Factors Associated with Health Care Provider Attitudes, and Confidence for the Care of Women and Girls Affected by Female Genital Mutilation/Cutting

Christina X. Marea,1,2,* Nicole Warren,1 Nancy Glass,1 Crista Johnson-Agbakwu,3 and Nancy Perrin1

Abstract

Background: Female genital mutilation/cutting (FGM/C) is a cultural practice that includes procedures that intentionally alter or cause harm to female genital organs for nonmedical reasons, affecting ~200 million women and girls globally. Health care providers in the United States often lack confidence to provide appropriate FGM/C-related care, and experience attitudes that may negatively impact quality of care for FGM/C.

Methods: We conducted a cross-sectional survey of health care providers to explore the associations between health care provider characteristics, awareness of health complications of FGM/C, attitudes, and confidence for FGM/C care.

Results: Factors associated with more Confidence for Clinical FGM/C Care include awareness of health complications, ever cared for a woman with FGM/C, being a woman or person of color, and more than 5 years of clinical practice. Increased Confidence in Communication Skills for FGM/C Care was associated with awareness of more health complications for FGM/C. Women endorsed significantly less Negative Attitudes toward FGM/C compared with men; no other factors were associated with health care provider attitudes.

Conclusion: Future research should further investigate factors associated with health care provider attitudes toward FGM/C and those affected by the practice to promote quality care. Health providers require adequate training for clinical FGM/C care and in the communication skills that promote patient/provider communication cross-culturally.

Trial Registration: ClinicalTrials.Gov ID no. NCT03249649, Study ID no. 5252. Public website: https://clinicaltrials.gov/ct2/show/NCT03249649

Keywords: female genital cutting; female genital mutilation; female circumcision; health care provider; attitudes; confidence

Introduction

Female genital mutilation/cutting (FGM/C) includes procedures that intentionally alter or cause harm to female genital organs for nonmedical reasons, and affects ~200 million women and girls globally.1 FGM/C is practiced in ~30 countries with the majority in sub-Saharan Africa, and others in the Middle East and South Asia.2,3 Although FGM/C prevalence rates are falling globally, the number of girls and women affected is expected to rise in the coming decades because of persistently high fertility rates in FGM/C practicing countries.3 The COVID emergency is currently contributing to a rise in cutting in some regions, with an estimated additional 2 million girls at risk for FGM/C.4

1School of Nursing, Johns Hopkins University, Baltimore, Maryland, USA.
2School of Nursing and Health Studies, Georgetown University, Washington, District of Columbia, USA.
3Arizona State University Southwest Interdisciplinary Research Center, Phoenix, Arizona, USA.
4ORCID ID (https://orcid.org/0000-0003-3820-2452).
5Current affiliation: Department of Advanced Practice Nursing, School of Nursing and Health Studies, Georgetown University, Washington, District of Columbia, USA.

*Address correspondence to: Christina X. Marea, PhD, MA, CNM, School of Nursing, Johns Hopkins University, Baltimore, MD 20057-0004, USA, E-mail: cflemi10@jhu.edu, christina.marea@georgetown.edu

© Christina X. Marea et al., 2021; Published by Mary Ann Liebert, Inc. This Open Access article is distributed under the terms of the Creative Commons License [CC-BY] (http://creativecommons.org/licenses/by/4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.
In the United States, the Centers for Disease Control (CDC) estimates that 545,000 women and girls may have undergone FGM/C or been born to women from FGM/C-practicing countries. This latter group is often assumed to be at-risk for FGM/C. Health care providers in countries where FGMC is not normative are increasingly likely to care for affected women and girls due to global migration trends and must be able to meet the health care needs of this group.

FGM/C is conducted on girls between infancy and adolescence, usually by the age of 15, and may include practices from symbolic nicking of the clitoris to infibulation (cutting and sewing a narrowed vaginal opening) depending on the region and cultural group. FGM/C is primarily conducted by nonmedical providers, such as traditional birth attendants, although there is a trend toward medicalization (when FGM/C is performed by a health care provider). All types of FGM/C have been associated with adverse health consequences, including immediate, gynecologic, obstetric, and mental and sexual health outcomes; however, not all women with FGM/C will experience adverse health effects, and more severe morbidity is associated with more extensive forms of cutting.

Women and girls who have experienced FGM/C require specialized health care to address the possible health complications. For women with type 3 FGM/C, defibulation, or the surgical release of the FGM/C scar to widen the vaginal opening, is an important intervention that can lessen or eliminate some health complications of FGM/C and prevent some complications of childbirth associated with FGM/C. However, health care providers rarely receive training for the care of women and girls who have experienced FGM/C, and obstetric providers rarely receive training to perform defibulation. Those providers who have received training often report that they would benefit from additional training. A recent survey of obstetric providers in the United States found that ~30% would perform infibulation, a type of FGM/C that includes the partial or complete resuturing of the vulva following defibulation, if a woman requested it. In the United States and other Western countries, health care providers may find themselves facing ethical dilemmas as they balance an opposition to FGM/C as a practice with adult women’s right to bodily modifications.

