

# FEMALE GENITAL MUTILATION IN DIFFERENT SAMPLES OF EGYPTIAN FEMALES AND ITS MEDICOLEGAL IMPLICATION

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## ABSTRACT

**Background:** Female genital mutilation (FGM) is primarily widespread in certain high-risk countries, including Egypt. It has been reported that FGM practice continues to exist because it is reinforced by customs, culture, beliefs, social pressure, religion, and the assumption that it increases a girl's chance of marriageability. **Objectives:** To assess FGM in different places in Egypt regarding its incidence, medicolegal implications, and possible complications. **Methods:** This is an observational case-control clinical study that was conducted on females recruited consequently from the primary health care center, the Egyptian Ministry of Health, Safe Women Unit, and Gynecological Clinic of Kasr-Alainy University Hospital. The included females were classified into Group I, the circumcised females (n=256), and Group II, the uncircumcised females (n=250). The participants underwent full history taking and clinical examination. **Results:** The majority of circumcised females (82%) were circumcised at the age range of 7-14 years. The decision-maker was mostly the mother (61.3%). The circumcision was performed by medical (43%), non-medical (43%), or paramedical (14.1%) persons. There was a statistical significance in the education level and the occupation between the two groups. A statistically significant higher percentage of vaginal dryness, loss of libido, vaginal infection, vaginismus, and dyspareunia was shown in the circumcised females. **Conclusion:** The decision maker for FGM was mostly the mother. A relatively large proportion of the procedures were performed by medical practitioners. Besides physical harm, psychological harm was encountered in the present study with half of the circumcised females. The educational level seems to be affecting the FGM practice.

**KEYWORDS:** Female genital mutilation, medicolegal implications, Egypt, complications.

## INTRODUCTION

females in Egypt still face some forms of sex-based discrimination, such as female genital mutilation, violence, virginity testing, and child marriage that must be changed from inside our culture (Bassem et al., 2018; Moawad et al., 2021; Zayed et al., 2022)

The female reproductive system consists of

organs concerned with menstruation, intercourse, fertilization, pregnancy, and labour (Roach & Andreotti, 2017).

Female genital mutilation (FGM) is defined as the intentional injury of a woman's genital organs for non-medical reasons (Dilbaz et al., 2019).

Currently, it is estimated that 200 million

women worldwide currently have circumcised. (Klein et al., 2018). Most FGM occurs in about 30 Middle Eastern and African countries, with maximum frequency present in Egypt, Somalia, Guinea, Djibouti, Mali, Sierra Leone, Sudan, and Eritrea. (Young et al., 2020).

There is no health benefit from FGM, but it causes severe immediate and longstanding physical, emotional, and sexual damage, including long-lasting pain, repeated urinary and vaginal infections, post-traumatic anxiety, and severe discomfort during sexual relations. (McCauley & Broek, 2019).

Legislation and education programs are important tools to eradicate FGM, but if not accompanied by measures that aim to affect cultural traditions and expectations, it will be ineffective (UNICEF, 2013).

Egyptian efforts against female genital mutilation started early in the last century. FGM was prohibited by a decision of the Minister of Health in 1997, but the practice was not fully prohibited as, in some cases, it was allowed with a doctor's approval. In 2007, Egypt announced that there was a complete ban on female genital mutilation. (Meleigy, 2007).

The purpose of this study was to evaluate female genital mutilation in urban and rural areas in Egypt regarding its medicolegal implications and its possible complications.

## SUBJECT AND METHODS

### *Study design and setting:*

This is an observational case-control clinical study. This study was performed at Badr Primary Health Care Center Omar Makram Health Care Unit, the Egyptian Ministry of Health, the Safe Woman Unit, and the Gynecological Clinic of Kasr-Alainy University Hospital.

### *Study population:*

This study included 500 circumcised and uncircumcised female samples which were recruited from Badr Primary Health Care Center and Omar Makram Health Care Unit, the Egyptian Ministry of Health, and the Safe

Woman unit and gynaecological clinic of Kasr-Alainy University Hospital. They were classified into two groups: Group I: circumcised females (n=250) and Group II: uncircumcised females (n=250). All females aged 10-50 years old and those who accepted to be enrolled in the study and signed an informed consent were included, while Females with mental problems and congenital anomalies were excluded.

