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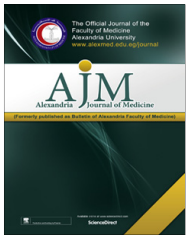

Effect of female genital mutilation on female sexual function, Alexandria, Egypt

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KEYWORDS

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Abstract *Background:* The global prevalence of female genital mutilation (FGM) ranges from 0.6% up to 98%. It has many health psychological impacts including abnormalities of female sexual function.
Objectives: To study female genital mutilation and its effect on female sexual function, Alexandria, Egypt 2013.
Methods: A case–control study was conducted on a convenient sample of 272 circumcised women with their 272 control from 4 randomly selected primary health care centers. Specially designed format (including data about socio-demographic characters, gynecological obstetric histories, and FGM act) and female sexual function index (a 19-item self-reported questionnaire for assessing the key dimensions of female sexual function) were used. Bivariate analysis was conducted to test significant differences between cases and control.
Results: 73.9% of cases experienced dysmenorrhea (OR = 3.750), 43.4% had obstructed labor (OR = 1.745) and 27.6% got postpartum hemorrhage (OR = 2.855). 48.9% of FGM was performed by dayas or midwives, 91.2% performed at home, 49.6% of type I, and 87.9% experienced complications. Cases had lower mean sexual function. 52.6% of cases were convinced with FGM.
Conclusion: FGM was a risk factor for dysmenorrhea, obstructed labor and postpartum hemorrhage. Cases had lower mean sexual function; moreover, half of them convinced with FGM practice and with its continuation.

1. Introduction

World Health Organization (WHO) defined female genital mutilation (FGM) as "all procedures that involve partial or total removal of the external female genitalia, or other injury to the female genital organs for non-medical reasons."[1] Many countries throughout the globe perform it: Western, Eastern, and North-Eastern Africa, particularly Egypt and

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Ethiopia, and in parts of Asia and the Middle East (nearly half of its cases are in Egypt and Ethiopia). The prevalence of FGM ranges from 0.6% up to 98%.[2] It was performed for about 140 million women and girls, 101 million in Africa alone.[1]

The practice is deep-rooted in gender disparity, cultural uniqueness, and ideas about purity, modesty, esthetics, status and honor. Moreover, it acts as a trial to manage women's sexual life by reducing their sexual desire, thus promoting chastity and fidelity. This practice is encouraged by both women and men.[3]

It is performed at the age of four years up to puberty. It is usually performed at home without anesthesia.[5] It has four types.[4] Type I is usually the removal of the clitoris and clitoral hood.[1] Type II is the removal of the clitoris and labia minora.[5] Type III involves the removal of all or part of the labia minora and majora, and usually the clitoris, with wound suture; a small hole is left for the passage of urine and menstrual blood, and the wound is re-opened for intercourse and childbirth.[5] Types I, II, and III are performed for 85% of cases. Type III is the most common procedure in Djibouti, Somalia and Sudan, and in parts of Eritrea, Ethiopia and Mali.[6] Type IV is the miscellaneous procedures at the external genitalia, for example symbolic piercing of the clitoris or labia, cauterization of the clitoris, and cutting into the vagina to widen it.[5]

FGM has many health effects including recurrent urinary and vaginal infections, chronic pain, infertility, hemorrhaging, epidermoid cysts, and difficult labor.[7] It has also its psychological impact and abnormalities in the female sexual function.[8]

Throughout Egypt, many studies have been conducted to determine the pattern and prevalence of FGM, but those studied the risks of FGM and its effect on women's sexual life are scare.[8–13] Therefore, this study was carried out.

2. Objective

To study the effects of female genital mutilation on female sexual function, Alexandria, Egypt 2013.

2.1. Subjects and methods

A case–control study was conducted during the period June through August 2013. A convenient sample of 272 currently married educated women had FGM with their 272 matched controls (their matching was for age, education and marital status); women were included from 4 randomly selected PHCC: 2 from urban and 2 from rural Alexandria (Abees region).

Approval of the authority was assured. Ethical consideration and confidentiality of the data were assured. Written signed consent was obtained from every participant after explanation of the objectives of the study. The response rate was 80% (272/340).