Although there are guidelines available for the care of women and girls affected by FGM/C from the World Health Organization (WHO), and professional and advocacy groups, the health outcomes and experiences of FGM/C affected populations receiving care in the diaspora do not reflect high-quality care. The WHO defines quality care as being effective, efficient, accessible, patient-centered, equitable, and safe. Women living with FGM/C experience excess cesarean birth rates for nonobstetric reasons. A recent meta-synthesis of qualitative studies exploring the birth experiences of migrant women living FGM/C finds that they report fear of and a lack of trust in their health care providers. Somali women living with FGM/C in Ohio report experiencing barriers to care that result in delays, and are less likely to access preventative health services. Somali women living with FGM/C in the United States report experiencing disrespect and stigma in the health care setting. A qualitative study of women living with FGM/C in Boston found that they feel reluctant to report FGM/C, or health complications associated with FGM/C, because of the negative attitudes of health care providers, or because they may not realize the symptom may be related to their FGM/C status.

The lack of health care provider awareness about the health consequences of FGM/C further degrades the quality of care. To provide quality care for FGM/C, health care providers must be aware of the potential health complications of FGM/C, be confident in their ability to manage care for women and girls who have experienced FGM/C, and understand how their own attitudes toward FGM/C and those affected by the practice may impact how they provide care.

**Conceptual approach**

The knowledge, attitudes, and practices (KAP) framework is often used to assess health care providers who care for women and girls affected by FGM/C. The KAP framework theorizes that an individual learns about a topic (knowledge), develops some affective response (attitude), and engages in a behavior (practice)—often these factors influence one another in multidirectional ways. Existing studies assessing health care providers’ KAP have typically reported their results as purely descriptive, without exploring the relationships between knowledge, attitudes, and practices or considering health care provider characteristics, such as demographics or past experiences with FGM/C, as confounders to these relationships.

The purpose of this study was to explore the relationship between provider characteristics, including awareness of the health complications of FGM/C (knowledge), and their attitudes toward FGM/C and confidence in their ability to care for patients affected by FGM/C (practice). Self-reported confidence is a
proxy for practice when we cannot directly observe provider care.38 A rigorous examination of the relationship between provider characteristics, awareness, attitudes, and confidence will provide direction for future FGM/C-related training.

Methods

Study setting
We conducted an online cross-sectional survey of health care providers at the time of registration in a workshop titled “Optimizing Care for Women and Girls Affected by FGM/C” in the Greater Phoenix and Tucson, Arizona, and Baltimore, Maryland areas.

Recruitment and study population
Health care providers were invited to register for the workshop and complete the survey via emails that were distributed to list-servs at 14 health care institutions in Phoenix and Tucson, Arizona metropolitan areas, and distributed to the Johns Hopkins Health System, Johns Hopkins University Schools of Medicine, Nursing and Public Health, as well as to professional organizations in the Greater Baltimore, Maryland, and Washington D.C. area. List-serv contacts included nursing and residency training program directors, medical directors, nursing and medical faculty, and hospital department chairs, and points of contact for local chapters of professional organizations such as Association of Women’s Health, Obstetric and Neonatal Nurses (AWHONN), American College of Nurse Midwives (ACNM), and American College of Obstetricians and Gynecologists (ACOG). Electronic consent was obtained from all participants.

The Greater Baltimore area is home to large populations of migrants from Sudan, Ethiopia, and Eritrea, while Arizona has received a large number of Somali refugees.39,40 These countries have high FGM/C prevalence (74–98%), and FGM/C type in these countries tends to be type 3—the most extensive form of cutting with the highest rate of morbidity.3 The study population for this analysis includes physicians, residents, nurse-practitioners, and nurse-midwives who care for women or girls and are in current clinical practice at least 1 day per month. We excluded nurses, health professional students, mental health, and social work providers.

Measures
The online questionnaire included four sections: provider characteristics, awareness of health complications of FGM/C, attitudes toward FGM/C, and confidence in providing care for women with FGM/C. We measured awareness of health complications of FGM/C using a 33-item checklist that comprised health complications identified by the 2016 WHO Guidelines.7 The attitudes and confidence measures were developed by our research team that includes clinical and research experts in FGM/C. We validated the measures using exploratory factor analysis. The development and psychometric validation of the measures are presented in a separate article currently available as a preprint.41 The Attitudes measure includes two subscales “Negative Attitudes toward FGM/C and Those Affected by the Practice” (referred to henceforth as Negative Attitudes scale) and “Empathetic Attitudes toward FGM/C and Those Affected by the Practice” (Empathetic Attitudes scale). The Attitudes measure includes items that assess attitudes toward FGM/C, and those affected by the practice including women, families, and communities. The Confidence measure includes two subscales Confidence in Clinical FGM/C Care and Confidence in Critical Communication Skills for FGM/C Care. The Attitudes and Confidence scales both have Likert response options from 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree. See Table 1 for sample items and Cronbach’s alphas.

