Prevalence of Female Genital Mutilation at Beni-Suef Governorate, Egypt

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Abstract

Background: Female genital mutilation/cutting are procedures in which young girls' and women's external genital organs are manipulated, altered, or removed. Female genital mutilation is considered to be a kind of gender discrimination against women and girls. **Aim:** The present study was carried find out about FGM in Beni-Suef Governorate. **Design:** Descriptive Cross-sectional study. **Setting:** Family Health Centers (FHCs) in different Governorates at Beni-Suef. **Sample:** Convenient sample. **Tools:** pre-designed structured questionnaire was used to collect data. The questionnaire is divided into six sections: (I): Socio-demographic and personal data. (II): Knowledge of females regarding FGM/C. (III): Attitudes of females regarding FGM/C. (IV): Intention to practice FGM/C. (V): Reasons for practicing FGM/C and reasons for refusing FGM. (VI): Female Sexual Function Index (FSDI). **Results:** The prevalence of FGM/C was 71.4%. Only 25.7% of females had good knowledge about FGM/C; 35.5% had an unfavorable attitude towards supporting FGM/C. About 29.7% of participants in the current study are suffering from complications after FGM. There was a significantly higher Desire, Arousal, Lubrication, orgasm, Satisfaction domain, and Total score among not circumcised married participants than circumcised ones. However, the Pain domain didn't differ significantly between circumcised and not circumcised. **Conclusion:** the prevalence of FGM/C is still higher despite the health consequences of the procedure. There was a significant association between rural residence, lower mother and father education, marriage, and the presence of circumcision. **Recommendation:** Continuous educational programs for mothers and health care providers about FGM are required to increase their awareness.

Keywords: Female genital mutilation, prevalence, Beni-Suef.

Introduction

Female genital mutilation/cutting (FGMC) is a traditional and cultural procedure that includes all procedures that involve partial or total removal of the external female genitalia, or other injuries to the female genital organs for non-medical reasons. ***(WHO, 2016).*** The most commonly claimed reasons for FGM/C were social conventions, religion, ensuring premarital virginity and marital fidelity, enhancing marriageability, and cultural values of femininity and modesty ***(WHO, 2020).***

The female genitalia is thought to be filthy and unattractive, and the clitoris contains toxins. It is thought to cause impotence in men and to be harmful to the infant after delivery. One of the major reasons for FGM/C is this belief ***(ILOKA, 2022).***

The WHO put four classifications for FGM/C (WHO, 2018): **Type I:** It includes the partial or total removal of the clitoris and/or prepuce. **Type II:** It includes the partial or total removal of the clitoris and therefore the labia minora with or without excision of labia majora. **Type III:** it's also called infibulation. This kind includes narrowing the opening of the vagina and creating a seal covering by excision and repositioning of the labia minora or majora. The clitoris and therefore the prepuce could be excised. **Type IV:** It includes other harmful procedures done to the female genitalia for non-medical causes like piercing, incising, pricking, cauterization or scraping. In Egypt, the most commonly practiced types of FGM are types I and II. **(WHO, 2018).** There is no concrete evidence of where FGM was first beginning to be practiced, but some studies suggest it'd are first started in ancient Egypt and then spread to different parts of the world at different times ***(Abdelhafeez, et al.,2020).***

Regardless of its origin, FGC has been performed by Christians, Muslims, and Animists. The practice was also common in the U. S. of America and Europe in the early 19th century when cutting of genitals was wont to treat psychological disorders, and prevent masturbation also as "clitoral enlargement", epilepsy, and hysteria ***(Abathun, et al., 2017).***

Female genital mutilation/cutting has no benefits; on the contrary, it has several negative health consequences and alters the normal function of women's bodies ***(WHO, 2020).*** Female genital mutilation has both physiological and psychological consequences, including short- and long-term effects ***(Young, et al., 2020).*** The approach used to perform the procedure may influence the severity of the short-term consequences ***(Klein, et al., 2018).***

Significant of the study:

