



CLINICAL ARTICLE

Female genital mutilation in Upper Egypt in the new millennium

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ABSTRACT

Objective: To estimate the influence of the 2007 criminalization law on the prevalence and yearly incidence of female genital mutilation (FGM) in Upper Egypt and assess the attitudes of both the population and their health providers toward FGM. **Methods:** Between September 15, 2008, and September 15, 2010, all girls and young women presenting at the Departments of Gynecology and Obstetrics or Pediatrics of Sohag and Qena University Hospitals were invited to answer a questionnaire, which was also presented to their parents. Another questionnaire was presented to all nurses, young physicians, and senior physicians working at either hospital. **Results:** The prevalence of FGM was 89.2%. The incidence was 9.6% in 2000, began to decrease in 2006, and had reached 7.7% at the end of the study period in 2009 ($P=0.05$). In their vast majority, the procedures were performed by general practitioners. In total, 88.2%, 34.3% and 14.9% of nurses, young physicians, and senior physicians, respectively, approved the practice. **Conclusion:** The incidence of FGM is still very high in Upper Egypt in spite of the criminalization law. While general practitioners perform most procedures, most nurses are in favor of preserving the practice.

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1. Introduction

Female genital mutilation (FGM) has been practiced in Egypt since antiquity and is therefore deeply rooted culturally [1]. Its prevalence has been estimated at 61% in Lower Egypt and 97% in Upper Egypt [2–4].

The immediate and long-ranging physical, psychosexual, and reproductive consequences of FGM have long been known and attempts were made to keep the practice in check. For more than 6 decades, many health organizations have made it a priority to raise the world's awareness of FGM and looked for ways to decrease its incidence [5]. In 1994, Egypt issued a decree that allowed FGM procedures to be performed only in licensed hospitals and only by physicians [6]. This official legalization and medicalization of FGM was soon recognized as a factor responsible for its perpetuation, however, and it was completely banned 2 years later at both private and government hospitals [7]. In 2007, after an adolescent girl died from hemorrhage in Upper Egypt after undergoing FGM, the Egyptian parliament criminalized the practice [8]. Presently, any person performing FGM is liable to arrest and punishment.

Although criminalized, FGM is still widely practiced covertly. The true reasons for having FGM performed on girls are uncertain, but those often put forward are respecting tradition, following a religious precept, and the necessity of ensuring female chastity [5,9].

The Egyptian government has used the mass media and organized group discussions to educate the population about the many repercussions of what it considers a deep-seated public health problem, and even passed a law to criminalize performing FGM. Eliminating the practice would also require a good estimation of its extent, however, as well as an accurate understanding of the true reasons behind its singular longevity. Lessening the burden of FGM necessitates changing the mindsets of a wide part of the population and of many health professionals [3].

Although reports seem to indicate a decreasing popularity of FGM in Upper Egypt [3], the sparse data about the extent of the practice have been conflicted, especially since it was criminalized. The aim of the present study was twofold: to assess the yearly incidence of FGM in Upper Egypt in the 2000 to 2009 period, and therefore the impact of the criminalization law issued in 2007; and to evaluate the attitudes of both the general population and their health providers toward FGM.

2. Materials and methods

The present cross-sectional study was conducted between September 15, 2008, and September 15, 2010, at the Departments of Gynecology and Obstetrics and the Departments of Pediatrics of Sohag and Qena University Hospitals, Sohag and Qena, Egypt, in collaboration with the Department of Community Medicine of Sohag University. The Sohag and Qena University Hospitals provide medical care to the population of most of the central and southern parts of Upper Egypt.

During the study period, a predesigned oral questionnaire was presented to each girl and young woman between the ages of 5 and

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25 years who presented to these Departments of Gynecology and Obstetrics and Pediatrics, and/or to one or both of her parents. Nurses, young physicians (house officers and residents), and senior physicians working at either hospital were asked to answer another questionnaire. The exclusion criteria were the refusal of the patient or her parents to participate, the parents' intention to have their daughter undergo FGM later on, uncertainty about the year FGM was performed, the absence of both parents at the time of the interview, and FGM done before 2000 or after 2009. The local Ethics Committee approved the study and verbal consent was obtained from the participants and/or at least 1 parent.

This questionnaire consisted of the following questions: (1) Did you (your daughter) undergo FGM? If Yes, the next 2 questions were also read to both daughter and parents: (2) (a) When, where and by whom was it performed? and (b) Did your sisters and/or your mother (your other daughters and/or yourself [your wife]) undergo FGM? The remaining questions were read only to the parents: (c) Did you have information about the risks of FGM? If Yes: (d) did you personally believe that FGM was dangerous? If Yes: (e) Why then was FGM performed? If No: (3) Why then was FGM not performed? (The parents had the opportunity to elaborate on the last 2 questions).