### *Study measurements:*

The study participants were subjected to the following:

### Data collection procedures

- The included female, or the caregiver if the female was not an adult, was informed about the study and asked to participate in the survey after providing informed consent.
- An interview-based data collection was performed using a pre-tested, structured questionnaire.
- The questionnaire elicited information on the participant's socioeconomic data, such as age, residence, race, marital state, education, and hygienic practice.
- Circumcised females were questioned about the circumcision as regard (to type, age of circumcision, whether n, done by a medical practitioner or not, under anaesthesia or not (general or local), who takes her (father, mother, brother, or others), physical effect (acute as pain, bleeding, shock, fever, tenderness, infection and chronic consequences as keloid formation, deformity, cyst, anaemia, repeated urinary tract infection, psychological effects, problem with sexuality (loss of libido, vaginal dryness, vaginal infection, or genital discomfort), present local or systemic complaint or complication.

Clinical examination: for circumcised females.

*Full general examination:* All cases are conscious, generally competent, and ready for examination.

*Local examination:*

- Before the examination, we take written consent from participants or from parents if they are below 18 years old. Reassurance and explaining the examination steps and their importance to the examined female. Infection control practice was strictly followed by the clinical examiner, including hand washing and putting on gloves (WHO, 2016).

- The examined female was asked to lie on her back with her legs apart and knees bent. A prepubertal examination was performed in the frog-leg position. The examined female was asked to expose the needed area for examination. The female was covered until the examiner was ready for the examination, and then exposure and inspection were performed (Young et al., 2020).

- The external genital examination of the included females included the identification of the prepuce, clitoris, and labia minora and majora (Figure 7). A local clinical examination of the external genitalia was performed to assess the type of circumcision (Abdulcadir et al., 2022).

#### Statistical analysis

Data were coded and entered using the statistical package for the Social Sciences (SPSS) version 28 (IBM Corp., Armonk, NY, USA). Data was summarized using frequency (count) and relative frequency (percentage) for categorical data. For comparing categorical data, a Chi-square ( $\chi^2$ ) test was performed. The exact test was used instead when the expected frequency was less than 5 (Chan, 2003). P-values less than 0.05 were considered statistically significant.

## RESULTS

The majority of circumcised females (82%) underwent circumcision at the age range of 7-14 years. The decision maker was mostly the mother (61.3%), followed by the father (24.2%), and relatives (14.5%). Mother was the most frequently accompanying person (69.9%), followed by relatives (26.2%) and father (3.9%). The circumcision was performed by medical (43%), non-medical (43%), or paramedical (14.1%) persons. It was done without anaesthesia in 43% of cases, under general anaesthesia in

34.4% of cases, and with local anaesthesia in 22.7% of cases, as shown in Table 1.

The majority of circumcised females (203 cases; 79.3%) underwent type 1 circumcision, followed by type 2 (51 cases; 19.9%) and type 3 (2 cases; 0.8%).

Most of the circumcised females (157 cases; 61.3%) had pain after circumcision, while a few of them (20 cases; 7.8%) had bleeding after circumcision; of them, 4 cases (20%) needed blood transfusion. Other complications were abscess formation (36 cases; 14.1%) and urinary tract infection (60 cases; 23.4%), as shown in Table 2

Table (1) shows the distribution of circumcised females according to their circumcision history.

The circumcised females (n=256)			
		N	%
Age of circumcision	7-14	210	82.0%
	15-20	46	18.0%
The decision maker of circumcision	Father	62	24.2%
	Mother	157	61.3%
	Relatives	37	14.5%
Who accompanies her	Father	10	3.9%
	Mother	179	69.9%
	Relatives	67	26.2%
Who performs this circumcision	Medical	110	43.0%
	Paramedical	36	14.1%
	Not	110	43.0%
if Under anaesthesia	Medical		
	General	88	34.4%
	Local	58	22.7%
	Not	110	43.0%

**Table (2):** showing the physical complications of circumcision.

The circumcised females (n=256)			
		N	%
Pain	Yes	157	61.3%
	No	99	38.7%
Bleeding	Yes	20	7.8%
	No	236	92.2%
if you need a blood transfusion,	yes	4	20.0%
	No	16	80.0%
Abscess	Yes	36	14.1%
	No	220	85.9%
Repeated UTI	Yes	60	23.4%
	No	196	76.6%