Female genital mutilation/ cutting is a global problem that affects women and girls all over the world. Over 200 million girls and women have been subjected to female genital mutilation (FGM) globally. In Africa, every five minutes a girl undergoes FGM. **(Obiora, et al., 2021).** In Egypt, although the prevalence of FGM/C among females aged 15-49 declined from 97% in 1985 to 87% in 2015, the prevalence remains high despite governmental efforts **(MOHP, et al., 2015).** The prevalence of FGM/C among adolescent girls and women has dropped from 94% in 2008 to 88% in 2014 ***(Alkhalaileh, et al., 2018).*** The prevalence of FGC is ranging from 61% in Lower Egypt to 97% in Upper Egypt. It is practically common in Upper Egypt, with highs of 73.9%, 75.5%, and 85.5% in Beni-Suef, Assiut, and Luxor, respectively ***(EL-Gharib, 2019).*** According to a study conducted on 860 preparatory school female students attending two public schools in the rural area in Beni-Suef city the prevalence of FGM was 78.8% ***(Khamis, et al., 2019).***

Aim of the Study

The present study was carried find out about FGM in Beni-Suef Governorate through:

- Assess the prevalence of FGM at Beni-Suef and compare it over time.
- Assess the causes of FGM at Beni-Suef.
- Assess the effect of FGM.
- Estimate the attitude of females toward the practice of FGM.

Subjects and methods

I. Technical Design:

Study Design: Descriptive Cross-sectional study was used to achieve the aim of the current study.

Setting: The study was conducted in family health centers (FHCs) in different Governorates at Beni-Suef.

Subjects: Convenient sample will be used.

Tools of data collection

Pre-designed structured questionnaire will be used to collect data. Data will be collected through personal interviews. The questionnaire is divided into six sections:

Section I: Socio-demographic and personal data. Including age, residence, level of education, marital status, occupation and experience with mutilation, etc……

Section II: Knowledge of females regarding FGM/C: Females' knowledge was assessed using both single-response and multiple-response questions. They included knowledge of females about the spread, types, and procedures of FGM/C, side effects, and health consequences of FGM/C and FGM/C in Egyptian law. A scoring system was developed, and the total knowledge score was calculated by summing the scores of all questions. The total level of knowledge is considered as follows:

- Good level of knowledge >75%.
- A fair level of knowledge is 50% to <75%.
- Poor level of knowledge <50%.

Section III: Attitudes of females regarding FGM/C: A Likert scale was used to assess attitudes, ranging from agree to disagree. FGM/C from a social standpoint; FGM/C and its effect on female genitalia; FGM/C violation and disability; FGM/C from a religious standpoint; FGM/C practice encouragement in society; FGM/C and marriage; and finally, FGM/C law were all included.

Scoring system

The statement's favorable attitude received (3). The neutral attitude received (2) and the bad attitude received (1). The total level of attitude is considered as follows:

- Favorable attitude ≤75%
- Neutral attitude 50% to<75 %
- Unfavorable attitude >50%

Section IV: Intention to practice FGM/C: It included questions about the following:

- Planning mutilating daughter(s).
- Supporting the practice of FGM/C.
- Confiscating information about mutilating daughters (age of the daughter, any health consequences, who perform mutilation, intention for mutilation of daughters in future).
- Facing social pressure from family or neighbors to have their daughter undergo FGM/C (s).
- Is there anyone in the area who does or wants to conduct FGM/C?

Section V: Reasons for practicing FGM/C and reasons for refusing FGM

Section VI: Female Sexual Function Index (FSDI). A four-week self-reported questionnaire that examines the key characteristics of female sexual function. It consists of 19 multiple-choice questions that assess six domains. Each dimension was rated on a scale of 0/1 (no sexual activity or sexual dysfunction) to 5 (complete sexual activity).

Researchers will use the Arabic version of the FSFI, which was translated by ***(Anis, et al., 2011),*** For the Arabic version of the FSFI, a total score of 28.1 was used as the cutoff point to distinguish between women with FSD and those with normal function (sensitivity 96.7%, specificity 93.2%). The scale has been translated into Arabic.

Validity of the Tool:

Content validity will be done through five experts from Faculty Members of the Maternal Health Nursing department and obstetrics medicine Specialty to ascertain relevance and completeness.

Tool reliability:

The study tools were tested for their internal consistency by calculating Cronbach's Alpha, it was (0.405) for knowledge and (0.764) for attitude.