The questions presented to the health providers were the following: (1) Have you ever performed FGM? (2) Did your daughters undergo FGM? (3) Did you believe that it was necessary? (The possible answers were Yes, No, and No opinion). If Yes: (4) Why?

After the study ended, the prevalence and yearly incidence of FGM for the years 2000 to 2009 were calculated and the incidence rates were compared using the Pearson correlation coefficient (r). The participants were divided into 2 groups, one consisting of those who underwent FGM and the other of those who did not. The demographic characteristics (place of residence, socioeconomic status, religion, and education level) of the participants and their parents were compared using adjusted odds ratios (ORs) and their 95% confidence intervals (CIs). The answers provided by the 3 groups of medical staff (nurses, young physicians and residents, and senior physicians) are reported as percentages. The χ^2 test was used for statistical analysis and $P < 0.05$ was considered statistically significant.

3. Results

A total of 9783 young female patients (plus their parents), 271 nurses, 411 young physicians, and 127 senior physicians) were invited to answer the questionnaires. Among these, 4158 (42.5%) of the eligible patients and at least 1 of her parents, 263 nurses (97.0%), 411 young physicians (100.0%), and 127 senior physicians (100.0%) accepted to participate.

From 2000 to 2009, 3711 of the young participants (89.2%) underwent FGM and 447 (10.8%) did not. The mean age at the time of FGM was 8.2 ± 0.9 years. About three quarters (74.3%) of the procedures were performed at home and the remaining 25.7% at private clinics.

Our results show a marked decrease in yearly FGM incidence in 2006 and until the criminalization law was issued in 2007, and then a slower but steady decrease until the end of the study period when it was at its lowest ($r = -0.54$ [95% CI, -0.91 to 0.02]; $P = 0.05$) (Fig. 1). There were no significant differences between the 2 groups in socioeconomic status, religion, participants' education level, and fathers' or mothers' education level (Table 1). The factors associated with higher rates of FGM were rural residence (OR, 8.20) and having a genitally mutilated mother (OR, 9.12) or sister(s) (OR, 6.28).

At the beginning of the new millennium, FGM was most often performed by nurses, general practitioners, or gynecologists, and rarely by barbers or midwives. As the years went by, the proportion of nurses and gynecologists performing FGM steadily decreased, with a steeper decrease after 2007. In 2008 and 2009, FGM was mostly performed by general practitioners (Fig. 2).

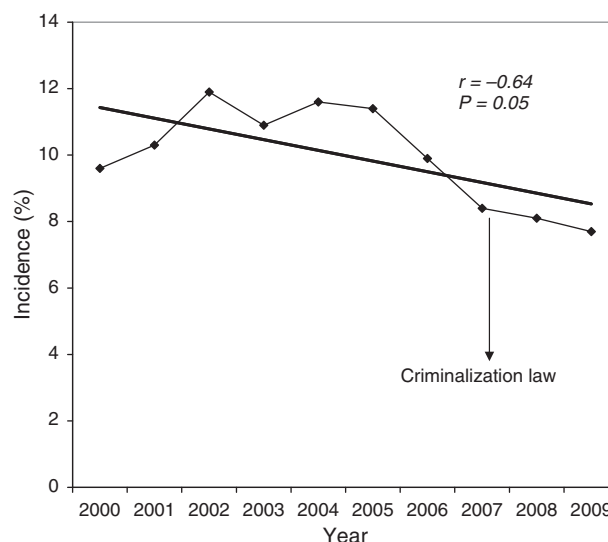


Fig. 1. Yearly incidence of female genital mutilations during the years 2000–2009.

The reasons given by the parents who had their daughter undergo FGM were their religious beliefs (44.2%), tradition (36.5%), and the necessity to preserve the girl's chastity (19.3%). Although more than half (57.4%) of these parents had received some information about the risks associated with FGM, none believed that FGM was actually dangerous in any way. Surprisingly, although 78.1% of the parents whose daughter did not undergo FGM had received information about the risks associated with the practice, only 6.4% of these parents believed that it was dangerous. They said that they did not want their daughter to endure the pain (36.5%), that the girl's mother had not undergone FGM (31.9%), that they thought FGM was unnecessary (7.8%) or dangerous (4.9%), or that they could not find a safe place to have it performed (1.2%). The remaining 17.7% gave no reason.