A specially designed interviewing format in Arabic was completed by the researcher followed by completion of Female Sexual Function Index (FSFI) by the women herself. The interviewing format included data about socio-demographic characters, gynecological and obstetric histories, and FGM act. The format also included female sexual function index (FSFI).[8] FSFI is a 19-item questionnaire, and has been developed as a brief, multidimensional self-report instrument for assessing the key dimensions of sexual function in women. It included 6 domains namely: desire, arousal, lubrication, orgasm, satisfaction and pain.[8] Satisfaction was measured using related 3 FSFI questions which measured in 3 choices modified Likert scale graded from 0 to 2, where unsatisfaction = 0, indifference = 1, and satisfaction = 2. Satisfaction is considered as (Yes) when the total scores $\geqslant 4$ and is considered as (No) when the total score < 4.

2.2. Statistical analysis

Data were entered and analyzed using SPSS version 17.0. Data were presented using frequencies, means and standard deviation. Bivariate analysis was conducted to test significant differences between cases and control. Chi-square test was used for qualitative variables and Student *t*-test for quantitative one. The level of significance was at 95% level.

3. Results

The mean age of the studied cases was 32.7 ± 7.44 years and their mean age of marriage was 20.4 ± 2.47, with no significant statistical differences between cases and control. (Table 1) Nearly two-fifths (39.3%) of cases got university education and more, 43.4% was working ($p = 0.006$), 49.6% belonged to middle social class ($p = 0.021$), and 74.3% lived in nuclear family (Table 1).

Table 1 Socio-demographic description of the studied women.

	Cases ($n = 272$ /%)	Control ($n = 272$ /%)	*p*-Value
Age (Mean ± SD)	32.7 ± 7.44	33.9 ± 8.33	0.096
Age at marriage (Mean ± SD)	20.4 ± 2.47	20.9 ± 2.79	0.053
Educational level			
Read and write	23 (8.5)	27 (9.9)	
Basic education	70 (25.8)	64 (23.6)	0.181
Secondary	72 (26.5)	63 (23.2)	
University and more	107 (39.3)	118 (43.4)	
Work status			
Housewife	155 (57.0)	123 (45.2)	**0.006***
Working	117 (43.0)	149 (54.8)	
Perceived social level			
Low	122 (44.9)	92 (33.8)	
Middle	135 (49.6)	167 (61.4)	**0.021***
High	15 (5.5)	13 (4.8)	
Place of origin			
Rural	157 (57.7)	153 (56.2)	0.729
Urban	115 (42.3)	119 (43.8)	
Family type			
Extended	70 (25.7)	64 (23.5)	0.550
Nuclear	202 (74.3)	208 (76.5)	

* *p*-Value is significant at less than 0.05 level.

Table 2 Gynecological and obstetric history of cases and their control.

	Cases (n = 272/%)	Control (n = 272/%)	p-Value	OR	CI at 95% level
Regularity of menses					
Irregular	115 (42.3)	110 (40.4)	0.663	1.079	0.767–1.518
Regular	157 (57.7)	162 (59.6)			
Dysmenorrhea					
Yes	201(73.9)	117(43.0)	**0.000***	**3.750**	**2.612–5.385***
No	71(26.1)	155(57.0)			
Mode of delivery					
Assisted	203 (74.6)	75 (27.6)	**0.000***	**7.728**	**5.278–11.314***
Normal	69 (25.4)	197 (72.4)			
Obstructed labor					
Yes	118 (43.4)	83(30.5)	**0.002***	**1.745**	**1.227–2.482***
No	154 (56.6)	189(69.5)			
Postpartum hemorrhage					
Yes	75 (27.6)	32 (11.8)	**0.000***	**2.855**	**1.812–4.499***
No	197 (72.4)	240 (88.2)			

* p-Value is significant at less than 0.05 level.

Table 3 Description of FGM practice.

	N = 272	%
Age of FGM		
Mean ± SD	9.7 ± 2.12	
Person performed it		
Barber	91	33.5
Daya or midwife	133	48.9
Nurse	22	8.1
Physician	26	9.6
Place		
Home	248	91.2
Medical center	24	8.8
Type		
I	135	49.6
II	127	46.7
III	10	3.7
Complications		
No	33	12.1
Yes	239	87.9
Bleeding	*73*	*30.6*
Shock	*76*	*31.8*
Pain	*17*	*7.2*
Urine retention	*73*	*30.6*
Who insisted on this practice		
Mother	94	34.6
Grandma	121	44.4
Others	57	21.0

Table 4 Sexual function among cases and control.