Statistical analysis
We performed the statistical analysis using SPSS (version 26). We addressed missing data in scale scores using replacement for the average for any participants who had completed at least 75% of the items for the

Table 1. Attitudes and Confidence Scale Characteristics and Sample Items

| Scale names and example items | Cronbach’s alpha | Number of items |
|-------------------------------|-----------------|----------------|
| Negative attitudes toward FGM/C and those affected by the practice | 0.814 | 5 |
| Health care providers who perform any form of FGM/C, including symbolic nicking, should be charged with a crime | | |
| Empathetic attitudes toward FGM/C and those affected by the practice | 0.628 | 5 |
| Symbolic nicking or cutting of the female genitalia is an effective way to reduce the harm of FGM/C compared with more extensive procedures | | |
| Confidence in clinical FGM/C care (five items) | 0.857 | 5 |
| On inspection of the female genitalia, I can identify a woman with FGM/C | | |
| Confidence in critical communication skills for FGM/C care | 0.694 | 3 |
| Respond to the health concerns of women with FGM/C by engaging in nonjudgmental listening | | |

FGM/C, female genital mutilation/cutting.
five-item scales, and 66% of items for the three-item scale. This method of imputation may reduce variability in the data and weaken correlation estimates; however, it does allow us to utilize all cases for analysis. Descriptive statistics are presented as count and percentages. We used multivariable linear regression to explore the association of participant characteristics, previous clinical FGM/C experiences, and awareness of health complications of FGM/C with attitudes and confidence.

Ethics statement
We received approval from the Arizona State University and Johns Hopkins Medical Institute Institutional Review Board (IRB).

Results
Participant characteristics
A total of 796 health care providers attended training events in Arizona and 101 in Maryland for a total of 897 possible survey participants. A total of 354 health care providers completed the online survey (response rate 39.5%), of whom 164 respondents met the inclusion criteria. Study participants were predominantly physicians (28%) or medical residents (48.8%), female (73.2%), and white (76.8%). About half the sample specialized in women’s health (47%), and the majority had <5 years of clinical experience (62.2%). See Table 2 for detailed participant characteristics. Most participants had previously cared for a patient with FGM/C (65.9%), although less than half had received training in how to care for women affected by FGM/C (41.5%). See Table 3 for detailed participant clinical FGM/C experiences. There were no significant differences in demographics or FGM/C experiences by site.

Factors associated with health care provider attitudes and confidence for FGM/C care
First, we ran descriptive statistics for the four subscales. The Negative Attitudes, Empathetic Attitudes, and Confidence for Clinical FGM/C Care subscales have a possible range from 5 to 20, with higher scores indicating more negative attitudes, more empathetic attitudes, or higher level of confidence, respectively. The Confidence in Critical Communication Skills for FGM/C Care subscale has a possible range of 3–12, with higher scores indicating a higher level of confidence. Descriptive statistics for the scores on the Attitudes and Confidence scales are presented in Table 4.

Next, we explored factors associated with increased health care provider confidence for the care of women affected by FGM/C. Factors associated with increased health care provider scores on the Confidence for Clinical FGM/C Care include being aware of more health complications of FGM/C, having ever cared for a woman affected by FGM/C, identifying as female, identifying as a person of color, and having more than 5 years of clinical experience. Neither having received

Table 2. Participant Characteristics (n = 164)

| Clinical practice                      | Combined, n (%) |
|----------------------------------------|-----------------|
| Outpatient medical care                |                 |
| Resident                               | 80 (48.8)       |
| Physician                              | 46 (28.0)       |
| CNM                                    | 28 (17.1)       |
| NP                                     | 10 (6.1)        |
| Gender                                 |                 |
| Female                                 | 120 (73.2)      |
| Male                                   | 33 (20.1)       |
| Missing/declined/other/trans            | 11 (6.7)        |
| Race/ethnicity                         |                 |
| Person of color                        | 37 (22.6)       |
| Latino/Hispanic                        | 11 (6.7)        |
| Asian                                  | 16 (9.8)        |
| Black/African American/Native American/other nonwhite | 10 (6.1) |
| White                                  | 126 (76.8)      |
| Missing/declined                       | 1 (0.6)         |
| Women’s health specialty               |                 |
| Yes                                    | 77 (47.0)       |
| No                                     | 79 (48.2)       |
| Missing                                | 8 (4.9)         |
| Scope of practice includes BIRTH (Ob/Gyn, midwife) |                 |
| Yes                                    | 76 (46.3)       |
| No                                     | 80 (48.8)       |
| Missing                                | 8 (4.9)         |
| Years in practice                      |                 |
| < 5                                    | 102 (62.2)      |
| 5–10                                   | 22 (13.4)       |
| 10–20                                  | 16 (9.8)        |
| > 20                                   | 23 (14.0)       |
| Missing/declined                       | 1 (0.6)         |

*Due to small n in these groups, they were collapsed to protect participant confidentiality.