Half of the circumcised females had sleeping disorders, either frequently (66 cases; 25.8%) or sometimes (62 cases; 24.2%). More than a third of them (95 cases; 37.1%) were avoiding and hating some person. More than one quarter had a lack of self-confidence (73 cases; 28.5%). The feeling of anger was reported by 110 cases, 43%, and the feeling guilty was reported by 95 cases, 37.1%, as shown in Table 3

**Table (3)** shows the distribution of circumcised females according to psychological disturbance.

		Circumcised females	
		N	%
<b>Sleeping disorder</b>	<b>Frequently (1-3 times weekly)</b>	66	25.8%
	<b>Sometimes (1-3 times monthly)</b>	62	24.2%
	<b>Not happen</b>	128	50.0%
<b>Avoiding and hating the person</b>	<b>Yes</b>	95	37.1%
	<b>No</b>	161	62.9%
<b>Lack of self-confidence</b>	<b>Yes</b>	73	28.5%
	<b>No</b>	183	71.5%
<b>Feeling of anger</b>	<b>Yes</b>	110	43.0%
	<b>No</b>	146	57.0%
<b>Feeling of injustice</b>	<b>Yes</b>	95	37.1%
	<b>No</b>	161	62.9%

A statistically significant difference was found between the two groups in the education level ( $p < 0.001$ ); the highest percentage of circumcised females were not educated (131 cases; 51.2%), while the highest percentage of non-circumcised females were educated {secondary (144 cases; 57.6%) and high education (33.2%)}. Both groups differed significantly in occupation ( $p < 0.001$ ), with a high percentage of the circumcised females who were non-working (87.9% vs. 63.6% in uncircumcised). The two groups showed comparable history regarding the menstrual duration ( $p = 0.866$ ), menstrual regularity ( $p = 0.569$ ), and menstrual flow ( $p = 0.718$ ), of non-significant except dysmenorrhea, a statistically significant difference was found between the two groups ( $p = 0.018$ ), with higher percentage of severe dysmenorrhea in the circumcised group (34.8% vs 22.8% in non-circumcised).as showed in Table 4

**Table (4):** showing comparison between circumcised and non-circumcised females regarding education, menstrual history and sexual history

		Circumcised		Non circumcised		P value
		N	%	N	%	
Education level	<b>High educated</b>	18	7.0%	83	33.2%	< 0.001
	<b>Educated</b>	107	41.8%	144	57.6%	
	<b>Not educated</b>	131	51.2%	23	9.2%	
Occupation	<b>Work</b>	31	12.1%	91	36.4%	< 0.001
	<b>Not work</b>	225	87.9%	159	63.6%	
Duration (menstrual history)	<b>2-5</b>	184	71.9%	178	71.2%	0.866
	<b>6-10</b>	72	28.1%	72	28.8%	
regularity (menstrual history)	<b>Regular</b>	190	74.2%	191	76.4%	0.569
	<b>Irregular</b>	66	25.8%	59	23.6%	
flow (menstrual history)	<b>Normal</b>	219	85.5%	211	84.4%	0.718
	<b>Heavy</b>	37	14.5%	39	15.6%	
	<b>(changing sanitary pads after less than 2 hours (CDC, 2022).</b>					
Vaginal dryness	<b>Yes</b>	108	44.3%	40	18.5%	< 0.001
	<b>No</b>	136	55.7%	176	81.5%	
Loss of libido	<b>Yes</b>	171	70.1%	32	14.8%	< 0.001
	<b>No</b>	73	29.9%	184	85.2%	
Vaginal infection	<b>Yes</b>	113	46.3%	55	25.5%	< 0.001
	<b>No</b>	131	53.7%	161	74.5%	
Vaginismus	<b>Yes</b>	92	37.7%	21	9.7%	< 0.001
	<b>No</b>	152	62.3%	195	90.3%	
Dyspareunia	<b>Yes</b>	127	52.0%	48	22.2%	< 0.001
	<b>No</b>	117	48.0%	168	77.8%	
dysmenorrhea (menstrual history)	<b>Mild</b>	65	25.4%	64	25.6%	0.018
	<b>Moderate</b>	67	26.2%	84	33.6%	
	<b>Severe</b>	89	34.8%	57	22.8%	
	<b>Not Found</b>	35	13.7%	45	18.0%	

