the six-year training. The education system at Jimma University is taught in English. Participants were provided with either English or Amharic version of the questionnaire.

Operational definitions: The questions consisted of multiple choice and fill in the blank formats. Knowledge was assessed through six criteria including: knowledge of health benefits from FGM/C, short-term complications, long-term complications, childbirth complications, legality of the procedure, and psychological effects of FGM/C. Respondents were asked to list the complications in open-ended questions. Accepted short-term complications included severe pain, infection, shock, urine retention, and death. Accepted long-term effects were bladder infections, cysts, scarring or keloid formation, infertility, and reduction of libido. Childbirth complications included cesarean section, hemorrhage, episiotomy, longer maternal hospital stay, fistula formation, newborn death, and maternal death. Practices were assessed by asking respondents how frequently they discuss each of the above categories with their patients. The choices included never, sometimes, often, and always. In addition, participants were asked how frequently they discuss sexual health and FGM/C issues with patients. Attitudes towards FGM/C were assessed by one multiple-choice question. The response choices included ignoring FGM/C, educating and sensitizing the patient, reporting the patient to authorities, or supporting the practice. Respondents were also asked if they felt their medical training with FGM/C was adequate.

***Data analysis*:** Tabulation of the data was performed throughout the data collection period. Before entering the data, the questionnaire was checked for completeness. All data was analyzed using STATA software version at 13.0 (Collage Station, TX). Univariate and bivariate analyses with chi square or Fischer's exact test and P-values were used to determine if there was a statistically significant association between study and outcome variables. Logistic regression was used to determine possible associations between the variables in terms of odds ratios. Statistical significance was considered at $p<0.05$.

***Ethical considerations*:** Ethical clearance for the study was obtained from both Institutional Review Board committees at Jimma University Hospital and Stony Brook University Hospital. All participants gave written informed consent. Participation was voluntary and respondents could withdraw from the study at any time without explanation or penalty. The anonymity of each participant was assured and no personal details were recorded or produced on any documentation related to the study.

RESULTS

Knowledge: A total of 427 healthcare practitioners participated in the study. Of the respondents, 71% were male and 29% were female (Table 1). The majority of HCPs were trained at Jimma University, whereas 16% were trained elsewhere. Their ages ranged from 20 to 57 years with a median of 24.

HCP knowledge results are shown in Table 2. Of the participants, 28.6% believed there were positive health outcomes from undergoing FGM/C. Female gender, nursing occupation, and practitioners older than 30 years were more likely to claim that FGM/C can benefit the health of girls and women.

Table 1: Study Sample Demographics among 427 Healthcare Practitioners in Jimma, Ethiopia 2013

Title	Male		Female		Total	
	n	%	n	%	n	%
Physician	18	94.7	1	5.3	19	4.5
Health Officer	86	67.7	41	32.3	127	30.2
Nurse	6	18.2	27	81.8	33	7.9
Midwife	15	62.5	9	37.5	24	5.7
Medical Student	174	82.9	36	17.14	210	50
Other	0	0	7	100	7	1.7
Total	299	71.2	121	28.8	420	100
Training Attitudes						
Inadequate	190	72	74	28	264	63.2
Adequate	108	70.1	46	29.9	154	36.8
Total	298	71.3	120	28.7	418	100
Education Institution						
Jimma University	269	76.2	84	69.4	353	84
Elsewhere	30	44.8	37	30.6	67	16
Total	299	71.2	121	28.8	420	100

The majority of HCPs could recall two or three of the short-term complications (2 correct 39.3%, 3 correct 23.4%). Long-term effects of FGM/C were not as well known, with HCPs naming only one (43.1%) or two (32.1%) correct answers. Notably, there were no differences between occupations, but females were less likely to know long-term effects from FGM/C compared to males (OR 0.26, CI 0.12 - 0.55).

Childbirth complications were reported with the lowest accuracy. The majority of HCP's correctly identified FGM/C is prohibited in Ethiopia (82.4%) and that depression can result from the procedure (92.7%).