CNM, Certified Nurse Midwife; NP, nurse practitioner.

Table 3. Participant Experiences with Female Genital Mutilation/Cutting (n = 164)

| Ever cared for a patient with FGM/C | Combined, n (%) |
|-------------------------------------|-----------------|
| Yes                                 | 108 (65.9)      |
| No                                  | 56 (34.1)       |
| Previous FGM/C training             |                 |
| Yes                                 | 68 (41.5)       |
| No                                  | 96 (58.5)       |
| Aware of defibulation?              |                 |
| Yes                                 | 105 (64.0)      |
| No                                  | 59 (36.0)       |
previous training for FGM/C nor being a women’s health care provider was significantly associated with higher scores for Confidence for Clinical FGM/C Care. The only factor significantly associated with higher scores on the Confidence in Critical Communication Skills scores was awareness of more health complications of FGM/C. See Table 5 for detailed analysis of factors associated with health care provider confidence.

Next we explored participant characteristics associated with attitudes toward FGM/C and those affected by the practice. Women had significantly lower scores on the Negative Attitudes scale compared with men. No other factors were significantly associated with negative attitudes scores. We did note that those who had ever received training for FGM/C care and those who identify as a person of color tended to have lower scores on the Negative Attitudes scale than their counterparts; however, none of these was significant. Only one variable (more than 5 years of clinical experience) was significantly associated with scores on the Empathetic Attitudes scale, demonstrating that those with more experience report less empathetic attitudes. See Table 6 for detailed results of the multivariable regression.

Defibulation/reinfibulation
We performed descriptive analyses of items related to defibulation and reinfibulation among health care providers who attend births, including obstetrician/gynecologist residents, and nurse-midwives (n=76). Only 8 (10.5%) providers responded that they had been trained to perform defibulation. Almost half of those who attend births (42.1%) agreed or strongly agreed that health care providers should perform reinfibulation if the woman requests it. Only a third of health care providers who attend births agreed or strongly agreed that they can perform defibulation during the second stage of labor (35.3%). Fewer than half of the health care providers who attend births (45.9%) agreed or strongly agreed that they could respond to a request for reinfibulation with cultural humility.

Discussion
This study provides the first exploration of the relationship between health care provider characteristics, awareness of health complications, attitudes toward FGM/C, and confidence for FGM/C care using psychometrically validated scales. Existing studies assessing health care providers caring for women and girls affected by FGM/C tend to report descriptive findings, without exploring how these factors are interrelated. Our study sample includes a diverse cross section of health care providers including physicians, nurse-practitioners, and nurse-midwives who practice in regions with considerable numbers of refugees and immigrants from regions where FGM/C is common.

Table 4. Attitudes and Confidence Scales—Descriptive Statistics

| Health care provider attitudes toward FGM/C and those who practice FGM/C | n   | Mean  | Standard deviation | Minimum | Maximum | Possible range |
|--------------------------------------------------------------------------|-----|-------|--------------------|---------|---------|----------------|
| Negative attitudes toward FGM/C and those who practice                    | 154 | 16.21 | 2.40               | 10      | 20      | 5–20           |
| Empathetic attitudes toward FGM/C and those who practice                  | 150 | 11.28 | 2.33               | 5       | 20      | 5–20           |

| Health care provider confidence for the care of women affected by FGM/C  | n   | Mean  | Standard deviation | Minimum | Maximum | Possible range |
|--------------------------------------------------------------------------|-----|-------|--------------------|---------|---------|----------------|
| Confidence for clinical FGM/C care                                        | 155 | 11.38 | 2.98               | 5       | 20      | 5–20           |
| Confidence in critical communication skills for FGM/C care               | 157 | 9.02  | 1.44               | 3       | 12      | 3–12           |

Table 5. Factors Associated with Health Care Provider Confidence—Multivariable Analysis

