



Female genital mutilation/cutting: going beyond urogynecologic complications and obstetric outcomes

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Abstract

Purpose of review Female genital mutilation/cutting (FGM/C or FGM) are procedures that involve partial or total removal of external female genitalia and other injuries to the female genital organs for non-medical reasons. Over 4 million girls are at risk of FGM annually. Since urogynecologic and obstetric complications of FGM have been extensively described and characterized, the aim of this review is to shift the focus on other aspects like perception of women, awareness of community, and knowledge of health workers. Our purpose is to highlight those aspects and understand how their grasp might help to eradicate this practice.

Recent findings Self-perception of women with FGM changes when they emigrate to western countries; awareness of complications and awareness of their rights are factors that make women reject the practice. Women from rural areas, already circumcised, or without a secondary level education are more likely to have a circumcised daughter. Women with at least a secondary education are more likely to agree with the eradication of the practice. Lack of education and poor wealth index are factors associated with men's support of FGM. Although aware of FGM, healthcare professionals need to be trained on this topic. General practitioners play a central role in addressing patients with FGM to the right path of diagnosis and treatment and psychologists in helping them with psychological sequelae.

Conclusion These findings point out the future area of intervention, stressing the need of higher standard of care and global effort to eradicate this practice.

Keywords Female genital mutilation · Female genital cutting · Female circumcision · FGM · FGM/C · Complications

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What does this study adds to the clinical work

The topic of Female Genital Mutilation is of increasing interest. It is important to shift the focus on aspects like perception of women, awareness of community, and knowledge of health workers. These findings point out the future area of intervention, stressing the need of higher standard of care and global effort to eradicate this practice

Introduction

Female Genital Mutilation/Cutting (FGM/C or FGM) are procedures that involve partial or total removal of external female genitalia and other injuries to the female genital organs for non-medical reasons [1]. The justifications for the practice vary from one region to another as well as over time and is based on multiple factors such as socio-cultural,

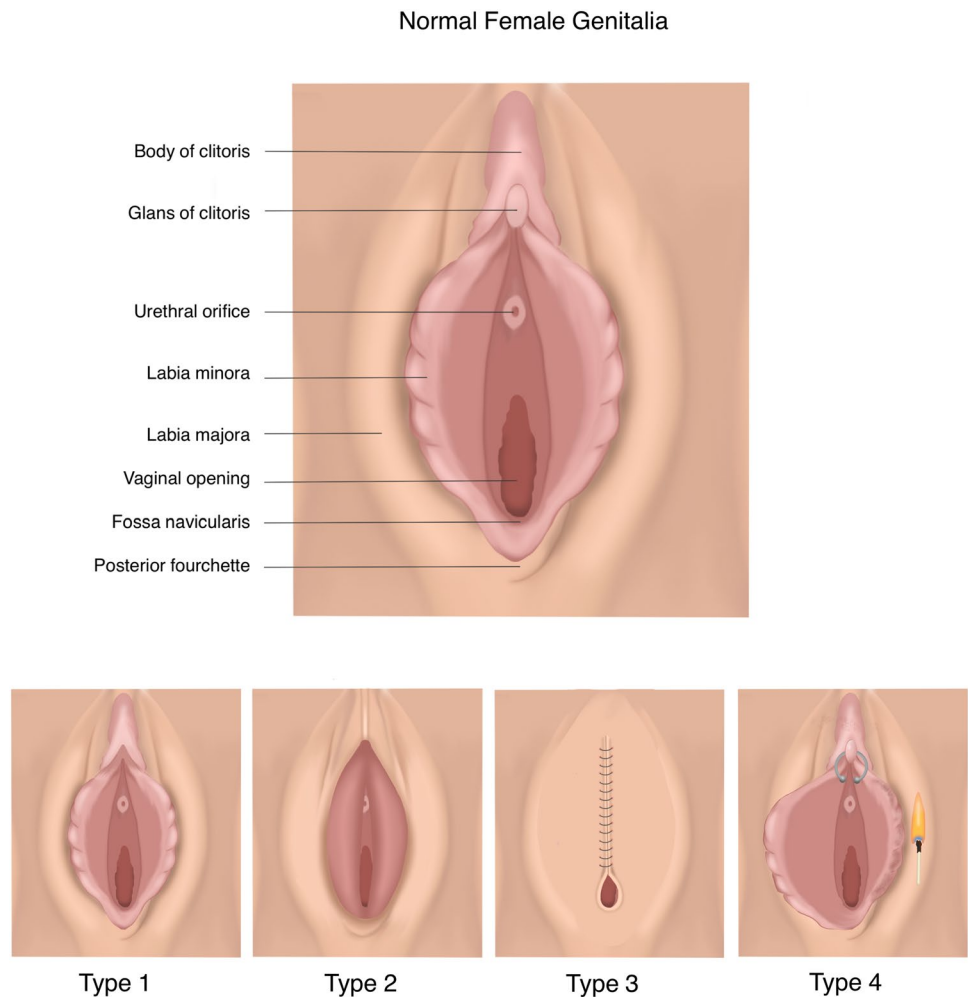
economics, sexual, hygienic-aesthetic, and spiritual [1]. FGM has been performed on at least 200 million girls and women in 31 countries across Africa, Middle West, and Asia, with more than half of those living in Egypt, Ethiopia, and Indonesia. Over 4 million girls are at risk of FGM annually [1].