Table 1

Sociodemographic characteristics of the young female participants and their parents in the 2 groups.^a

Characteristic	Group 1 (n = 3711)	Group 2 (n = 447)	Adjusted OR (95% CI)	P value
Residence				
Rural	3639 (98.1)	84 (18.8)	8.20 (2.77–6.21)	0.001
Urban	72 (1.9)	363 (81.2)		
Socioeconomic status				
Low	2876 (77.5)	331 (74.0)	2.06 (1.42–3.61)	0.17
Moderate	720 (19.4)	107 (23.9)	1.13 (0.88–2.24)	
High	115 (3.1)	9 (2.1)	1.00	
Religion				
Muslim	3667 (98.8)	439 (98.2)	1.04 (0.91–1.26)	0.64
Christian	44 (1.2)	8 (1.8)		
Education				
Preschool	19 (0.5)	3 (0.7)	1.00	0.36
Illiterate	84 (2.3)	14 (3.1)	1.17 (0.84–1.36)	
Educated	3608 (97.2)	430 (96.2)	0.72 (0.54–1.12)	
Father's education				
Illiterate	366 (9.9)	27 (6.0)	1.98 (0.56–3.06)	0.45
Can read and write	941 (25.4)	107 (23.9)	1.36 (0.98–2.15)	
Educated	2404 (64.7)	313 (70.1)	1.00	
Mother's education				
Illiterate	977 (26.3)	91 (20.4)	2.16 (1.33–2.95)	0.41
Can read and write	1508 (40.6)	235 (52.5)	1.26 (0.88–2.61)	
Educated	531 (14.3)	121 (27.1)	1.00	
Has a GM mother	3682 (99.2)	151 (31.7)	9.12 (2.11–14.09)	0.001
Has GM sisters	2159 (58.2)	79 (17.7)	6.28 (1.18–10.89)	0.01

Abbreviations: CI, confidence interval; FGM, female genital mutilation; GM, genitally mutilated; OR, odds ratio.

^a Values are given as number (percentage) unless otherwise indicated.

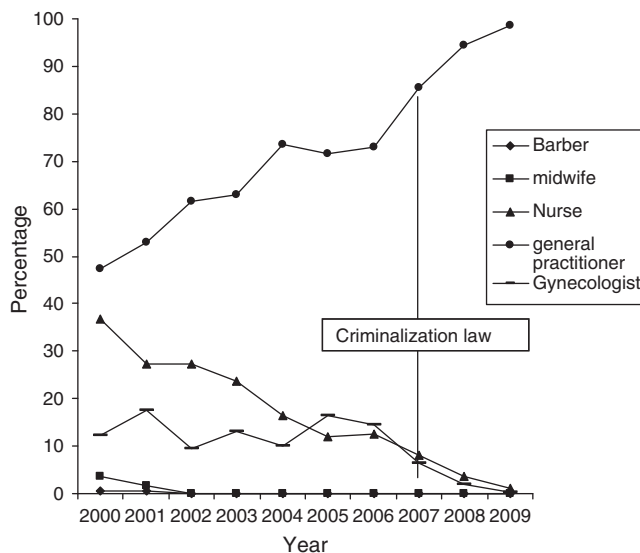


Fig. 2. Professions of persons performing female genital mutilation during the years 2000–2009.

Regarding the nurses, none had ever performed FGM, 33.8% had no information about its risks, 28.1% had their daughters undergo FGM, and 47.9% said that they would subject their daughters to FGM. All of those in favor of preserving the practice (88.2%, despite the fact that only 28.1% had their daughters undergo FGM) mentioned tradition as their reason.

Whereas 34.3% of the young physicians and 14.9% of the senior physicians defended the practice, 40.4% and 64.8%, respectively, did not. The remaining 25.3% and 20.3% provided no opinion. Among those defending the practice, 97.4% of the young physicians and 100.0% of the senior physicians said it was prescribed by religion.

4. Discussion

Female genital mutilation is widely practiced in Egypt, particularly in its upper region [4]. However, estimations of its prevalence have been scarce over the years and no studies had been conducted on the attitude of the population toward FGM after performing the procedure was criminalized in 2007.

The present study found an 89.3% prevalence of FGM in Upper Egypt, a rate much higher than those reported in some studies [2,10–12] but markedly less than those reported in other studies [4,10,12]. To our knowledge, ours is the only hospital-based study, and its design allowed us to interview all participants ourselves. In the other studies, which were community based, the participants were interviewed by social workers or nurses on behalf of an organization [2,4,10–12]. In our opinion, hospital-based studies allow for a more accurate estimation of the prevalence of and attitudes about FGM.