Table 2: Knowledge Differences among Healthcare Professionals in Jimma, Ethiopia 2013

Knowledge		Physician	Health Officer	Nurse	Midwife	Medical Student	Fischer's Exact
Are there health benefits	Yes	4 (21%)	33 (26%)	26 (79%)	5 (21%)	47 (22%)	<0.000
Is FGM/C illegal	Yes	19 (100%)	114 (90%)	9 (27%)	17 (70%)	193 (92%)	0.377
Are there psychological effects	Yes	18 (95%)	122 (96%)	31 (94%)	21(88%)	196 (93%)	0.304
What are the short term complications*		2-3 correct	2-3 correct	1 correct	0-1 correct	2-3 correct	<0.000
What are the long term complications*		1-2 correct	1-2 correct	1 correct	1-2 correct	1-2 correct	0.497
What are the childbirth complications*		1 correct	0-1 correct	0-1 correct	1-2 correct	0-1 correct	0.115

* Greater than 50% of occupational group answered correctly

Attitudes: The majority of HCPs (77.5%) would educate and sensitize a patient who has undergone FGM/C herself or who is considering cutting her daughter. Gender differences did not exist with regard to attitude. Notably, 52 (12.2%) of the respondents would ignore the issue of FGM/C when encountered. A high proportion (61.8%) of the HCPs felt their medical training was insufficient with information regarding FGM/C. HCPs who felt they received adequate training to treat women with FGM/C were more likely to engage in patient communication (Table 3). Increased exposure of FGM/C through medical education made HCPs more likely to question females about their sexual health (OR=2.48, CI 1.17-5.26), discuss the complications of the procedure (OR = 2.15, CI 1.20-3.87), inform women about the legality of the practice (OR=2.38, CI 2.38-4.63), and screen a patient for depression (OR = 1.38 CI 1.10-3.09).

The group who felt they received adequate medical education regarding FGM/C achieved the same knowledge scores as their colleagues. There was no difference of knowledge between those who believed their training was adequate and those who believed their training was inadequate.

Practices: The practices concerning FGM/C were assessed by investigating whether or not HCPs discuss the topic with their patients, how frequently they do so, and what aspects of FGM/C are addressed (complications, legality). A majority (84%) of HCPs asked women about their sexual health and if they have undergone FGM/C. Females were less likely to discuss the short-term complications (OR=0.29, CI 0.15-0.54), long-term complications (OR=0.39, CI 0.21-0.72), and the legality of the practice (OR=0.5, CI 0.26-0.99) compared to their male counterparts (Table 4).

Table 3: Logistic Regression of HCPs who felt they received adequate FGM/C medical training in Jimma, Ethiopia 2013

Practices	Odds ratio (95% CI)
Ask about sexual health	2.48* (1.17-5.26)
Discuss health benefits with patients	1.20 (0.76-1.89)
Discuss long-term complications	2.15* (1.20-3.87)
Discuss legality of FGM	2.38* (1.22-4.63)
Ask patient about depression	1.84* (1.10-3.09)
Knowledge	
Health Benefits from FGM/C	0.96 (0.55-1.65)
Short-term complications	0.68 (0.34-1.37)
Long-term complications	1.20 (0.60-2.42)
Childbirth complications	1.08 (0.65-1.78)

***p<0.001, ** p<0.01, * p<0.05

Table 4 Logistic Regression of Gender in Jimma, Ethiopia, 2013

Practices	Odds ratio (Reference: Males) (95% CI)
Ask about sexual health	0.65 (0.31-1.36)
Discuss health benefits with patients	0.91 (0.52-1.62)
Discuss short-term complications	0.29*** (0.15-0.54)
Discuss long-term complications	0.39** (0.21-0.72)
Discuss legality of FGM	0.50* (0.26-0.99)
Knowledge	
Health Benefits from FGM/C	1.02 (0.52-2.01)
Short-term complications	0.46 (0.21-1.02)
Long-term complications	0.26*** (0.12-0.55)
Childbirth complications	0.75 (0.42-1.36)
Attitudes towards FGM/C	0.73 (0.32-1.63)

***p<0.001, ** p<0.01, * p<0.05

DISCUSSION

Our study showed a considerable proportion of Ethiopian HCPs were not able to recall health consequences associated with FGM/C nor did they feel that their medical education regarding the practice was adequate. The majority did express attitudes against FGM/C by opting to educate and sensitize their patients about the harmful health outcomes. In contrast to male circumcision where infants have a lower relative risk of acquiring urinary tract infections, there are no known health benefits from undergoing female genital cutting. The perception that FGM/C is advantageous for young girls is likely to contribute to the high prevalence in our setting. An analysis of 21 studies has shown that the belief in health benefits of FGM/C is a major factor for its continuation (25). If the cohort of educated individuals holds this belief, it is very likely that an equal or greater proportion of those from the general population would have a similar belief.

Over a quarter of HCPs in our study believe that there are positive health consequences from undergoing FGM/C. One rationale for this finding may be the perceived overlap between health benefits and social advantages-such as better marriage prospects, preserving girls' virginity, increased sexual pleasure for the man, and religious necessity (9) which ultimately outweigh the biologic risks.