For the World Health Organization, FGM are divided into 4 types [1] (Fig. 1). Type 1 is the partial or total removal of the clitoral glans (the external part of the clitoris, which is a sensitive part of the female genitals), and/or the prepuce/clitoral hood (the fold of skin surrounding the clitoral glans). Type 2 is the partial or total removal of the clitoral glans and the labia minora (the inner folds of the vulva), with or without removal of the labia majora (the outer folds of skin of the vulva). Type 3 (also known as infibulation) is the narrowing of the vaginal opening through the creation of a covering seal. The seal is formed by cutting and repositioning the labia minora, or labia majora, sometimes through stitching, with or without removing the clitoris. Type 4 includes all other harmful procedures to the female genitalia, e.g.,

pricking, piercing, incising, scraping, and cauterizing the genital area.

FGM are associated with many health risks and complications including acute pain, genital tissue swelling, shock, fever, bleeding, infections (tetanus, HIV, hepatitis B and C), septicaemia, gangrene, ulcers, wound healing problems and death [1–3]. Long-term complications include chronic vaginal and pelvic infections, dyspareunia, scarring and keloid, urinary problems (recurrent cystitis, urethritis, painful urination), menstrual disorders, infertility, childbirth, and pregnancy complications (difficult delivery, excessive bleeding, caesarean section, need to resuscitate the baby) [1–3]. The impact of FGM on mental health includes depression, anxiety, post-traumatic stress disorder, low libido, low self-esteem, nightmares, psychosis, and neurose [1–3]. As such, it is important to understand how academics and practitioners are involved in studying and practicing issues related to FGM and how they are involved in the care of women with FGM, especially in geopolitical contexts where religions play a major role [4] (although FGM is not always a practice related to religion, see after for more insight). Despite

Fig. 1 Normal female genitalia and types of female genital mutilation according to the World Health Organization definition. Type 1 is the partial or total removal of the clitoral glans, and/or the prepuce/clitoral hood. Type 2 is the partial or total removal of the clitoral glans and the labia minora, with or without removal of the labia majora. Type 3 (infibulation) is the narrowing of the vaginal opening through the creation of a covering seal. The seal is formed by cutting and repositioning the labia minora, or labia majora, sometimes through stitching, with or without removing the clitoris. Type 4 includes all other harmful procedures to the female genitalia, e.g., pricking, piercing, incising, scraping, and cauterizing the genital area



this, addressing primary care to women with FGM is necessary but attention must be paid to the background of health professionals and to the experiences they live facing with this sensitive topic [5]. Moreover, FGM is often a wretched matter of social convention and interventions to invert this trend must begin [6].