|                                   | Confidence for clinical FGM/C care (n=139)* | Confidence in critical communication skills for FGM/C (n=140)* |
|-----------------------------------|--------------------------------------------|-------------------------------------------------------------|
|                                   | B (S)                                      | 95% CI                                                      | p       | B (S)                                      | 95% CI                                                      | p       |
| Awareness of health complications  | 0.265                                      | 0.047 to 0.140                                             | <0.001  | 0.187                                      | 0.002 to 0.059                                             | 0.035  |
| Women’s health provider           | 0.089                                      | −0.365 to 1.389                                            | 0.249   | 0.074                                      | −0.333 to 0.733                                            | 0.459  |
| Ever cared for a woman affected by FGM/C | 0.340                                      | 1.145 to 3.103                                             | <0.001  | 0.142                                      | −0.181 to 1.002                                            | 0.172  |
| Ever received training for care of women affected by FGM/C               | 0.066                                      | −0.408 to 1.182                                            | 0.338   | −0.012                                     | −0.515 to 0.450                                            | 0.894  |
| Female gender                    | 0.178                                      | 0.320 to 2.265                                             | 0.010   | −0.110                                     | −0.625 to 0.559                                            | 0.755  |
| Person of color                  | 0.161                                      | 0.242 to 2.029                                             | 0.013   | 0.026                                      | −0.459 to 0.631                                            | 0.755  |
| More than 5 years of clinical experience                                 | 0.135                                      | 0.037 to 1.607                                             | 0.040   | 0.034                                      | −0.383 to 0.571                                            | 0.696  |

*Bold-italic signifies statistically significant findings.
*Participants who were missing one or more of the predictor variables were excluded from the analysis.
B, beta; CI, confidence interval; S, standardized.
Table 6. Factors Associated with Health Care Provider Attitudes—Multivariable Analysis

|                                | Negative attitudes (n = 138) \( \beta \) | Empathetic attitudes (n = 134) \( \beta \) |
|--------------------------------|------------------------------------------|-------------------------------------------|
|                                | B  | 95% CI       | p   | B  | 95% CI       | p   |
| Awareness of health complications | 0.037 | -0.039 to 0.060 | 0.674 | 0.067 | -0.031 to 0.070 | 0.452 |
| Women’s health-focused clinician  | 0.033 | -0.790 to 1.093 | 0.751 | 0.051 | -0.734 to 1.219 | 0.624 |
| Ever cared for a woman affected by FGM/C | 0.084 | -0.618 to 1.445 | 0.429 | 0.088 | -0.618 to 1.510 | 0.409 |
| Ever received training for care of women affected by FGM/C | -0.160 | -1.589 to 0.092 | 0.080 | 0.119 | -0.310 to 1.455 | 0.201 |
| Female gender                   | -0.234 | -2.380 to -0.332 | 0.010 | 0.060 | -0.727 to 1.448 | 0.513 |
| Person of color                 | -0.109 | -1.586 to 0.337 | 0.201 | 0.067 | -0.598 to 1.376 | 0.437 |
| More than 5 years of clinical experience | 0.036 | -0.654 to 1.005 | 0.677 | -0.180 | -1.776 to -0.039 | 0.041 |

Bold-italic signifies statistically significant findings.

*Participants who were missing one or more of the predictor variables were excluded from the analysis.

Of the providers we surveyed, two-thirds had ever cared for a patient with FGM/C, but fewer than half had received any training for the care of those affected by FGM/C. This is consistent with a recent U.S. survey of obstetric providers, which found that 56% has received some didactic and 26% hands-on clinical training, and 60% had ever cared for someone with FGM/C.22

Participants reported moderate levels of confidence for the clinical care of patients living with FGM/C. This is consistent with the findings of an existing qualitative synthesis that found health care providers are often unsure of what constitutes appropriate care for those affected by FGM/C, and many desire additional training.42 Interestingly, having received prior training for FGM/C was not significantly associated with increased confidence for Clinical FGM/C Care. This may indicate that existing training interventions are inadequate, and do not provide the opportunity for health care providers to achieve competence before caring for patients. Simulation-based training may be an effective modality for FGM/C-related care because it has been demonstrated to improve health care provider confidence and positively affect patient outcomes, particularly for care of a relatively uncommon condition such as FGM/C.43

Participants in our study reported high levels of confidence in their communication skills. This is a more surprising finding in the context of existing studies of health care providers who note their frustration with cross-cultural communication and lack of confidence with interpreter use.44 Research with women and girls living with FGM/C demonstrates that they often feel disrespected and stigmatized by their providers, and thus, provider confidence may be misplaced.31 The only factor associated with increased confidence in communication was awareness of more complications associated with FGM/C, suggesting that the first step toward increasing provider confidence is increasing their knowledge about FGM/C and its consequences.

Future research should explore how patients and providers interpret and experience communication during clinical visits to identify areas of incongruence. Research studying patient/provider communication, particularly in the presence of racial, cultural, and/or linguistic discordance, has demonstrated that health care providers often experience implicit bias that is transmitted to the patient through their communication behaviors.45,46 Health care providers caring for women who have experienced FGM/C in the diasporic setting may be further influenced by “othering” of African bodies, and moral superiority of opposition to FGM/C may lead to a paternalistic and stigmatizing treatment of women living with FGM/C.47

Our findings were limited in terms of factors associated with the Negative and Empathetic Attitudes subscales. Only one factor had a significant association—identifying as a woman was significantly associated with less negative attitudes toward FGM/C compared with identifying as a man. Women also had significantly higher scores on the Confidence for Clinical FGM/C Care scale. A study conducted in Spain also found significant gender differences; women were more likely to detect FGM/C cases and correctly identify FGM/C, while men were more likely to include reporting women with FGM/C to the authorities as part of their response.23 No other variables under investigation were significantly associated with scores on the Attitudes subscales.