First, hospitals are used by people from different districts, who are likely to constitute more heterogeneous groups than those interviewed in community-based studies. Living in the same location tends to produce similar mindsets. Moreover, the people of Upper Egypt are suspicious and apprehensive of any survey carried out by any organization—especially a survey about the extremely sensitive topic of FGM—because they assume that organizations use surveys to spread foreign ideas [13]. This reluctance is likely to increase the possibility of non-reporting, under-reporting, and even false reporting, which are major obstacles to accurate data collection in community-based studies. In a hospital-based study, the mutual relationship between patient and physician may obviate this apprehension.

The incidence of FGM began to decrease less sharply following the law criminalizing the procedure. The most remarkable change, however, was that the vast majority of the procedures were now carried out by general practitioners. The law made gynecologists, and perhaps also nurses, reluctant to perform FGM, and general practitioners clearly filled the gap. At the same time, families had become more aware of the possible immediate complications of FGM, such as hemorrhaging, and knew that a general practitioner would better cope with these complications than a nurse and for a lesser fee than a gynecologist. Thus, the high demand for general practitioners as performers of FGM in Upper Egypt is a direct effect of the criminalization law. Finding ways to improve the income of general practitioners and further their education in the field of reproductive health would increase the chances of success of any program aiming at curtailing the practice of FGM.

In the United Kingdom, a criminalization law similar to the one issued in Egypt invites people to report any case of FGM that becomes known to them [8]. No-one in Upper Egypt would disclose the occurrence of an FGM procedure, however, and in the absence of a life-threatening hemorrhage the general practitioner is protected by parents and community. And since severe bleeding is uncommon following WHO type I FGM, which is the most commonly performed in Egypt [14,15], the procedure is almost never discovered. The criminalization law will therefore have no effect until the mindset of the Egyptian population toward FGM has changed. But before this happens, not only those who perform FGM on girls, but also the parents of the girls, ought to be liable to punishment. A serious defect in the law would then be corrected.

The present study revealed that rural residence and having a genitally mutilated mother and/or sister(s) were the most significant sociodemographic factors associated with undergoing FGM. This finding seems to indicate that the problem is grounded in the culture, a hypothesis supported by the findings that neither socioeconomic class, nor religion, nor the education level of the study participants, nor the education level of their parents affected the incidence of FGM.

The reasons the parents most frequently reported for having their daughter undergo FGM were religion, tradition, and the necessity of preserving the girl's chastity. But FGM predates Christianity and Islam and is mentioned neither in the Bible nor in Quran [16,17]. Attributing a religious reason to FGM is therefore pure pretense, and serves to hide the anxiety caused by sexual desire in women. This anxiety is heightened by the ever-increasing exposure of men to pornographic media, which strengthens the population's misconception that sexual promiscuity is predominantly practiced women who did not undergo FGM [18].

The organizations combatting FGM are, therefore, wasting their efforts when they base their arguments on the desirability of a less painful, more enjoyable sexual function for women. Instead, these organizations should stress the life-threatening risks and the physical complications associated with FGM—the latter including infertility [19], a very distressing problem for parents.

The most frustrating finding of this study was the attitude of the health providers. Most of the many nurses and young physicians defending FGM believed that their arguments stemmed from their religion. None of the participating hospital nurses had performed the procedure. However, nurses who practice in the community are extremely influential. Introducing the topic of FGM in the curriculum of nursing and medical students, with clarifications by respected clerics on the views of religion regarding FGM, may reverse this attitude.

The most obvious limitation of the study was the absence of data about general practitioners. As it was not possible to include these community physicians in our hospital-based study, we replaced them with house officers and residents. Another limitation was the lack of written consent from the participants. During a pilot phase of the study, nearly all prospective participants refused to sign consent forms. This massive refusal may reflect the sensitivity of the topic and the fear of the people to release any written information about FGM

procedures performed in their own families. The ethics committee eventually waived the need for written consent.

Despite its limitations, the present study provided data that suggest novel strategies toward eliminating the burden of FGM. First, criminalizing the parents' action should be included in the banning law. Second, improving the income of young physicians and general practitioners is crucial if FGM is to be eliminated. Third, the adverse repercussions of FGM on the reproductive function should be emphasized whereas concentrating on the sexual implications of FGM should stop. Fourth, making the topic of FGM part of the curriculum in medical and nursing schools, and also part of well-designed continuous education programs that would include general practitioners, is of the greatest urgency. Finally, inviting the professional medical organizations and medical councils to propose regulations aiming at stopping this illegal practice of should be considered.

We all should realize that such an old problem may not end soon. It will end when the Egyptians begin to reflect as a people on their own attitudes toward their traditions and present way of being.

Conflict of interest

The authors have no conflicts of interest.