There was a statistically significant higher percentage of females with vaginal dryness in the circumcised group (44.3% vs non-circumcised with a p-value <0.001. The highest percentage of females in the circumcised group reported a loss of libido (171 cases; 70.1%), while this was reported by only 32 cases, 14.8% of the non-circumcised group (p<0.001). Also, both groups differed significantly in the incidence of vaginal infection (46.3% of the circumcised group vs. 25.5% of the non-circumcised group) with a p-value <0.001. Similarly, statistically significant higher percentages of females experiencing vaginismus (37.7% vs. circumcised 9.7%, p<0.001) and dyspareunia (52% vs. 22.2%, p<0.001) were found in the circumcised group c

compared to the non-circumcised group. as shown in Table5

No statistically significant difference was found between rural and urban females in the circumcised group in the opinion about circumcision (p=0.25), the reason for agreeing (p=0.282), the knowledge about the banning of circumcision (p=0.721), or the source of knowledge (p=0.145).

**Table (5)** shows a comparison between urban and rural circumcised females in their attitude towards circumcision.

		Urban circumcised		Rural circumcised		P value
		N	%	N	%	
Opinion about circumcision	<b>Strongly agree</b>	51	40.8%	44	33.6%	0.25
	<b>Agree</b>	17	13.6%	22	16.8%	
	<b>Neutral</b>	6	4.8%	15	11.5%	
	<b>Refuse</b>	4	3.2%	6	4.6%	
	<b>Strongly refuse</b>	47	37.6%	44	33.6%	
Why agree	<b>Cultural</b>	38	51.4%	38	46.9%	0.282
	<b>Religious</b>	14	18.9%	24	29.6%	
	<b>Sexual</b>	22	29.7%	19	23.5%	
Know about the ban on circumcision	<b>Yes</b>	103	82.4%	113	86.3%	0.721
	<b>No</b>	22	17.6%	18	13.7%	
Source of knowledge of the ban	<b>Family</b>	23	22.3%	24	21.2%	0.145
	<b>Friends</b>	2	1.9%	8	7.1%	
	<b>Media</b>	76	73.8%	72	63.7%	
	<b>Literature</b>	0	0.0%	1	0.9%	
	<b>Religious speech</b>	2	1.9%	8	7.1%	

## DISCUSSION

In the present study, the majority of circumcised females (82%) underwent circumcision at the age range of 7-14 years, and the remaining underwent circumcision between

15 and 20 years old (18%). The age at circumcision was highly variable among the previous studies that assessed FGM. In Egypt, the reported figures were close to our data since **Tag-Eldin et al. (2008)**, **Zayed & Ali (2012)**, and **Mohammed et al. (2018)** stated the mean ages at the time of FGM/C were  $10.1 \pm 2.3$ ,  $10.846 \pm 1.9$ ,

and  $11.5 \pm 2.3$  years, respectively. This indicates that FGM in Egypt is most commonly performed just prepubertal rather than shortly after birth. This was further confirmed by the 2014 Egypt Demographic and Health Survey (EDHS), which stated that the majority of females in Egypt undergo female circumcision between the ages of 9 and 12 (EDHS, 2015).

In our study, the decision maker was mostly the mother (61.3%), followed by father (24.2%), and relatives (14.5%). Mother was the most frequently accompanying person (69.9%), followed by relatives (26.2%) and father (3.9%). The results of this work are reliable with a study in Ethiopia, where the decision-makers for female circumcision were the mothers who play a main role in the practice (Abathun et al., 2016).

An earlier study confirmed these findings, where the decision-makers for this practice were the mothers of circumcised females, and a minor percentage said that the decision-makers were their fathers (Bogale et al., 2014). Also, additional work among Canadian-Somali contributors conveyed that the mothers of the circumcised females were blamable for organizing their FGM (Jacobson et al., 2018).

According to the current work, the circumcision was performed by medical (43%), non-medical (43%), or paramedical (14.1%) persons. It was done without anaesthesia in 43% of cases, under general anaesthesia in 34.4% of cases, and with local anaesthesia in 22.7% of cases. In another study conducted in Egypt, Rasheed et al. (2011) carried out a similar study in Greater Egypt and intended to evaluate the effect of the 2007 criminalization law on the frequency and yearly occurrence of FGM, and it was found that the practice was performed by physicians in their majority of cases,

In total, 88.2% of nurses, 34.3% of junior physicians, and 14.9% of senior physicians accepted the practice. The study by Molina-Gallego et al. (2021) found that qualified groups that contributed were mostly done by nurses (58.8%), followed by family doctors (29.6%). Our findings were inconsistent with the study of

Mohammed et al. (2018), who found that this act was done by a physician in only 8.7% of the cases, while 91.3% of them were done by non-medical persons. This difference may be explained by the difference in the recruited sample, where their study population was only rural residents who are little dependent on the medical professionals for FMG.

