

## Female genital cutting: prevalence, knowledge, and attitudes of Sohag University level students, Upper Egypt.

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### Abstract

**Background:** Egypt showed high prevalence of female genital cutting (FGC). FGC had many harmful physical, psychological and sexual effects. Many efforts had been established to raise awareness about FGC and to decrease its incidence. Education may play a role to change the attitude towards FGC. **Objective:** This study is conducted in Sohag University to estimate the prevalence of FGC and to measure student's (including males) knowledge and attitudes toward FGC and to identify the reasons behind supporting or rejecting FGC practice.

**Participants and methods:** This is a cross-sectional study that included 1075 students from five faculties (Agriculture, Arts, Commerce, Nursing and Education) and technical health institute selected by using simple random sample. A questionnaire was used to collect the relevant data. Statistical analysis was performed using STATA program.

**Results:** The prevalence of FGC was 86.87%. Possible complications of FGC were known by 51-69% of the students. Thirty-six percent (36%) of students supported the FGC practice while 64% reject it. Males are significantly supporting FGC practice more than females (42% vs. 29%,  $p < 0.0001$ ). The reasons to support the practice were religious tradition (18.60%), cleanliness (11.63%), cultural and social tradition (21.19%), chastity (28.68%) and evidence of femininity (19.90%). The reasons to reject practice were no religious support (29.07%), painful procedure (23.15%), unhealthy procedure (24.56%) and bad social habit (22.38). **Conclusion:** One-third of university students were still supporting FGC practice especially males. Effort towards health education, better to include topic about FGC in the curriculum, will help in discontinuation of FGC in the future.

**Key word:** female genital mutilation, knowledge, attitudes, university student, and Egypt.

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### Introduction

Female genital cutting (FGC) or female circumcision was defined as partial or total cutting away of the female external genitalia without medical reasons <sup>(1)</sup>. Worldwide, more than 135 million women have been circumcised. Each year, three million girls are estimated to

be circumcised by World Health Organization <sup>(1, 2)</sup> mainly from Africa and Middle East with highest prevalence in northeastern Africa (ranges from 80% to 97%) <sup>(1)</sup>. The incidence of FGC during the last 2 decades declined in many African countries <sup>(1, 3, 4)</sup>. However, FGC

in Egypt did not show any significant decline 1995–2005, despite efforts made to reduce the frequency<sup>(5-7)</sup>. The incidence of FGM is still very high in Upper Egypt in spite of the criminalization law<sup>(8)</sup>. The prevalence of FGC is ranging from 61% in Lower Egypt to 97% in Upper Egypt<sup>(5, 9, 10)</sup>. FGC had many harmful physical, psychological and sexual effects of females<sup>(11, 12)</sup>. Many efforts have been established to raise awareness about FGC and to decrease its incidence<sup>(13)</sup>. Education may play a role to change the attitude towards FGC<sup>(14, 15)</sup>. This study was conducted to identify the prevalence of FGC among university level female students, to examine the knowledge about FGC of all students including males, to identify their attitudes towards FGC practice and to examine the reasons for supporting or rejecting it.

### **Participants and Methods:**

#### **Study design:**

This is cross-sectional study

#### **Study setting:**

This study was conducted in Sohag. Sohag is one of the nine governorates of Upper Egypt (Egypt consists of 27 governorates). Sohag have 12 municipalities. The total area of Sohag is 11 218 km<sup>2</sup> with total population of 4,469,151 according to Central Agency for Public Mobilization and Statistics, Egypt (2014). The total numbers of students were approximately 17,000 students in 2014-2015.

#### **Sample size and randomization:**

Using Sample Size Determination table for survey study developed by Bartlett, Kotrlik, & Higgins<sup>(16)</sup> and assuming alpha levels of 0.05, the necessary sample size was calculated as 370. Other way to calculate the sample size is by using sample size calculator program. Based on a confidence level of 95

percent, confidence interval 4% and 16,000 population size, the necessary sample size was calculated as 579. For better result we included 1075 students. The sample size was taken from students in university students from five faculties (Agriculture, Arts, Commerce, Nursery and Education) and from technical health institute using simple random sample.

#### **Instruments:**

A questionnaire was established specially for this study after examining some of previous studies about FGC. The questionnaire was tested by asking 60 students to complete the questionnaire. Revision was made and some changes were done. The study was explained to the students. Some teaching rooms were selected randomly and paper questionnaires were distributed to students who were willing to participate in the study. The questionnaires were completed by the students themselves anonymously. The questionnaire divided to two parts. First part questions aimed to measure knowledge of students about FGC while the second part aimed to identify their attitude and their reasons to support or reject this practice.