	Cases (n = 272)	Control (n = 272)	(p-Value)
Sexual desire			
Mean ± SD	2.8 ± 1.01	4.1 ± 0.85	**0.000***
Sexual arousal			
Mean ± SD	2.3 ± 1.47	4.3 ± 1.10	**0.000***
Lubrication			
Mean ± SD	2.1 ± 1.38	4.5 ± 0.99	**0.000***
Orgasm			
Mean ± SD	1.9 ± 1.41	4.4 ± 1.14	**0.000***
Satisfaction			
Mean ± SD	2.6 ± 1.27	4.4 ± 1.17	**0.000***
Pain			
Mean ± SD	2.6 ± 1.29	4.1 ± 1.26	**0.000***
Total score			
Mean ± SD	14.3 ± 5.93	25.9 ± 3.44	**0.000***

* p-Value is significant at less than 0.05 level.

For cases, the mean age of menarche was 11.7 ± 1.40 year, the mean number of gravidity, parity, abortions, and female daughters were 4.1 ± 1.85, 3.1 ± 1.30, 1.1 ± 1.11and 1.5 ± 0.97 respectively with insignificant difference between cases and control (data were not presented).

Regarding gynecological and obstetric history of cases, 42.3% had irregular menses, 73.9% experienced dysmenorrhea (OR = 3.750), 43.4% had obstructed labor (OR = 1.745) and 27.6% got postpartum hemorrhage (OR = 2.855) (Table 2).

On describing the FGM act, the mean age of that act was 9.7 ± 2.12 year, 48.9% of cases were performed by dayas or midwives, 91.2% performed at home, 49.6% of type I, 87.9% experienced complications and for 44.4% of cases, grandma was the person who insisted for doing this act (Table 3).

Regarding the sexual functions, the cases had lower mean sexual function than control in all aspects namely sexual desire, sexual arousal, lubrication, orgasm, satisfaction, and pain, with total score of 14.3 ± 5.93 for cases and 25.9 ± 3.44 for control (p = 0.000) (Table 4).

Fig. 1 illustrates that 52.6% of cases were convinced with FGM (p = 0.000) and 46.0% of them actually did it or plan to do it for their daughters.

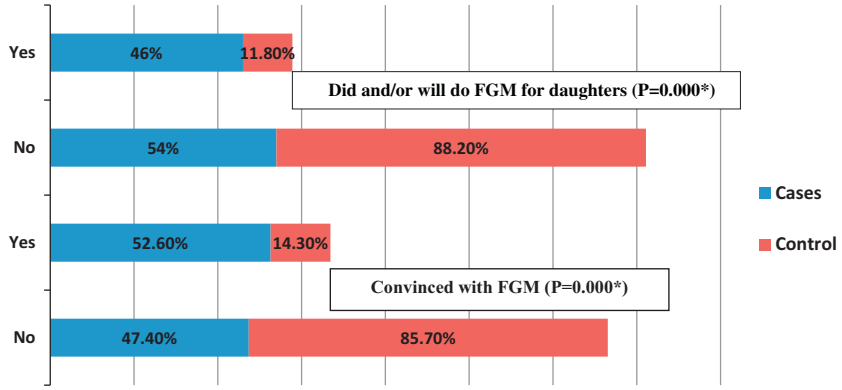

Figure 1 Attitude of women toward FGM practice.

4. Discussion

In Egypt, 91% of women aged 15–49 years have been circumcised despite banning of this practice by the government.[14]

Rural women are more likely to be circumcised than urban one.[14] This was concomitant with the results of the present work, where 57.7% of cases were of rural origin.

Egyptian demographic health survey 2008 (EDHS) illustrated that the possibility of FGM also declined with educational level and was higher among women in lower social strata.[14] This was also proved by the current work (39.3% of cases got university education and more versus 43.3% of their control group and 44.9% with perceived low social class versus 33.8% of their control group).

EDHS 2008 stated that all circumcised women had this act before the age of 15 years. The tradition is that all girls are circumcised before puberty.[14,15] The same was proved by this study, where the mean age of FGM was 9.7 ± 2.12 years. Nearly half (48.9%) of FGM was carried out by dayas or midwives, which was nearly similar to the results of EDHS 2008.[14]

FGM has many frequent health impacts. They include infection (mainly urinary or vaginal), pain, infertility, hemorrhage and complications during childbirth.[7] That was concomitant with the results of the present work, where 87.9% of cases experienced complications. Cases were at risk of obstructed labor (OR = 1.745) and postpartum hemorrhage (OR = 2.855). Three-quarters of cases (74.6%) had assisted delivery (OR = 7.728).

Cases were at risk of dysmenorrheal (OR = 3.750). FGM may end in fibrosis which could predispose to dysmenorrheal.[16]

The present work revealed a significant association between FGM and female sexual function, where reduction of all aspects was obtained (namely desire, arousal, lubrication, orgasm, satisfaction and pain). The total score of female sexual function for cases was significantly lower than their control (14.3 ± 5.93 for cases versus 25.9 ± 3.44 for control).