Ethical Consideration:

The Scientific Research Ethics Committee Faculty of Nursing Beni-Suef University granted official authorization to undertake the planned study. Subjects were given thorough information about the study and their role before completing the informed consent form, and they were informed that they had the right to refuse to participate. Explaining the goal and nature of the study, as well as the opportunity of withdrawing at any moment, were all ethical considerations, as was the confidentiality of the information, which was not accessible by anyone else without the participants' agreement. Ethics, values, culture, and beliefs were all held in high regard.

II- Operational Design:

This study's operational design consisted of three phases: a preparatory phase, a pilot study, and fieldwork.

Preparatory phase:

Using textbooks, articles, journals, and websites, this phase began with a survey of current and past national and worldwide related literature about the study's subjects. This review aided the researcher in reviewing and constructing data collection tools, and the researcher then assessed the tool's validity with an expert jury to ensure that the substance, knowledge, accuracy, and relevance of questions for tools were all met.

Pilot study:

A pilot study was conducted on 10% of the entire study population to examine the applicability, efficiency, and clarity of tools, as well as the practicality of fieldwork. Based on the outcomes of the pilot research, necessary modifications were made, such as the exclusion of some questions from the tool, to reinforce their contents or for greater simplicity and clarity. The pilot sample was not included in the study's main sample.

III- Administrative Design:

The title and protocol were approved by the Beni-Suef University officials, and the protocol was approved by the ethical committee. The dean of Beni-Suef University's college of nursing sent an official letter to the family health centers (FHCs) in Beni-Suef Governorates, requesting permission to conduct the study. This letter provided the study's goal as well as photocopies of data collecting materials to obtain their consent and assistance with data collection.

Fieldwork

The information was gathered over six months beginning in November 2021 and ending in April 2022. The researcher was present at the

previously indicated location until the entire sample size was gathered. Before data collection, the researcher introduced herself to the women and explained the purpose of the study.

The sample was taken three times a week; from 9 A.m. to 2 P.m. Women's consent was acquired orally before data collection. The researcher begins filling out the interviewing questionnaire to assess women's socio-demographic characteristics, knowledge of FGM/C, attitudes toward FGM/C, intention to practice FGM/C, reasons for practicing FGM/C, and reasons for refusing FGM/C, and Female Sexual Function Index (FSDI). The instruction was given to each woman individually for 3 sessions each session ranging from 15-20 minutes on an individual.

IV- Statistical Design:

Data Management and Analysis:

Using a statistical tool for social sciences, the acquired data was updated, coded, tabulated, and entered into a computer (IBM SPSS 25). Data was supplied, and appropriate analysis was performed for each parameter based on the type of data obtained. Mean and standard deviation was used to express quantitative variables (SD). Chi-square (2) test results were used to analyze categorical variables. Pearson's correlation test was employed to evaluate quantitative variables, and the Student's t-test was applied to compare group means.

Results:

Table (1) showed that the mean age of the studied participants was 22.6±5, most of them were rural residents (70.4%), 90.2% were highly educated, 57.5% were single, 96.8% were Muslims, and most of their mothers were educated (72.8%), and most of their fathers were educated (83.2%). About two-thirds of the participants were a student (65.4%).

Figure (1) shows that the prevalence of FGM/C was 71.4%.

Table (2) shows that. Non-mutilated females constituted 28.6% of the studied females. Among them, 39.9% were medically examined by physicians or other mutilators to know whether they needed to be mutilated or not. The mean age at the time of mutilation was 12.5±2.5 years. More than half of mutilation cases (51%), the mother was the person responsible for the mutilation decision, and in 44% both parents were responsible for the mutilation decision.

Table (3) showed that there was a significant association between rural residence, lower mother and father education, marriage, and the presence of circumcision.

Table 4 shows that: About 64% and 59.6% of females knew that FGM/C causes psychological problems and social problems, respectively, 71.3% knew that FGM/C might cause the girls' death, while almost half of females (56%) had a misconception that FGM/C does not affect the woman's sexual satisfaction. About 29.7% of participants are suffering from complications after FGM. About 82.1% of them suffered from pain after the surgery, also 33.9% mentioned severe bleeding, 31.1% suffers from difficult micturition and about 18.6 have a keloid and scar from the mutilation.