Administrative and ethical issues including confidentiality and verbal consent were obtained.

#### **Statistical Analysis:**

Statistical analyses were performed using intercooled STATA program version 12.1. Data are presented as counts, percentages, and means. Chi square test was used compare different groups. Level of significance was set at P value <0.05.

### **Results**

#### **Demographic characteristic:**

This study included 1075 students at s in Sohag University. Their mean age was 19.66 ± 1.51 years. About 55.35% were

males and 44.65% were females. The demographic characteristics of the respondents were shown in table (1).

#### **Prevalence of FGC:**

Among 480 female students 417 were circumcised giving a prevalence of 86.87%. The mean age of circumcision was  $7.13 \pm 3.5$ . The median age was 7 years (range 1-14)

#### **Knowledge about FGC:**

Table (2) shows the knowledge and beliefs about FGC. Of the possible complications of FGC, 59.63% of student identified hemorrhage (57.65% for males and 62.08% for females). There is no significant relationship between both sexes as regard identifying hemorrhage as possible complication ( $p=0.26$ ). Other complications were better identified by females than males. These complications were genital tears and infections (57.95% for all students, 49.41% for males, 68.54% for females,  $p<0.0001$ ), infertility (50.51% for all students, 38.99% for males, 64.79% for females,  $p<0.0001$ ), difficult labor (69.40% for all students, 64.87 % for males, 75.00 % for females  $p=0.002$ ), serious complications up to death (58.23% for all students, 53.45% for males, 64.17% for females  $p=<0.0001$ ), and dyspareunia and loss of libido (60.93% for all students, 56.81% for males, 66.04% for females  $p<0.0001$ ). Decrease sexual pleasure in females was identified by 64.19% of students (63.70% of males and 64.79% of females) while 19.53% did not know that FGC decreased sexual pleasure in females (17.31% of males and 22.29% of females,  $p=0.009$ ).

#### **Source of Knowledge about FGC:**

The main source of information about FGC was TV (and other mass media or internet) (42.42%). Other sources were

health education sessions, study, friends and family (16.65%, 16.56%, 13.11% and 11.26% respectively).

#### **Attitude towards FGC:**

Approximately one-third of the students (36.00%) supported the FGC practice while 64.00% reject it. Male students more supporting for the practice than females did (41.85% of males vs. 29% of females,  $p<0.0001$ ). Reason to support or reject FGC were shown in table (3). The reasons to support the practice of FGC were an important religious tradition (18.60%), cleanliness for girls (11.63%), cultural and social tradition (21.19%), chastity (28.68%) and evidence of femininity (19.90%). There is a significant difference between male and females as regard why they supported the practice ( $p=0.01$ ). The main difference was that 23.69% of males thought that FGC was an important religious tradition compared to 9.42% of females. The reasons to reject practice were painful procedure (23.15%), unhealthy procedure (24.56%), no religious support (29.07%), and bad social habit (22.38). There is a significant difference between males and females as regard why they reject the practice ( $p=0.01$ ). The main difference was that 19.94 % of males thought FGC as unhealthy procedure compared to (29.24%) in females.

#### **Discussion**

In spite of presence of many studies that measure the knowledge and attitude towards FGC, our study is an important one because it includes males and identify their knowledge and altitudes as they are also important decision maker in this issue. Also it includes university student who represent person with high level of education and they are the future

parents who are responsible for decision of doing this practice.

Despite the effort of WHO to minimize the FGC, the prevalence is still high especially in North Africa <sup>(1, 2)</sup>. Previous studies <sup>(5, 9)</sup> showed high prevalence of FGC in Egypt ranging from 61% in Lower Egypt to 97% in Upper Egypt. FGC in Egypt did not show any significant decline 1995–2005, despite efforts made to reduce the frequency <sup>(5-7)</sup>. The current study confirmed these finding. It showed a high prevalence of FGC (87%) among female university level students. This is near to results reported in Sohag (89%) <sup>(8)</sup>, and in Upper Egypt (85%) <sup>(10)</sup>. The mean age of circumcision in current study was  $7.13 \pm 3.5$ . This was near to that reported by other studies <sup>(11, 17, 18)</sup>. Egyptian demography and health survey reported that more than half of FGC were done between seven and ten years of age at the time of circumcision, and virtually all of the women were circumcised before age 15 years <sup>(15)</sup>. This reflects the fact that, in Egypt, traditionally girls are circumcised slightly before or at puberty <sup>(9)</sup>.