These scales were developed for use in this study, and likely require further refinement including potentially the inclusion of additional items to broaden the range of attitudes assessed. Furthermore, our sample...
was self-selected and so may have less variance in terms of the attitudes compared with a random sample of health care providers. Finally, future research should consider investigating the association between health care provider attitudes scores and factors such as scores on a validated measure of implicit bias, and/or political affiliation, which may inform attitudes toward immigrants in our current highly politicized anti-immigrant environment.48

The Attitudes scales that we developed were designed to be used with any health care provider, regardless of scope of practice, while the Confidence scales were designed for any health care provider who provides outpatient care. Women with FGM/C require specialized consideration from all health care providers; however, there are important skills for providers who attend birth. It is concerning that only about 10% of providers who attend births have been trained to perform defibulation, an important intervention for reducing obstetric morbidity.15 Despite only 10% reporting receiving training for defibulation, about a third agreed or strongly agreed that they are confident that they could perform defibulation during the second stage of labor. This may represent an overconfidence on the part of providers, and a risk to women with FGM/C.

We found that almost half of the providers who attend births agree or strongly agreed that a provider should perform reinfibulation if the woman requests it. This is a controversial stance given that reinfibulation is considered a form of FGM/C, and thus vehemently opposed by the WHO. This is not completely surprising given that no professional health organization has published FGM/C-specific guidelines in more than a decade. Reinfibulation is associated with similar health complications as other forms of FGM/C. However, there is a dearth of research on the consequences of partial defibulation and partial reinfibulation, which may have different outcomes related to possible physical health complications or mental health and well-being, particularly genital self-image or bodily satisfaction.47 An important difference is that reinfibulation is typically performed on an adult woman who can legally consent to the procedure. In many high-income countries in the West, medical ethicists agree that adults have the right to bodily modifications that are without direct medical benefits including cosmetic genital surgery.49,50

While the ethics of this debate are beyond the scope of this article, it is important that health care providers receive adequate training regarding the ethical dilemmas they may face during the provision of care so that they are not surprised by a request, and that they may have a considerate and respectful response should a request arise.

Conclusion

Few health care providers receive any training for the care of women and girls who have experienced FGM/C, and those who have received some training are not necessarily more confident in their ability to provide appropriate clinical care for FGM/C. The overall negative attitudes toward FGM/C and those affected by the practice may be consistent with the overall discriminatory attitudes toward patients of color in the United States. Given the gross disparities in maternal and neonatal outcomes by race, strategies to help providers recognize and mitigate their negative attitudes are imperative. The high level of willingness to perform reinfibulation paired with a lack of understanding and training on how to perform defibulation or manage a vulvar scar highlights the need for more explicit guidelines for U.S. providers.

Guidelines should include a structure for providers to explore their attitudes regarding reinfibulation, obtain appropriate training for defibulation and reinfibulation, and guide providers in how to have a culturally informed discussion with patients about the health and ethical issues related to a woman’s choice.

Our research has demonstrated innovative and important opportunities for the development of future education and training for health care providers caring for women and girls affected by FGM/C. Specifically, future training for health care providers should include opportunities to practice clinical and communication skills through structured clinical simulations, which are more effective than didactic teaching for building health care provider confidence. Training should also include opportunities for discussion and reflection of individual attitudes toward the practice of FGM/C and those who are affected by the practice. Further research should explore how simulations and structured discussions around the power dynamics of providing care to marginalized and oppressed groups can further transform attitudes, confidence, and quality of care.

Acknowledgment

This study was supported by the Rockefeller University Heilbrunn Family Center for Research Nursing through the generosity of the Heilbrunn Family.
Author Disclosure Statement

No competing financial interests exist.

Funding Information

This survey was embedded into a larger program funded by the Department of Health and Human Service/Office on Women’s Health (grant no. ASTWH160045-02-00), whose primary aim was to enhance culturally informed health care services for women affected by FGM/C.