Recently, new research has shifted from medical to anthropological considerations and very interesting data emerged. We have therefore reviewed the literature of last year, highlighting interesting new findings and how these should be interpreted to improve FGM complications' management and to reach its eradication.

Methods

Search strategy

To conduct our review, we adopted the five-stage methodological framework developed by Arksey and O'Malley. Arksey and O'Malley's framework [7] includes six stages (the sixth being optional): (1) identifying the research question, which is generally broad in nature; (2) identifying relevant studies, a process that is as comprehensive as possible; (3) study selection, with the establishment of inclusion/exclusion criteria, based on familiarity with the literature; (4) charting the data, a stage that includes sifting, charting, and sorting information according to key issues and themes; (5) collating, summarizing, and reporting the results, which provides both a descriptive and numerical summary of the data and a thematic analysis; and (6) a consultation exercise, an additional, parallel step involving key stakeholders to inform and validate study findings. A systematic review of peer-reviewed articles was therefore carried out using Medline, PubMed, and Scopus databases but were not excluded commonly referenced and highly regarded publications from others database, i.e., GoogleScholar. Initial systematic search was conducted using following terms: female genital mutilation OR FGM OR female genital cutting OR female circumcision OR female cutting OR female mutilation AND obstetric outcome OR consequence OR sequelae or delivery OR outcomes OR pregnancy OR complications OR obstetric [Title/Abstract]. Publications from August 2021 to August 2022 were selected. Two-hundred-seventy studies were obtained.

Eligibility criteria, study selection and data extraction

Selection criteria were based on the PICo (Population, Phenomenon of interest and Context) [8].

Population

- Female with Female Genital Mutilation, Healthcare providers, General population facing the problem of FGM.

Phenomenon of interest

- Inclusion criteria: Information and psycho-social aspects related to FGM/C in both high- and low-income countries; healthcare providers opinion, knowledge, and awareness about FGM/C; population awareness and perception on FGM/C;
- Exclusion criteria: Obstetrics and gynecologic outcomes of women with FGM/C; treatment of FGM/C.

Context: Regarding FGM/C

Time frame: Data collection period from August 2021 to August 2022.

Filter: Study and publication types—inclusion criteria.

- Primary studies (All types including preprints of nonrandomized interventions and RCTs).
- Publication in English.

If it was not clear from the abstract whether the article might contain relevant data, the full article was assessed. After the elimination of duplicates, preliminary examination of titles and abstracts according to the review questions was carried out. First two authors independently assessed and subsequently discussed the quality of all eligible studies then the analytic process was completed by categorizing relevant issues and summarizing the findings. Twenty-six papers were included in the systematic review, responding to the author's purpose. A narrative synthesis of the selected studies was, therefore, conducted summarizing findings attempting to answer the following questions: (1) Are western countries' specialists aware of FGM practice? Are they well trained in identifying and treating complication of FGM? (2) Are the healthcare systems adequate in supplying the needs of women with FGM? Is it a problem facing just with low-income countries or also with western countries? (3) Which is the self-perception of women who underwent a mutilation? Which is the men's perception and the perception of women who did not suffer from FGM? (4) Are there associations between any mothers' determinants and the circumcision status of daughters? (5) Is the marital status, the sexual behaviors, and the STDs rate a predictor of the chance of being victim of mutilation? (6) Which are the factors that can predict the wiliness of perpetration versus the wiliness of eradication of this practice?

Evidence synthesis

Specialists' awareness and knowledge

Are western countries' specialists aware of FGM practice?

Recent papers analyzed surveys about their perception, knowledge, and expertise in identifying and treating FGM and its complication.