Additionally, we found a modest to poor level of knowledge regarding FGM/C. All respondents were more likely to recall immediate complications from the procedure compared to the long-term and childbirth complications. There are several possibilities why HCPs cannot identify the effects, even though 88.4% of women in the community have undergone FGM/C. Where FGM/C prevalence is high, common consequences may be considered "normal" (26). The health complications from FGM/C in Jimma such as urinary tract infections or excessive bleeding during birth may be construed as normal. As in The Gambia (15), new graduates from Jimma University were unaware of the extent of FGM/C consequences and were unable to connect the complications with the practice. Exposure to the type of FGM/C performed in the Jimma could be another reason for poor obstetrical knowledge related to FGM/C. Type III, known as "infibulation", the most severe type that can result in narrowing of the vaginal canal, is not commonly practiced in Jimma. Thus graduates have limited knowledge about this type of FGM/C. Meta-analyses have shown that prolonged labor, obstetric lacerations, excessive hemorrhage, instrumental delivery, and difficult labor are markedly associated with all types of FGM/C (27). Nonetheless, HCPs' obstetrical knowledge in our study was poor and this could be due to their inability to link these complications to FGM/C.

Males scored higher than females with the recall of FGM/C consequences and with accurately stating there were no health benefits from the procedure. This inter-sex discrepancy of knowledge likely reflects the unequal distribution of education. Within the Ethiopian healthcare system, males predominantly fill physician and health officer roles whereas females fill the nursing and midwifery occupations. Other studies conducted in Ethiopia reported that the higher women scored on self-empowerment indices the more likely they opposed FGM/C (23,28). Adolescent males in Jimma who had lower gender role perceptions were 1.4 times more likely to support the continuation of FGM/C compared to their female counterparts (11).These studies indicate that the patriarchal society and lower female status is an impediment to abolishing FGM/C. Training male HCPs to discuss FGM/C with their patients may open dialogue between the sexes and incorporating more females into physician and health officer roles will contribute to better self-empowerment indices.

The larger question remains why is it important to involve men in the campaign to end FGM/C. In a behavior change study in Senegal and The Gambia, Shell-Duncan and colleagues found that more men than women favored stopping FGM/C (29) and that when men were involved in deciding whether their daughters should undergo FGM/C, they were less likely to have FGM/C. Surveys conducted in Eritrea, Nigeria, Sudan, and Yemen have explored whether wives and husbands even talk about FGM/C or know what their partners think about the practice (9). The results show a substantial proportion (22%-45%) of wives do not know their husbands' views on FGM/C. Many couples do not consider FGM/C an appropriate topic for discussion between husband and wife. Men may hesitate to broach the topic because it is considered a "woman's issue". Empowering HCPs with the skills and knowledge to start the conversation, especially male HCPs, is a new approach to address this obstacle.

Self-reported practices had excellent responses, with over 70% of healthcare professionals discussing FGM/C with patients. The higher-than-expected results can be explained by the bias of reporting one's own behavior in the setting of a retrospective survey. Of note, HCPs who reported adequate exposure and medical training to FGM/C were more likely to discuss FGM/C with their patients (OR>2). This finding suggests that training HCPs about FGM/C manifests as an increased comfort level for discussing difficult, taboo issues. The perception that one is fully qualified to care for women with FGM/C increases the likelihood that HCPs will discuss the issue with patients. Open communication with the HCPs rather than passive learning is necessary to drive a change in attitude toward discontinuation of FGM/C (13).

Limitations: There could be a recall or reporting bias in our study. HCPs not be willing to provide accurate information because the FGM/C is prohibited in Ethiopia or because they themselves are circumcised. Social desirability bias is a possibility given the nature of the topic and its sensitivity. Attempt was made to minimize this by framing questions to show that it was okay to answer in a way that was not socially desirable. The convenience sampling technique we used could introduce bias and the sampling frame was not known. The results should therefore be interpreted cautiously in terms of generalizability. Self-reporting is a gross overestimation of reality.

Conclusions: Healthcare practitioners in Jimma, Ethiopia support the discontinuation of FGM/C through their attitudes to educate patients. However, the majority of HCPs feel their FGM/C medical training has been inadequate. The respondents who felt they received sufficient medical training on the topic were more likely to discuss FGM/C with their patients, although their knowledge was no greater than their peers. This suggests that perceived training about the practice increases the likelihood a practitioner will discuss FGM/C with a patient even if the information disclosed is inaccurate. Male-female dialogue about FGM/C is a major barrier to abolishing FGM/C. For future interventions, it is imperative to educate HCPs, particularly males, on FGM/C in order to promote greater dialogue between the male HCPs and female patients. Open dialogue may serve to reduce lack of awareness and poor communication to ensure that the prevailing social expectations around FGM/C are challenged.

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