References

1. United Nations Children’s Fund. Female genital mutilation/cutting: a statistical overview and exploration of the dynamics of change. 2013. New York UNICEF Google Scholar. 2013.
2. World Health Organization. WHO | Female genital mutilation. WHO. 2017. Available at https://www.who.int/news-room/fact-sheets/fs241/en/ Accessed May 29, 2017.
3. United Nations Children’s Fund. Female Genital Mutilation/Cutting: a Global Concern Unicef’S Data Work on Fgm/C Support for Data Collection Data Analysis and Dissemination. Unicef. 2016. Available at https://www.unicef.org/media/files/FGMC_2016_brochure_final_UNICEF_SPREAD.pdf Accessed October 16, 2020.
4. UNFPA. Millions more cases of violence, child marriage, female genital mutilation, unintended pregnancy expected due to the COVID-19 pandemic. Available at https://www.unfpa.org/news/millions-more-cases-violence-child-marriage-female-genital-mutilation-unintended-pregnancies Accessed June 30, 2020.
5. Goldberg H, Stupp P, Okoroh E, et al. Female genital mutilation/cutting in the United States: estimated numbers of women and girls at risk, 2012. Public Health Rep. 2016;131(April):340–347.
6. Shell-Duncan B, Moore Z, Njue C. The medicalization of female genital mutilation/cutting: what do the data reveal? Popul council. 2017; 2017;14:64.
7. World Health Organization. WHO Guidelines on the Management of Health Complications from Female Genital Mutilation, 2016, p. 64.
8. Berg RC, Underland V, Odgaard-Jensen J, et al. Effects of female genital cutting on physical health outcomes: a systematic review and meta-analysis. BMJ Open. 2014;4:e006316.
9. Berg RC, Denison E, Fretheim A. Psychological, Social and Sexual Consequences of Female Genital Mutilation/Cutting (FGM/C): A Systematic Review of Qualitative Studies. Oslo, Norway: Knowledge Centre for the Health Services at The Norwegian Institute of Public Health (NIPH); 2010 Jun. Report from Norwegian Knowledge Centre for the Health Services (NOKC) No. 13-2010. PMID: 29320049.
10. Bagness C. Female genital mutilation: An RCN Recourse. Royal College of Nursing. 2016. Available at https://www.rcn.org.uk/professional-development/publications/pub-005447 Accessed June 5, 2017.
11. Berg RC, Odgaard-Jensen J, Fretheim A, et al. An updated systematic review and meta-analysis of the obstetric consequences of female genital mutilation/cutting. Obstet Gynecol. Int. 2014;2014:1–8.
12. Rouzi AA, Berg RC, Sahly N, et al. Effects of female genital mutilation/cutting on the sexual function of Sudanese women: a cross-sectional study. J Sex Med. 2010;7:801–6.
13. Iavazzo C, Sardi TA, Gkegkes ID. Female genital mutilation and infections: a systematic review of the clinical evidence. Arch Gynecol Obstet. 2013; 287:1137–1149.
14. Reisel D, Creighton SM. Long term health consequences of Female Genital Mutilation (FGM), Maturitas. 2015;80:48–51.
15. Okosanya BO, Oduwole O, Nwachuku N, et al. Deinfibulation for preventing or treating complications in women living with type III female genital mutilation: a systematic review and meta-analysis. Int J Gynaecol Obstet. 2017;136(Suppl.1):13–20.
16. Abdulcadir J, Say L, Pallitto C. What do we know about assessing healthcare students and professionals’ knowledge, attitude and practice regarding female genital mutilation? A systematic review. Reprod Health. 2017;14:64.
17. Reig-Alcalá M, Siles-González J, Solano-Ruiz C. A mixed-method synthesis of knowledge, experiences and attitudes of health professionals to Female Genital Mutilation. J Adv Nurs. 2016;72:245–260.
18. Cappon S, L’Ecluse C, Clancy E, et al. Female genital mutilation: knowledge, attitude and practices of Flemish midwives. Midwifery. 2015;31: e29–e35.
19. Leye E, Ysebaert I, Deblonde J, et al. Female genital mutilation: knowledge, attitudes and practices of Flemish gynaecologists. Eur J Contracept Reprod Health Care. 2008;13:182–190.
20. Relph S, Inamdar R, Singh H, et al. Female genital mutilation/cutting: knowledge, attitude and training of health professionals in inner city London. Eur J Obstet Gynecol Reprod Biol. 2013;168:195–198.
21. Kaplan A, Hechavarria S, Bernal M, et al. Knowledge, attitudes and practices of female genital mutilation/cutting among health care professionals in The Gambia: a multiethnict study. BMC Public Health. 2013; 13:851.
22. Lane JL, Johnson-Agbakwu CE, Warren N, et al. Female genital cutting: clinical knowledge, attitudes, and practices from a provider survey in the US. J Immigr Minor Heal. 2019;21:954–964.
23. Kaplan A, Torán-Monserrat P, Moreno-Navarro J, et al. Perception of primary health professionals about female genital mutilation: from healthcare to intercultural competence. BMC Health Serv Res. 2009;9:11.
24. Relph S, Inamdar R, Singh H, et al. Healthcare professionals more knowledgeable about female genital mutilation but still some way to go. BMJ. 2012;344(april 18 1):e2744–e2744.
25. Purchase TCD, Lamoudi M, Colman S, et al. Female genital cutting: a survey among healthcare professionals in Italy. Acta Obstart Gynecol Scand. 2013;92:858–861.
26. Earp BD. Between moral relativism and moral hypocrisy: reframing the debate on “FGM.” Kennedy Inst Ethics J. 2016;26:105–144.
27. WHO | WHO | Care of Girls and Women Living with Female Genital Mutilation. 2018. Available at https://www.who.int/reproductivehealth/publications-health-care-girls-women-living-with-FGM/en/ Accessed October 16, 2020.
28. Tunçalp, Were WM, Maclellen C, et al. Quality of care for pregnant women and newborns—the WHO vision. BJOG Int J Obstet Gynaecol. 2015;122:1045–1049.
29. Banks E, Meirk O, Farley T, et al. Female genital mutilation and obstetric outcome: WHO collaborative prospective study in six African countries. Lancet. 2006;367:1835–1841.
30. Varol N, Dawson A, Turkmani S, et al. Obstetric outcomes for women with female genital mutilation at an Australian hospital, 2006–2012: a descriptive study. BMC Pregnancy Childbirth. 2016;16:1–10.
31. Hamid A, Grace KT, Warren N. A meta-synthesis of the birth experiences of australian immigrant women affected by female genital cutting. J Midwifery Womens Health. 2015;63:185–195.
32. Banke-Thomas A, Agbemenu K, Johnson-Agbakwu C. Factors associated with access to maternal and reproductive health care among somali refugee women resettled in Ohio, United States: a cross-sectional survey. J Immigr Minor Heal. 2019;21:946–953.
33. Pavlish CL. Somali immigrant women and the american health care system. Soc Sci Med. 2010;71:353–361.
34. Mehta PK, Saia K, Mody D, et al. Learning from UJAMBO: perspectives on gynecologic care in african immigrant and refugee women in Boston, Massachusetts. J Immigr Minor Heal. 2017;20:1–8.
35. Strauss L, McEwen A, Hussein FM. Somali women’s experience of childbirth in the UK: perspectives from Somali health workers. Midwifery. 2009;25: 181–186.
36. Dawson A, Turkmani S, Fray S, et al. Evidence to inform education, training and supportive work environments for midwives involved in the care of women with female genital mutilation: a review of global experience. Midwifery. 2015;31:229–238.
37. Valente TW, Paredes P, Poppe PR. Matching the message to the process: the relative ordering of knowledge, attitudes, and practices in behavior change research. Hum Commun Res. 2006;24:366–385.
38. Pajares F. Current directions in self-efficacy research. In: Advances in Motivation and Achievement. Edited by Maerh M, Pintrich PR, 10th ed. Greenwich, CT: JAI Press, 1997, pp. 1–49. Available at https://www.uky.edu/~eushe2/Pajares/effchapter.html.
39. Migration Policy Institute. US Immigrant Population by State and County. Migration Policy Institute Data Hub. https://www.migrationpolicy.org/
40. Fox KA, Johnson-Agbakwu C. Crime victimization, health, and female genital mutilation or cutting among somali women and adolescent girls in the United States, 2017. Am J Public Health. 2020;110:112–118.