Table 5 showed that there was a significantly higher Desire domain of 5.8±1.8, Arousal domain of 13.7±2.9, Lubrication domain of 16±3.4, Orgasm domain11.7±2.6, Satisfaction domain13.3±2.4, and Total score among not circumcised married participants than circumcised ones but the Pain domain didn't differ significantly between circumcised 9.7±3.3 and not circumcised 9.3±2.2.

Only 25.7% of females had good knowledge regarding FGM/C, while 40.5% and 33.8% had poor and fair levels of knowledge, respectively **Figure (2).**

Figure (3) describes the percent of the distribution of females according to their total attitude score towards FGM/C. More than one-third of females (35.5%) had an unfavorable attitude towards (supporting) FGM/C and 44.3 % of them had a favorable attitude towards (refusing) FGM/C while 20. 2% had a neutral attitude.

Table (6) plan for FGM for daughters among the studied participants: About 29.4% of females aged 18-60 had the intention to mutilate their daughters. About 39.8% had already mutilated their daughters or sisters; with a mean age of 10.9±2.3 years. The mutilated daughters who had complications during or after the FGM/C procedure amounted to 6.9%.

Table (7) shows the distribution of females aged 18-60 years according to their reasons for performing and reasons for refusing FGM/C**.** Traditions and culture was the main reason for performing FGM/C as stated by females (77.4%), followed by religious requirements 21.7 %. decrease the sexual desire of females (14.4%), while 1.2%and 13.2% mentioned protection of virginity and to be an acceptable pride, About 2.7% of females did not know the reasons for performing FGM/C.

Table (1) Socio-demographic characteristics of the studied participants:

Items	Values (no=2837)	
	No.	%
Age		
18-	2020	71.2
30-	719	25.3
45-60	98	3.4
Age (Mean ± SD)	22.6±5	
Residence		
Rural	1997	70.4
Urban	840	29.6
Educational level		
Basic	46	1.6
Secondary or equivalents	231	8.1
High	2560	90.2
Marital status		
Single	1630	57.5
Married	1190	41.9
Divorced	15	0.5
Widow	2	0.1
Religion		
Muslim	2746	96.8
Christian	91	3.2
Mother education		
Illiterate	773	27.2
Educated	2064	72.8
Father education		
Illiterate	478	16.8
Educated	2359	83.2
Occupation		
Student	1854	65.4
Work	720	25.4
Not work	263	9.3

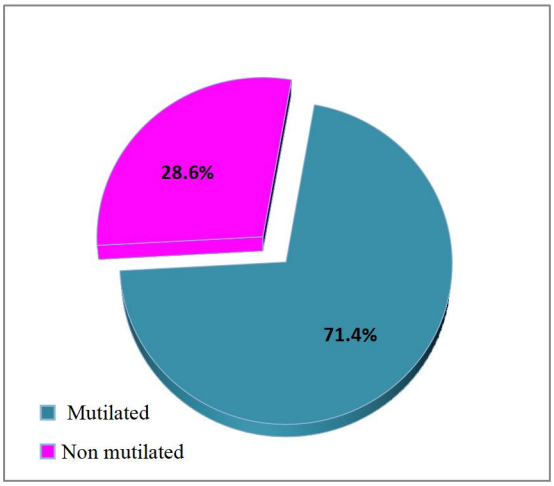

Figure (1): Prevalence of female genital mutilation/cutting.

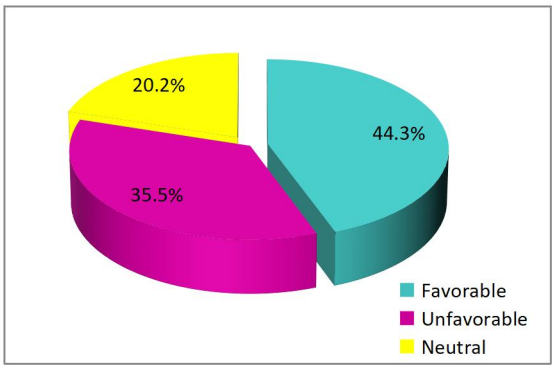

Figure (2): The distribution of females aged 18-60 years according to their total knowledge score.