This study showed fair knowledge about FGC. About 51-69% of the students knew possible complications of FGC such as hemorrhage (60%), genital tears & infections (58%), infertility (51%), difficult labor (69%), serious complications up to death (58%), dyspareunia and loss of libido (61%), and decrease sexual pleasure (64%). Females had significant good knowledge than males. This may because females more concerned with the issue of FGC. The main source of information about FGC was TV (and other mass media or internet) (42%). T.V and mass media were reported as main sources of information for reproductive health in

many studies <sup>(19-23)</sup>. The availability of internet for university to students made it playing an important role as source of information. This finding is reported by study in Egypt <sup>(22)</sup> and India <sup>(24)</sup>. Health education sessions and study come after TV and internet as a source of information reported by students (17% each). These findings indicate that health education and study played a role in improving the knowledge of students about FGC.

Previous studies <sup>(14, 15, 25-28)</sup> aimed to examine Egyptian women's attitudes and beliefs about female genital cutting found that 54-86% of women support this practice. Our study showed that only 36% supported the FGC practice. This result is lower than that reported from previous studies because of high level of education of participants. Dalal et al <sup>(14)</sup>, found that women with higher level education were three times more likely to discontinue the practice than those with no education. EDHS, 2008 <sup>(15)</sup> reported that 43% of secondary or higher women feel that the practice of circumcision should continue.

EDHS, 2008 <sup>(15)</sup> reported that there is no difference between males and females as regard supporting the practice. The current study showed that, male students more supporting for the practice than females (42% vs. 29%). Asekun-Olarinmoye & Amusan <sup>(29)</sup> found that a greater proportion of men than women did not want the practice of FGM stopped in the pre-intervention stage. After health education intervention, there was a statistically significant decrease in the proportion of males who did not want the practice of FGM stopped. Tag-Eldin et al <sup>(18)</sup> found that father played minor role as roles as decision-makers for the practice (9%) compared to mothers (65%) and to the

family as a whole (24%). However, especial effort should also be given towards health education of males concerning FGC and its complication.

This study showed that, the reasons to support the practice of FGC were that FGC is an important religious tradition (19%), cleanliness for girls (12%), cultural and social tradition (21%), chastity (29%) and evidence of femininity (20%). Tag-Eldin et al<sup>(18)</sup> found that, the reasons for supporting FGC practice were religious tradition (33%), cleanliness for girls (19%), cultural and social tradition (18%) and chastity (16%). Previous studies<sup>(28, 30, 31)</sup> showed that the most important cause for supporting FGC is religious requirement. The current study showed only 19% of students saw that FGC is a religious requirement. This finding indicated that better education changed the beliefs related FGC especially for younger women. EDHS, 2008<sup>(15)</sup> supported this finding by reporting that, women under age 25 were less likely than older women to see circumcision as a religious requirement. Our finding showed that 23% of males thought that FGC was an important religious tradition compared to 9% of females. This finding also emphasizes the importance of giving more effort towards health education of males concerning FGC.

The reasons to reject practice, in this study, were painful procedure (23%), unhealthy procedure (25%), no religious support (29%), and bad social habit (22%). The main cause to reject the practice was no religious support (32%) in males while it was unhealthy procedure (29%) in females. The reasons for rejecting the procedures reported by Tag-Eldin et al<sup>(18)</sup> were unhealthy and painful procedure (54%), unnecessary for females (18%), no religious support

(20%) and bad social habit (4%). These differences can be attributed to differences in the composition of the groups. Our study was composed of university students including males and females, while the Tag-Eldin et al<sup>(18)</sup> study composed from female school students.

### Conclusion

In conclusion, this study showed improved knowledge and attitudes of university level students towards FGC. However, about one-third of student still supporting this practice especially males. Effort towards health education for both male and female students about FGC, better to include topic about FGC in the curriculum, will help in discontinuation of FGC in the future.

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### Conflicts of interest

There are no conflicts of interest.