Results from a survey distributed to 54 US-based female Pelvic and Reconstructive Surgeons show all of them had heard of FGM but only 13% received formal education during medical training although half of participants encountered a patient with FGM during clinical practice [9]. In this study, less than 15% of specialists felt completely confident in recognizing and discussing FGM and 24% correctly identified FGM types on clinical representation. A bigger study was conducted among 548 members of the American College of Obstetrician and Gynecologist [10] and 60% of them had cared of women with FGM (11.6% at least in 20 occasions). Doctors who worked in urban center were more likely to have seen these patients in the last 12 months ($p < 0.01$). In contrast with the previous study, 40% of participants reported that they received some education on FGM. Those who had received education were younger (mean age = 45.7 vs 53.5 years, $p < 0.01$), in practice for fewer years (17.8 vs 25.6 years, $p < 0.01$) and women ($n = 352$ vs 142 men, $p < 0.01$). Specialists who practiced obstetrics or both obstetrics and gynecology, were more likely to have encountered a patient with FGM during the last 12 months when compared with those who practiced gynecology alone (10.84 and 12.12%, $p = 0.03$). Only 9% of participants were aware of the existence of FGM guidelines. Lack of training was cited as the largest barrier in caring women with FGM in both studies analyzed above [9, 10]. Another survey distributed to 363 members of the American Society of Plastic Surgeons showed that 80% of them had no prior training or education on FGM, nearly 90% had never treated a patient with FGM but 81.5% of them believed that Plastic Surgery has a role in FGM's care and 60% were interested in improving knowledge [11]. In the same paper, authors compared the surveys' results to 491 members of the American College of Obstetrician and Gynecologist who responded to the same questionnaire. Comparing the latter two health care professionals' groups, Plastic Surgeons were less likely to have received any kind of education on FGM ($p < 0.001$) or being familiar with FGM ($p < 0.001$). An Australian commentary that aimed to identify a referral pathway for women with FGM living in Australia, analyzing local literature, confirmed the need of specific training on FGM for health professionals [12]. Another publication preliminarily shows the

framework of a study that is expecting to end by 2023 and is proposing to explore the impact of FGM/C education program for midwives and nurses in South Australia [13]. A similar formative research was just performed on a sample of 150 health workers in Guinea: lack of training, lack of effort in abandoning FGM, limited knowledge on how to manage complications, highlighted what could be useful to improve in prevention and care [14]. Improvement after training has also been studied in 133 Liberian Healthcare professionals (nurses, physician assistants, midwives) [15]. They were trained in sexual, obstetric, and psychosocial care for women with FGM. Competences, in term of knowledge acquisition, trainee attitudes and acceptability to implement WHO-recommendations were analyzed through questionnaires. After training, the test score on knowledge increased as the capacity in collecting clinical history, performing genital examination, providing obstetric care, asking the correct questions to identify FGM complications, and treating them correctly. They also perceived themselves as improved in distinguish different types of FGM.

Note of the Authors: beyond the professional background and the importance of training on FGM for the healthcare professionals, personal feeling, preconceptions, and emotions of these workers should be considered as emerged from our research [5].

Healthcare system and FGM

Are the healthcare systems adequate in supplying the needs of women with FGM? Is it a problem facing just with low-income countries or also with western countries?

Although a French study has developed practice guideline to offer specific medical assistance needed by migrant women with FGM [16] Australian researchers focused on the necessity of involving women with FGM in co-production of the healthcare programs [17]. Familiarity and utilization of health facilities from women with FGM had been studied: an analysis conducted on a sample of 68,775 mothers in sub-Saharan countries, examined the association between maternal healthcare service utilization and circumcision of daughter [18]. It was found that mothers who had four or more antenatal care visits were less likely to circumcise their daughters compared with those who had zero to three visits ($cOR[CI] = 0.63[0.59-0.68]$). At the same time, mothers who delivered at a health facility were less likely to circumcise daughters compared with those who delivered at home ($cOR[CI] = 0.47[0.43-0.51]$). However, barriers to healthcare services have been found analyzing 26 Somali and Sudanese women with FGM living in Norway [19]. Among these barriers, the most common were represented by