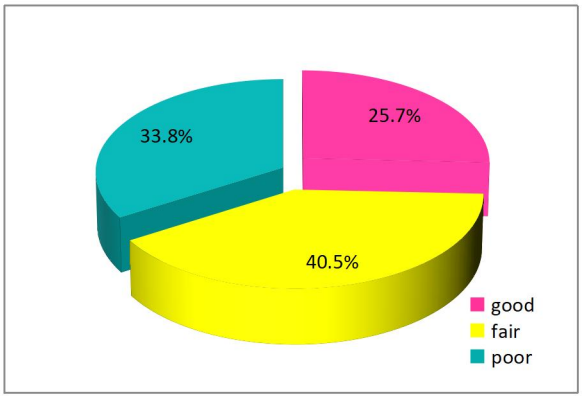

Figure (3): percent of the distribution of females according to their total attitude score towards FGM/C.

Table (2) Experience of FGM among the studied participants:

Items	Values (no=2837)	
	No.	%
Circumcised		
No	816	28.6
Yes	2021	71.3
age at circumcision (no=2021)		
<5(2-3yrs)	3	0.1
5-	160	7.9
10-	1533	75.8
>15	321	15.8
Mutilated after the marriage).	4	0.19
Mean age at circumcision (no=2021)	12.5±2.5	
Who took the decision? (no=2021)		
Mother	1030	51.0
Father	26	1.3
Mother and father	890	44.0
Grandmother	29	1.4
Aunt	22	1.1
Other (husband, stepmother)	12	0.5
By their own decision	2	0.09
Don't know	10	0.5
Place at which performed (no=2021)		
Home	1259	62.3
Private clinic	740	36.6
Hospital	22	1.1
Medical examination before the procedure:		
No	1216	60.1
Yes	805	39.9
Who perform it? (no=2021)		
Doctor	1124	55.6
Nurse	602	29.8
Dayah	170	8.4
Barber	23	1.1
Don't know	102	5.0
Types that you had (no=2021)		
Sunni (clitorectomy)	461	16.2
Excision	98	3.5
Pharaonic type	8	0.3
Don't know	1454	51.3

Table (3) Risk factors associated with FGM from baseline socio-demographic characteristics:

Items	Not circumcised		Circumcised		P-value
	(no=816)	%	(no=2021)	%	
Residence					
Rural	353	43.3	**1644**	**81.3**	<0.001*
Urban	463	56.7	377	18.7	
Educational level					
Basic	9	1.1	**37**	**1.8**	<0.001*
Secondary	37	4.5	**194**	**9.6**	
High	**770**	**94.4**	1790	88.6	
Marital status					
Single	519	63.6	1110	54.9	<0.001*
Married	292	35.8	**899**	**44.5**	
Divorced	5	0.6	10	0.5	
Widow	0	0.0	2	0.1	
Religion					
Muslim	786	96.3	1960	97.0	0.368
Christian	30	3.7	61	3.0	
Mother education					<0.001*
Illiterate	145	17.8	628	31.1	
Educated	**671**	**82.2**	1393	68.9	
Father education					<0.001*
Illiterate	76	9.3	402	19.9	
Educated	**740**	**90.7**	1619	80.1	

*P-value is significant

Table (4) FGM effects and knowledge related to Complications of FGM among the studied participants:

Items	Values (no=2837)	
	No.	%
FGM causes psychological problems		
No	505	17.8
Yes(correct)	1816	64.0
I don't know	516	18.2
FGM causes social problems		
No	708	25.0
Yes(correct)	1690	59.6
I don't know	439	15.5
FGM leads to death (immediate effect)		
No	301	10.6
Yes(correct)	2022	71.3
I don't know	514	18.1
FGM does not affect sexual desire (late effect)		
No(correct)	1590	56.0
Yes	461	16.2
I don't know	786	27.7
Are there complications of FGM		
Yes(correct)	2477	87.3
No	360	12.7
Immediate health consequences:		
Correct:		
Bleeding	1698	59.5
Severe pain	1396	49.2