Women with FGM have more sexual adverse effects.[8,12] One study that was conducted in Ismailia, Egypt[13], proved that women with FGM have higher rates of dyspareunia and lack of sexual desire. This could be explained by the fibrosis and rigid scar tissue following FGM which predisposes to narrowing of the vaginal orifice and muscular spasm which makes intercourse painful and difficult. These physical factors will predispose to psychological one, where the painful experience will drive women to lose both sexual desire and satisfaction.[16,17]

Despite all previously proved side effects of FGM, the present work revealed that 52.6% of cases convinced with this practice. Moreover, 46.0% actually re-did it or plan to do it for their daughters. EDHS 2008 stated that over the next 15 years in Egypt, there will be a steady decrease in the percent of women who will be circumcised from the level of 77% down to 45%.[8]

5. Conclusion

FGM was a risk factor for dysmenorrhea, obstructed labor and postpartum hemorrhage. Cases had lower mean sexual function; moreover, half of them convinced with FGM practice and with its continuation.

Recommendation

Further researches are needed to study the full range of FGM effects on physical, mental and psychosocial life of women. Moreover, planned health education campaigns are mandatory to elude the drawbacks of FGM and hazards of continuation of this practice.

Conflict of interest

None.

Authors' contribution

It is a single author paper. He carried out all the work from coordination of the work until drafting, revision of manuscript, statistical analysis, and design.

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References

1. World Health Organization. Female Genital Mutilation. Geneva: World Health Organization; February 2013.
2. Rahman A, Toubia N. *Female Genital Mutilation: A Guide to Laws and Policies Worldwide*. Zed Books; 2000.
3. Mackie G. Ending footbinding and infibulation: a convention account. *Am. Sociol. Rev*. 1996;**61**(6):999–1017.
4. World Health Organization. *Eliminating Female Genital Mutilation*. Geneva: World Health Organization; 2008, pp. 4, 22–8.
5. World Health Organization. *Eliminating Female Genital Mutilation*. Geneva: World Health Organization; 2008.
6. Caldwell JC, Orubuloye IO, Caldwell P. Female genital mutilation: conditions of decline. *Popul. Res. Policy Rev*. 2000;**19**(3):233–54.
7. Abdulcadira J, Margairaz C, Boulvain M, Irion O. Effectiveness of interventions designed to prevent female genital mutilation/cutting: a systematic review. *Swiss Med. Weekly* 2011;**6**(14).
8. Rosen R et al. The female sexual function index (FSFI): a multidimensional self-report instrument for the assessment of female sexual function. *J. Sex Marital Ther*. 2000;**26**(2):191–208.
9. Tag-Eldin MA, Gadallah MA, Al-Tayeb MN, Abdel-Aty M, Mansour E, et al. Prevalence of female genital cutting among Egyptian girls. *Bull. World Health Org*. 2008;**86**:269–74.
10. Al-Hussaini TK. Female genital cutting: types, motives and perineal damage in laboring Egyptian women. *Med. Princ. Pract*. 2003;**12**:123–8.
11. Allam MF, de Irala-Estevez J, Fernandez-Crehuet-Navajas R, Serrano de Castillo A, Hoashi JS, et al. Factors associated with the condoning of female genital mutilation among university students. *Public Health* 2001;**115**:350–5.
12. Elnashar A, Abdelhady R. The impact of female genital cutting on health of newly married women. *Int. J. Gynaecol. Obstet*. 2007;**97**:238–44.
13. El-Defrawi MH, Lotfy G, Dandsh F, Refaat H, Eyada M. Female genital mutilation and its psychosexual impact. *J. Sex Marital Ther*. 2001;**27**:465–73.
14. El-Zanaty F, Way AA. Egypt demographic and health survey 2008. Calverton, Maryland, USA: Ministry of Health and Population [Arab Republic of Egypt], National Population Council [Arab Republic of Egypt], and ORC Macro; 2009
15. El-Gibaly O, Ibrahim B, Mensch BS, Clark WH. The decline of female circumcision in Egypt: evidence and interpretation. *Soc. Sci. Med*. 2002;**54**:205–20.
16. World Health Organization. A systematic review of the health complications of female genital mutilation including sequelae in childbirth. WHO/FCH/WMH/00.2. Geneva; 2000
17. Geletkanycz C. The practice of female circumcision. Report from Institution; U.S. Public Health Services. Dataset-reports. Washington: Office of International Health; 1993. p. 5–45.