ignorance of FGM as cause of the experienced health problems by both patients and general practitioners, unawareness of the existence of FGM dedicated services and negative interactions with healthcare providers. Authors underlined the central role of general practitioners in the management of patients as well as the need for policymakers to invest in training. Moreover, for 88.5% of woman with FGM, from a sample of 360 living in Kenya, infrastructure for reproductive health services were limited in term of human resources and knowledge on mutilation [20]. Although the high prevalence of FGM, prevention, response to complications and health care system offers are often nowadays suboptimal: the need of a psychological support from experts, emerged in a study on 38 women from Izzi community in Nigeria [21]. A study performed in 27 high-burden countries showed that, despite 88.5% of health facilities had adequate space for privacy during consultation and 78.7% adequate equipment, only 42.6% of health workers had adequate knowledge on how to care women with FGM for both consequences, psychological and urogynaecological, according to patients' opinion [22]. Moreover, FGM sequelae costs, calculated from national cohort models of the 27 high-burden countries over 30 years, showed, in the same study, that 0.8 billion USD/year saving could be obtained if the practice of FGM would be fully abandoned [22].

Awareness of the population

Which is the self-perception of women who underwent a mutilation? Which is men's opinion and the perception of women who did not suffer from FGM?

Women Self-perception of FGM has been analyzed in 43 women studied in a program for Survivors of Torture in New York City [23]. The study included women with FGM or women who came from countries where FGM is commonly practiced. Mixed results were obtained: in fact, while 88.4% of women initially stated that there were no benefits undergoing FGM, once prompted with a set of options (such as social acceptance, religious approval, and better marriage prospects) several participants agreed that there might be some possible benefits from circumcision (16.3, 11.6, 9.3%, respectively). On the opposite, when tested for sexual pleasure, dyspareunia, and medical complications women agreed on the absence of benefits of being mutilated (46.5, 30.2, 25.6, respectively).

A qualitative research was made on the perception of FGM of 24 women who were mutilated, emigrated in Spain [24]. Results showed that the longer they stayed in Spain the higher was the rejection of FGM justifications. Further analysis in the same sample, underlined that lack of knowledge and family pressure are factors that encourage FGM perpetuation [25]. At the same time, awareness of

consequences on health, awareness of their rights, negative personal experiences and breaking taboos are factors that make rejection to FGM.

In a qualitative exploration of relational dynamics performed in nine women with FGM in United Kingdom, authors found an interesting result through interviews [26]. While willing not to blame their parents for guilty, women developed an increasing sense of belonging, particularly important in migrants according to authors, and a more powerful roles in their lives promoting the wiliness to protect future generations of girls.

Men Factors associated with men's opinion about FGM have been studied in 8718 men from Ethiopia [27]. Authors found several variables associated with men's support of FGM practice such as lack of education, poor wealth index, origin (Afar nomads) versus Somali, Muslim religion (see after for a note of the authors of the review) versus others and wife beating practice (all $p < 0.05$).

Maternal attitude

Are there associations between any mothers' determinants and the circumcision status of daughters?

Association between maternal social variables and daughter's circumcision risk rate has been studied using Ethiopian Demographic and Health Survey in a sample of 6948 women [28]. Results demonstrated that older (aged 40–49 years) versus younger (aged 15–24 years) women were significantly more likely to have at least one circumcised daughter. Moreover, mothers coming from rural areas or already circumcised were more likely to have at least one circumcised daughter. On the other hand, those with at least secondary-level education or those in favor of FGM discontinuation, were significantly less likely to have a circumcised daughter. The association between low education level of mothers and FGM of daughters has been confirmed in a sample of 360 Kenyan women [20]. Opposite to man, being a Muslim mother was negatively associated with having a circumcised daughter. No associations between daughter's circumcision status and household wealth, employment and media access were found by authors. Similar results were obtained in another study on a sample of 770 women from Ethiopia: in this sample too, woman from rural areas were sevenfold more like of experiencing genital mutilation compared to those from urban area [29]. For what concerns Religion belonging and FGM: Muslim and Protestant women were, in this study, less likely to experience FGM than other religions (note of authors of the review: religions compared with Muslim and Protestant were not specified by the Authors. They declared that the reason for disparity in this finding deserves further study). Disclaimer: authors of the current review agree with the needs of further study on

the topic, considering FGM not as a religious practice, rather a sociocultural practice.