Psychological trauma	457	16.1
Inflammation	527	18.5
Micturition problem	415	14.6
Death	306	10.7
Incorrect		
Severe anemia	360	12.6
Vomiting and diarrhea	101	3.5
Fainting	70	2.4
Don't know	156	5.4
Long term complication		
Correct		
Psychiatric consequences	1387	48.8
Sexual consequences	1475	51.9
Nodules and keloids	218	7.6
Menstrual problem	49	1.7
Labor problem	26	0.9
Incorrect		
Blood pressure disturbance	4	0.1
Heart problem	9	0.3
Pregnancy problems	65	2.2
Don't know	145	5.1
Did you have complications from the mutilation?		
Yes **No**	602 1419	29.7 70.3
If yes, mention the complication you have		
Pain Bleeding Difficult urination Keloids and scar Inflammation	290 120 110 66 20	82.1 33.9 31.1 18.6 5.6
Sources of information about FGM and its complication:		
Personnel experience Friends and neighbors Family TV and radio Lecture about FGM Religious leader Doctor or nurse Internet Books	2021 1028 95 626 229 146 294 629 1	71.3 36.2 3.3 22 8 5.1 10.3 22.1 0.03

Table (5) Association between FGM and the sexual score domains and total score:

Items	Not circumcised (no=291)	Circumcised (no=899)	P-value
Desire Domain	5.8±1.8	5.1±1.7	<0.001*
Arousal domain	13.7±2.9	12.3±3.6	<0.001*
Lubrication domain	16±3.4	13.6±4.3	<0.001*
Orgasm domain	11.7±2.6	10.6±3.1	<0.001*
Satisfaction domain	13.3±2.4	11.8±3.6	<0.001*
Pain domain	9.3±2.2	9.7±3.3	0.052
Total score	64.3±10.8	58.3±14.6	<0.001*

*P-value is significant

Table (6) plan for FGM for daughters among the studied participants:

Items	Values (no=2837) No.	%
Are you support the continuation of FGM for young generations?		
- No	1478	52.1
- Yes	834	29.4
- I don't know	525	18.5
Are you planning to mutilate your daughter or sister in the future?		
- No	1478	52.1
- Yes	834	29.4
- I didn't decide	525	18.5
Have you already circumcised your daughter or sister?		
- No	1707	60.2
- Yes	1130	39.8
How old was your daughter or sister when you performed the mutilation	10.9±2.3	
Who perform it? (no=1130)		
- Doctor	692	61.1
- Nurse	393	35.0
- Dayah	30	2.6
- Barber	15	1.3
Did she have complications from the mutilation? (no=1130)		
- No	1051	93.1
- Yes	79	6.9
Do you intend to perform FGM for your sister or daughter again?		
- No	1519	53.5
- Yes	811	28.6
- I didn't decide	507	17.9
Are you pressured by a family member to do FGM again?		
- No	2268	79.9
- Yes	569	20.1
Are you under pressure from your neighbors?		
- No	2670	94.1
- Yes	167	5.9
Do you know who performs FGM?		
- No	1736	61.2
- Yes	1101	38.8

Table (7): Distribution of females aged 18-60 years according to their prospects of reasons for performing and reasons of refusing FGM/C

Variables	No. (n=2837)	%
Reasons for performing FGM/C		
- Customs and traditions	**2198**	**77.4**
- Religious requirements	**616**	**21.7**
- To protect virginity	**36**	**1.2**
- To be an acceptable bride	**375**	**13.2**
- To reduce female sexual desire	**411**	**14.4**
- To facilitate the birth process and prevent the death of fetuses	**79**	**2.7**
- To move from the adolescent stage to women	**68**	**2.3**
- Aesthetic reason	**41**	**1.4**
- Cleanliness	**101**	**3.5**
- To be not refused by social and husband.	**14**	**0.4**
- don't know	**79**	**2.7**
Reasons of refusing FGM/C(n= 1478)		
- FGM/C causes health consequences mainly psychological and sexual.	700	47.3
- FGM/C is not necessary/ has no benefit	150	10.1
- FGM/C causes problems between wife and husband	139	9.4
- FGM/C is forbidden in religion	80	5.4
- FGM/C is not a religious commitment	70	4.7
- FGM/C causes death	111	7.5
- FGM/C is a bad and wrong tradition	88	5.9

Discussion:

Female genital mutilation/cutting is still one of the largest public health issues in Egypt and its governorates, despite the efforts made by the Egyptian government to eradicate it. The prevalence of FGM in the present study was 71.4%. It was lower than the prevalence of FGM/C stated in the latest study which was 78.8% ***(Khamis, et al., 2019).*** A survey of young women living in Beni-Suef City revealed that the prevalence was 55% ***(Ali, et al., 2018).*** Another research among university students in Beni-Suef found that 47.3 % had been circumcised (***Arafa, et al 2018).***