References

- [1] Gaali M, Streven H, Mardh P. Female genital mutilation – an exported medical hazard. *Eur J Contracept Reprod Health Care* 2005;10(2):93–7.
- [2] Tag-Eldin MA, Gadallah MA, Al-Tayeb MN, Abdel-Aty M, Mansour E, Sallem M. Prevalence of female genital cutting among Egyptian girls. *Bull World Health Organ* 2008;86(4):269–74.
- [3] El-Gibaly O, Ibrahim B, Mensch BS, Clark WH. The decline of female circumcision in Egypt: evidence and interpretation. *Soc Sci Med* 2002;54(2):205–20.
- [4] El-Zanaty F, Way A. Egypt demographic and health survey 2000. [www.usaid.gov. http://pdf.usaid.gov/pdf_docs/PNACL857.pdf](http://pdf.usaid.gov/pdf_docs/PNACL857.pdf). Published 2001.
- [5] Van der Osten-Sacken T, Uwer T. Is female genital mutilation an Islamic problem? [www.meforum.org. http://www.meforum.org/1629/is-female-genital-mutilation-an-islamic-problem](http://www.meforum.org/1629/is-female-genital-mutilation-an-islamic-problem). Published 2007.
- [6] United States Department of State. Egypt: Report on Female Genital Mutilation (FGM) or Female Genital Cutting (FGC). [www.unhcr.org. http://www.unhcr.org/refworld/docid/46d57876c.html](http://www.unhcr.org/refworld/docid/46d57876c.html). Published 2001. Accessed 2011.
- [7] WHO. Female genital mutilation: fact sheet no. 241. [www.prb.org. www/prb.org/pdf10fgm.wallchart](http://www.prb.org/www/prb.org/pdf10fgm.wallchart). Published 2006.
- [8] BBC. BBC News: Police plea on genital mutilation. [www.news.bbc.co.uk. http://news.bbc.co.uk/1/hi/health/6291218.stm](http://news.bbc.co.uk/1/hi/health/6291218.stm). Published 2007.
- [9] Assaad MB. Female circumcision in Egypt: social implications, current research, and prospects for change. *Stud Fam Plann* 1980;11(1):3–16.
- [10] Hassanin IM, Saleh R, Bedaiwy AA, Peterson RS, Bedaiwy MA. Prevalence of female genital cutting in Upper Egypt: 6 years after enforcement of prohibition law. *Reprod Biomed Online* 2008;16(Suppl 1):27–31.
- [11] Sayed GH, Abd el-Aty MA, Fadel KA. The practice of female genital mutilation in upper Egypt. *Int J Gynecol Obstet* 1996;55(3):285–91.
- [12] El-Zanaty F, Way A. Egypt interim demographic and health survey 2003. [www.measuredhs.com. http://www.measuredhs.com/pubs/pdf/FR149/00FrontMatter.pdf](http://www.measuredhs.com). Published 2004.
- [13] el Naggar M, Allam H. Female genital mutilation persists in Egypt despite renewed opposition. [www.mcclatchydc.com. http://www.mcclatchydc.com/2007/01/25/15599/female-genital-mutilation-persists.html](http://www.mcclatchydc.com/2007/01/25/15599/female-genital-mutilation-persists.html). Published 2007.
- [14] WHO. Female Genital Mutilation: Report of WHO Technical Working Group. Geneva: WHO; 2006.
- [15] Al-Hussaini TK. Female genital cutting: types, motives and perineal damage in laboring Egyptian women. *Med Princ Pract* 2003;12(2):123–8.
- [16] Rahman A, Toubia N. Female genital mutilation: The Practice and its Prevention. London, UK: Minority Rights Publications; 1994.
- [17] Schell-Duncan B, Hernlund Y. Female Circumcision in Africa: Dimensions of the Practice and Debate. In: Schell-Duncan B, Hernlund Y, editors. *Female Circumcision in Africa: Culture, Controversy, and Change*. Boulder, USA: Lynne Rienner; 2000.
- [18] WHO. Men's and women's perceptions of the relationship between female genital mutilation and women's sexuality in three communities in Egypt. [www.who.int. http://whqlibdoc.who.int/hq/2010/WHO_RHR_HRP_10.17_eng.pdf](http://whqlibdoc.who.int/hq/2010/WHO_RHR_HRP_10.17_eng.pdf). Published 2010.
- [19] Almrroth L, Elmusharaf S, El Hadi N, Obeid A, El Sheikh MA, Elfadil SM, et al. Primary infertility after genital mutilation in girlhood in Sudan: a case-control study. *Lancet* 2005;366(9483):385–91.