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**Table 1: Demographic Characteristics of Respondents**

<b>Characteristics</b>	<b>Total No. (%)</b>
<b>Age</b>	
Mean (SD)	19.66 (1.51)
Median (range)	20 (17-23)
<b>Sex</b>	
Male	595 (55.35)
Female	480 (44.65)
<b>Type of study</b>	
Faculty of Agriculture	170 (15.81)
Faculty of Arts	188 (17.49)
Faculty of Nursery	194 (18.05)
Faculty of Commence	181 (16.84)
Faculty of Education	185 (17.21)
Technical Health Institute	157 (14.60)
<b>Grade</b>	
1	266 (24.74)
2	261 (24.28)
3	285 (35.81)
4	163 (15.16)
<b>Residence</b>	
Rural	599 (55.72)
Urban	476 (44.28)
<b>Religion</b>	
Muslim	883 (82.14)
Christian	192 (17.86)
<b>Religious Commitment</b>	
Religious	292 (27.16)
To some extent	688 (64.00)
Not Religious	95 (8.84)
<b>Father education</b>	
Not educated	190 (17.67)
Primary or preparatory	195 (18.14)
Secondary or technical	585 (54.42)
University or higher	105 (9.77)
<b>Mother education</b>	
Not educated	396 (36.84)
Primary or preparatory	189 (17.58)
Secondary or technical	438 (40.74)
University or higher	52 (4.84)
<b>Father work</b>	
Not work	199 (18.51)
Work	876 (81.49)
<b>Mother work</b>	
Not work	964 (89.67)
Work	111 (10.33)

**Table 2: Knowledge about FGM**

	Response			P value
	Yes	No	Don't Know	
	Number (%)	Number (%)	Number (%)	
<b>The possible complications of FGM are</b>				
<b>Hemorrhage</b>	<b>641 (59.63)</b>	<b>220 (20.47)</b>	<b>214 (19.91)</b>	0.26
▪ Male	343 (57.65)	124 (20.84)	128 (21.51)	
▪ Female	298 (62.08)	96 (20.00)	86 (17.92)	
<b>Genital tears &amp; infections</b>	<b>623 (57.95)</b>	<b>220 (20.47)</b>	<b>232 (21.58)</b>	<0.0001
▪ Male	294 (49.41)	135 (22.69)	166 (27.90)	
▪ Female	329 (68.54)	85 (17.71)	66 (13.75)	
<b>Infertility</b>	<b>543 (50.51)</b>	<b>209 (19.44)</b>	<b>323 (30.05)</b>	<0.0001
▪ Male	232 (38.99)	138 (23.19)	225 (37.82)	
▪ Female	311 (64.79)	71 (14.79)	98 (20.42)	
<b>Difficult labour</b>	<b>746 (69.40)</b>	<b>185 (17.21)</b>	<b>144 (13.40)</b>	0.002
▪ Male	386 (64.87)	116 (19.50)	93 (15.63)	
▪ Female	360 (75.00)	69 (14.37)	51 (10.63)	
<b>Serious complications up to death</b>	<b>626 (58.23)</b>	<b>248 (23.07)</b>	<b>201 (18.70)</b>	<0.0001
▪ Male	318 (53.45)	141 (23.70)	136 (22.86)	
▪ Female	308 (64.17)	107 (22.29)	65 (13.54)	
<b>Decrease sexual pleasure in females</b>	<b>690 (64.19)</b>	<b>210 (19.53)</b>	<b>175 (16.28)</b>	0.009
▪ Male	379 (63.70)	103 (17.31)	113 (18.99)	
▪ Female	311 (64.79)	107 (22.29)	62 (12.28)	
<b>Dyspareunia and loss of libido</b>	<b>655 (60.93)</b>	<b>269 (25.02)</b>	<b>151 (14.05)</b>	<0.0001
▪ Male	338 (56.81)	143 (24.03)	114 (19.16)	
▪ Female	317 (66.04)	126 (26.25)	37 (7.71)	

**Table 3: Reasons for Supporting or Rejecting FGM**

Variable	Male	Female	Total	
<b>Reasons to support practice</b>				
▪ Religious	59 (23.69)	13 (9.42)	72 (18.60)	0.01
▪ Cleanliness	26 (10.44)	19 (13.77)	45 (11.63)	
▪ Cultural/social issues	49 (19.68)	33 (23.91)	82 (21.19)	
▪ Chastity	71 (28.51)	40 (28.99)	111 (28.68)	
▪ Evidence of femininity	44 (17.67)	33 (23.91)	77 (19.90)	
<b>Reasons to reject practice</b>				
▪ Painful procedure	79 (22.83)	86 (25.15)	165 (23.15)	0.01
▪ Unhealthy procedure	69 (19.94)	100 (29.24)	169 (24.56)	
▪ No religious support	112 (32.37)	88 (25.73)	200 (29.07)	
▪ Bad social habit	86 (24.86)	68 (19.88)	154 (22.38)	