This may be accounted for by the variations in research settings and times. Despite the lesser incidence, a mutilation performer examined roughly 36.6% of non-mutilated girls to determine whether they need mutilation. The prevalence of FGM/C would have been higher if these females had been mutilated. The mean age at the time of mutilation was greater in the current study (12.5±2.5 years) compared to (7.89± 4.56, 5.6± 3.6, and 9.37 ± 2.38) studies in conducted Ethiopia (**Bogale, et al., 2015)**, southern Iran **(Dehghankhalili, et al., 2015**), and El-Mansoura Center, El-Dakahlia among school girls (***Yasin, 2013).***

Regarding the mutilation decision; in more than half of mutilated cases (51%), the mother was the person responsible for the mutilation decision. This was lower than the results of Yasin, (2014) who reported that mothers were responsible for FGM/C decisions in 65.2% of the sample. The disparities in the socio-demographics of the individuals and study sites may account for this. In the current study, medical professionals carried out 85.4% of the FGM/C procedures (physicians and nurses). However, the rate was comparable to the study conducted in Upper Egypt, which showed that girls were mutilated by medical professionals (88.2%, 34.3%, and 14.9%) of nurses, young physicians, and senior physicians, respectively. ***(Rasheed, et al., 2011).*** Regarding the type of FGM: more than half of the

participants (51.3%) the females did not know the type of FGM/C they were exposed to. Among those who knew, type I (16.2%) was the most commonly reported type, and the same outcomes were confirmed by other studies in Egypt. ***(El-Defrawi, et al., 2001; Mitwaly, et al., 2017; Ismail, et al., 2017).*** The most frequent type of FGM/C in the United Arab Emirates study was type I (62.8%), ***(Dehghankhalili, et al., 2015).***

The prevalence of FGM/C was found to be lowest among highly educated females (94.4%), most of their mothers were educated (82.2%), and most of their fathers were educated (90.7%). This finding was at odds with SYPE findings and the EHIS, which indicated that the prevalence of FGM/C reduced as educational attainment rose. The findings of the current study agreed with those of a study carried out in Alexandria, which revealed that mutilated females were more likely to be illiterate or have limited reading and writing skills than non-mutilated females ***(Mady, 2017).*** The present study shows that there was a significant association between rural residence, lower mother and father education, marriage, and the presence of circumcision. This outcome was consistent with a UAE study that found a significant correlation between education level and mutilation ***(Al Awar, et al., 2020)***

Regarding studied females' Knowledge about FGM/C, the results of the current study illustrated that; All of the female participants in the current study stated that they had heard of FGM/C and were aware that it was practiced in Egypt. This outcome was similar to the result of the study conducted on Egypt ***(Abdou, et al., 2020)*** and Ethiopia ***(Belda & Tololu, 2017).***

In the current study, only 25.7% of females had good knowledge about FGM/C. This result was much lower than results reported in Sudan ***(Esmail, et al., 2016)*** and Nigeria ***(Ibekwe, et al., 2012)*** which reported that most females had a good level of knowledge relating to FGM/C.

Most participants (87.3%) in the current study were aware that FGM/C has health effects, which was consistent with research done among university students in Sohag ***(Yousef, et al., 2017).*** Participants in the current study identified bleeding (59.5%), sexual repercussions (51.9%), severe pain (49.2%), and inflammation (18.5%) as the short- and long-term health effects of FGM/C. Comparable findings were reported from Ethiopia ***(Elgaali, 2005***) and Sohag ***(Yousef, et al., 2017***). some participants revealed that FGM can lead to labor and menstrual problems (0.9% & 1.7%, respectively).

About 29.7% of participants in the current study are suffering from complications after FGM. This was less than a study conducted in Sierra Leone where the majority (84.5%) of respondents reported complications of FGM. ***(Bjälkander, et al., 2012).*** About 82.1% of them suffer from pain after the surgery, also 33.9 % have severe bleeding, 31.1% suffer from difficult micturition and about 18.6% have a keloid and scar from the mutilation. These complications, including pain, heavy bleeding during the surgery, and trouble urinating, were also mentioned in the Nigerian study ***(Mandara, 2004)***.