In the present study, the majority of circumcised females (79.3%) underwent type 1 circumcision (clitoris or the clitoral hood is cut off), followed by type 2 (clitoris and inner lips are cut off) (19.9%), and type 3 (flesh removed) (0.8%). In agreement with our findings, type 1 and 2 were found to be the most prevalent FMG in the studies of Suleiman et al. (2021) and Adigüzel et al. (2019), while Gudu & Abdulahi (2017) and Kaur et al. (2021) found that type 3 was the most prevalent type. This variation seems to be a matter of cultural changes.

In the current study, most of the circumcised females (61.3%) had pain after circumcision, while a few of them (20 patients; 7.8%) had bleeding. Of them, 4 cases (20%) needed blood transfusion. Other complications were urinary tract infection (23.4%) and abscess formation (14.1%). In accordance with our study, prior studies have recommended that FGM contributes considerably to the disease of girls; most of them tend not to be cured in hospital sets (Bjälkander et al., 2012). In addition, it has been reported that the eight main categories of instant medical harm were haemorrhage, shock, genital tissue oedema, fever, infections, and difficulties with urination and healing of wounds (Berg et al., 2014). Our results match moreover to the results of Ethiopian work by Yirga et al. (2012) that FGM consequences involved discomfort, blood loss, and infection.

Psychological harms were also encountered in the present study, with half of the circumcised females having sleeping disorders, either frequently or sometimes. Sleeping disorders were encountered frequently in 25.8% and sometimes in 24.2% of the participants. More than a third of them (37.1%) were avoiding and hating some person. More than one quarter (28.5%) had a lack

of self-confidence. Feeling of anger was reported by 43%, and feeling guilty was reported by 37.1% of cases.

In agreement with our findings, **Andro et al. (2014)** and **Knipscheer et al. (2015)** stated that FGM is associated with a variety of longstanding health and emotional problems. **Obaid et al. (2019)** reported that the emotional problems of FGM include (PTSD), nervousness, panic disorders, depression, inhibition of feeling, and occasionally suicide attempts. Our results also come in agreement with those of **Kizilhan (2011)**, who found a greater prevalence of depression disorder (33.6%) and anxiety disorder (45.6%) in Kurdish women in northern Iraq who had undertaken FGM compared with a non-FGM group. **Chibber et al. (2011)** found that the highest prevalence of emotional troubles among FGM women were affective disorders, including anxiety and depression (58%). Also, **Vloeberghs et al. (2012)** established that 33% of FGM females from five African nations met the standards for anxiety disorders, and 16% had PTSD.

The present work revealed a statistically significant difference in the education level, with the highest percentage of circumcised females not educated, while the highest percentage of non-circumcised females being educated. Both groups differed significantly in the occupation, with more non-working females than circumcised females. This comes reliable with the outcomes of several studies that showed significant differences in the educational level and the occupational status between the women and those who didn't undertake FGM. **Anderson et al. (2012)**, **Raheem et al. (2018)**, and **Ismail et al. (2017)** stated the negative relation between the educational level and the performance of FGM. Mothers and fathers with low education and occupational status have circumcised their daughters usually.

Concerning menstrual and sexual history, a statistically significant higher percentage of severe dysmenorrhea, vaginal dryness, loss of libido, vaginal infection, vaginismus, and dyspareunia. This may be attributed to the

cutting-related psychological impact, including disgrace among women and incapacity to express their feelings about sexual life easily. In line with our findings, **Raheem et al. (2018)** study reported that disfigurement had bad effects on women's sexual function. Also, **Ibrahim et al. (2012)**, **Bjälkander et al. (2013)**, **Mahmoud (2016)**, **Buggio et al. (2019)**, and **Obaid et al. (2019)** showed the undesirable effect of disfigurement on pair sexual function, emotional condition and social life.

## CONCLUSION

The present work demonstrated that females' awareness, attitude, and station are affecting the females' intent to make FGM practice on offspring. Also, the educational level seems to be affecting the FGM practice. The majority of circumcised females underwent circumcision in the range of 7-14 years. The decision maker for FGM was mostly the mother, and the most common type of circumcision was type 1 (clitoris or clitoral hood is cut off). A relatively large proportion of the practice was performed by doctors without anaesthesia. There are physical, menstrual, sexual, and psychological harm were also encountered in the present study in a high percentage of circumcised females.