Sexual behavior, sexual transmitting disease (STDs) rate and marital status of women with FGM

Is the marital status, the sexual behaviors, and the STDs rate a predictor of the chance of being victim of mutilation?

The relation between marital status, FGM and sexual behavior has been studied in a sample of Nigerian Women (29,724 married and 8549 unmarried) [30]. Variable analyzed were: (1) sexual debut before 15 years, (2) multiple sexual partners or sexual transmitting disease (STDs) incidence in the last 12 months, (3) overall lifetime number of sexual partners, (4) pre-marital sex, (5) number of marriages. In unmarried women, authors did not find any association among these variables. In married women, the presence of FGM was positively related to being more likely to contract STDs and engaging in premarital sex but it was negatively related with the chance of having multiple sexual partners in the last 12 months. Moreover, the probability of having a girl-child marriage was lower in non-mutilated women compared with those with FGM, in a sub-Saharan population sample [31]. Similar results were obtained studying 360 women from Kenya, victims of FGM [17]. Thirty-nine percent of them were married between 15 and 19 years. Furthermore, husbands' occupational status and FGM of wives has been studied [29]. Women married with lower income men as merchants (sevenfold), daily laborer (threefold), and drivers or students (sevenfold) were more likely victims of FGM compared to women married with higher income men.

FGM perpetration versus its eradication

Which are the factors that can predict the wiliness of perpetration versus the wiliness of eradication of this practice?

A study conducted in Ethiopia analyzing 6984 women found that women with at least a secondary education were more than fourfold likely to agree with the termination of the FGM when compared to women with no education [32]. In a sample of 2000 Nigerian woman [33], those coming from urban area (91.1%) were more likely to perpetrate FGM ($p=0.001$), as well as those being a former victim of FGM or those having the opinion that FGM is beneficial. Quite the opposite, people who have seen a procedure of FGM support their eradication.

Finally, lack in specific laws against FGM in some country like Sierra Leone has been pointed out in a call for action from a 35 countries representative group for women's right

after recent death and complications in young women after FGM [34].

Conclusion

Self-perception of women with FGM changes when they emigrate to western countries; awareness of complications of FGM and awareness of their rights are factors that make them reject the practice. Women from rural areas, already circumcised, or without a secondary level education were more likely to have a circumcised daughter, moreover, women with at least a secondary education were more likely to agree with the eradication of the practice. Lack of education and poor wealth index are factors associated with men's support of FGM practice.

Although aware of FGM, healthcare professionals need to be more trained on this topic.

A central role in helping patients with FGM should be played by general practitioner and psychologists. Investments on Healthcare systems, in both high- and low-income countries, are required to provide higher standard of care for patients with FGM. "A culturally sensitive approach facilitates to work with culturally diverse people" (5) and this may help healthcare providers in gaining awareness on the theme of FGM and reaching a better approach to this sensitive topic beyond personal feelings.

FGM are recognized internationally as a violation of human rights. As results of our review, collective abandonment of FGM requires a multi-sectoral approach requesting collaboration on multiple levels involving policy, legislation, education systems and community. The position on FGM of the key players such as religious leaders in the community is crucial for directing preventive programs [35]. They must help shaping community behaviors, which is highly pertinent in the case of FGM as hardly discussed before. According to the literature, changing attitudes towards FGM is the main effort that the countries now must do, together with improving the knowledge of medical professionals, strengthening healthcare systems, implementing guidelines and training but also increasing the advocacy through research and publications for global efforts to end FGM, including tools for policy makers to highlight potential public health benefits and cost savings of preventing FGM.

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Data availability The data that support the findings of this study, generated during and/or analysed during the current study are openly available in Medline, Pubmed, Scopus, GoogleScholar repository. Any summary generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

Declarations

Conflict of interest The authors have no conflicts of interest to declare that are relevant to the content of this article.

Consent to publication Authors, undersigned, give their consent for the publication of identifiable details, which can include photograph(s) and/or videos and/or case history and/or details within the text (“Material”) to be published in the above Journal and Article.

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