The personal experience served as the primary information source for this study's analysis of FGM and its complications 71.3%, followed by friends or neighbors 36.2%, and 22% from TV or radio. In contrast, television and other forms of mass media were the main sources of information in the ***Yousef, et al., 2017*** study; ***Mohammed, et al., 2018.***

Regarding the effect of FGM/C on Female Sexual Function according to FSDI, the result of the current study illustrated that almost half of females (56%) had a misconception that FGM/C does not affect a woman's sexual satisfaction, and 14.4% of the participant stated that the reason for continuing FGM was to decrease the sexual desire of females. There was a significantly higher Desire domain of 5.8±1.8, Arousal domain of 13.7±2.9,

Lubrication domain of 16±3.4, Orgasm domain of 11.7±2.6, Satisfaction domain of 13.3±2.4, and Total score 64.3±10.8 among not circumcised married participants than circumcised ones. But the Pain domain didn't differ significantly between circumcised 9.7±3.3 and not circumcised 9.3±2.2. These findings were similar to those conducted among Egyptian women that revealed that Unmutilated subjects showed a considerably higher overall FSFI score (23.99 2.21 vs. 26.81 2.26 for mutilated participants). The un-mutilated subjects scored considerably higher on desire, arousal, lubrication, orgasm, and satisfaction (4.02±0.78, 4.86±0.72, 4.86±0.75, 4.86±0.68, and 5.04±0.71, respectively) than the mutilated participants (3.37±0.89, 4.13±0.71, 4.16±0.84, 4.50±79, and 4.69±0.92 regarding the sexual pain domain, no apparent difference between the two groups was reported. **(Anis, et al., 2012; Ismail, et al., 2017).**

Concerning the attitude of females towards FGM/C; the present study revealed that more than one-third of females (35.5%) had an unfavorable attitude towards (supporting) FGM/C and 44.3% of them had a favorable attitude towards (refusing) FGM/C while 20.2% had a neutral attitude. This result is higher than that reported In Sohag, a study of university students indicated that 29% of the female students supported the continued use of FGM/C. Their justifications included religious demands, girls' hygiene, cultural and social traditions, chastity, and signs of femininity ***(Yousef, et al., 2017).***

In the present study, about 29.4% of females aged 18-60 had the intention to mutilate their daughters. The EHIS statistics showed that 40.8 % intended to mutilate their daughters, which was lower than the results above ***(MOHP et al., 2015).*** The difference shows advancements in female attitudes, beliefs, and opinions regarding the ending of FGM/C in Egyptian society.

About 39.8% had already mutilated their daughters or sisters, with a mean age of 10.9±2.3 years. About 28.6% of females who had mutilated their daughters were planning to mutilate their other daughters in the future. According to a study of female schoolteachers in Cairo, 26.7% of them mutilated all of their daughters ***(Khalil & Orabi, 2017).***

Traditions and culture was the main reason for performing FGM/C as stated by females (77.4%), followed by religious requirements 21.7%. decrease the sexual desire of females (14.4%), while 1.2% and 13.2% mentioned protection of virginity and being an acceptable pride, respectively. About 2.7% of females did not know the reasons for performing FGM/C. These reasons were comparable to those reported by ***Allam, et al., (2001), and Abduo, et al., (2020)*** in Egypt.

Limitation of the study

Some respondents refused to participate in the survey because they were afraid of their husbands or of speaking with the researcher. Some participants were concerned that the researcher would alert the authorities about them or the mutilation process's perpetrators.

Conclusions

FGM/C is still a common procedure in Egypt and has a detrimental effect on Egyptian women's general health. FGM is still performed to a significant extent in Egypt, despite a drop in its frequency. Favorable attitude about FGM was estimated, while knowledge of the practice was unsatisfactory. Poor knowledge was positively connected with an unfavorable attitude, and both were predictors of females' propensity to practice female genital mutilation on their daughters. Males were crucial in the community of Egypt in maintaining the practice of FGM.

Recommendations

1. Development of educational programs for mothers and all care providers about FGM is required to increase their awareness.

2. Make a brochure's work on the health effect of female genital mutilation on health centers and hospitals.
3. Enforcement of the FGM/C law against all parties, whether parents seeking to perform FGM/C or health care workers or other persons participating in performing FGM/C.
4. Further studies are needed to assess: Motivations and behavior of health care workers to perform FGM/C.

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