## RECOMMENDATIONS

From the findings of this study, it is recommended that:

- More efforts should be directed to improve the health education level of all family members about circumcision and its physical, psychological, and sexual complications through schools, media, mosques, and churches.
- Need approach to area of high prevalence of the act with an emphasis on mothers, health care providers, religious authorities, and legislative institutions.
- It's significant to train medical field persons on how to raise awareness about the complications of FGM and inform them of the recent issuing of a law.



- Safeguarding gender justice and fairness through taking real steps to empower females and refining their situation and position by making sure that quality education is done to improve their decision-making ability and will be an effective method towards the eradication of the FGM practice.

- It is critical to inform people of the recent issuing of a law that forbids and criminalizes the FGM practice to turn potential into real modifications in attitudes and behaviours.

**Data availability statement:** The datasets used and/or analyzed during the current study are available from the corresponding author upon reasonable request.

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## الملخص العربي

### تشويه الأعضاء التناسلية الأنثوية في عينات مختلفة من الإناث المصريات ودلالاته الطبية والقانونية

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ختان الإناث منتشر بشكل كبير في بعض البلدان ومنها مصر ، ويرتبط معدله بشكل كبير بالوضع الاجتماعي والثقافي والتعليمي للمجتمع.

هدفت هذه الدراسة إلى تقييم ختان الإناث في أماكن مختلفة في مصر من حيث مدى حدوثه وآثاره الطبية القانونية ومضاعفاته.

هذه الدراسة قائمة على الاستبيان عن حالات الختان وأجريت على 500 مشاركة تم اختيارهن من مركز بدر للرعاية الصحية الأولية ووحدة عمر مكرم الصحية ، وزارة الصحة المصرية ، وحدة المرأة الأمانة وعيادة أمراض النساء بمستشفى القصر العيني الجامعي . تم تصنيف الإناث المشمولات علي المجموعات التالية: المجموعة 1؛ الإناث المختونات (ن = 256) اللاتي كن 125 (24.7٪) من الحضر و 131 (25.9٪) ، والمجموعة الثانية ؛ الإناث غير المختونات (ن = 250) اللاتي كن 125 (24.7٪) من الحضر و 125 (24.7٪) من الريف. وفقاً للتوزيع الجغرافي إلى أننا أدرجنا الحالات المشاركة في الدراسة من المراكز الريفية والحضرية.

في هذه الدراسة ، خضعت غالبية الإناث المختونات بنسبة 82٪ للختان في الفئة العمرية 7-14 سنة ، والباقي خضعن للختان بين 15 و 20 سنة بنسبة 18٪. وكان متخذ القرار بالختان هي الأم بنسبة 61.3٪ ، يليها الأب بنسبة 24.2٪ ، والأقارب بنسبة 14.5٪. وايضا كانت الأم هي الأكثر مرافقة للبتن اثناء الختان بنسبة 69.9٪ ، يليها الأقارب بنسبة 26.2٪ ، والأب بنسبة 3.9٪.

طبقا للبحث ، تم إجراء الختان من قبل اطباء بنسبة 43٪ ، أشخاص غير ممارسين صحيين بنسبة 43٪ ، أو تمريض بنسبة 14.1٪. تم إجراء العملية بدون تخدير على الإطلاق في 43٪ من الحالات ، وتحت التخدير العام بنسبة 34.4٪ من الحالات ، والتخدير الموضعي في 22.7٪ من الحالات.

أظهرت الدراسة أن هناك فروق في الدلالات الإحصائية من ناحية المستوى التعليمي ، حيث أن أعلى نسبة من الإناث المختونات غير متعلقات ، بينما أن أعلى نسبة للإناث غير المختونات في التعليم. اختلفت المجموعتان بشكل كبير في المهنة أيضاً ، حيث ارتفعت نسبة الإناث غير العاملات في الإناث المختونات.

فيما يتعلق بالحبيض والمضاعفات الجنسية ، اتضح من الدراسة ان الختان له مضاعفات ومنها عسر الطمث الشديد ، وجفاف المهبل ، وفقدان الرغبة الجنسية ، والعدوى المهبليّة ، والتشنج المهبلي ، وعسر الجماع.