41. Marea CX, Warren N, Hopkins J, et al. Assessing the reliability and validity of attitudes and confidence scales for the care of women and girls affected by female genital mutilation/cutting. 2020;1:1–28, DOI: 10.21037/rs.3.rs-126815/v1.

42. Dawson A, Homer CSE, Turkmani S, et al. A systematic review of doctors’ experiences and needs to support the care of women with female genital mutilation. Int J Gynaecol Obstet. 2015;131:35–40.

43. Brydges R, Hatala R, Zendejas B, et al. Linking simulation-based educational assessments and patient-related outcomes: a systematic review and meta-analysis. Acad Med. 2015;90:246–256.

44. Dawson AJ, Turkmani S, Varol N, et al. Midwives’ experiences of caring for women with female genital mutilation: insights and ways forward for practice in Australia. Women Birth. 2015;28:207–214.

45. Hagiwara N, Elston Lafata J, Mezuk B, et al. Detecting implicit racial bias in provider communication behaviors to reduce disparities in healthcare: challenges, solutions, and future directions for provider communication training. Patient Educ Couns. 2019;102:1738–1743.

46. Hall WJ, Chapman MV, Lee KM, et al. Implicit racial/ethnic bias among health care professionals and its influence on health care outcomes: a systematic review. Am J Public Health. 2015;105:e60–e76.

47. Johnson-Agbakwu CE, Manin E. Sculptors of African women’s bodies: forces reshaping the embodiment of female genital cutting in the west. Arch Sex Behav. 2020 [Online ahead of print], DOI: 10.1007/s10508-020-01710-1.

48. Khullar D, Chokshi DA. Challenges for immigrant health in the USA—the road to crisis. Lancet. 2019;393(9933):2168–2174.

49. Abdulcadir J, Adler PW, Alderson P, et al. Medically unnecessary genital cutting and the rights of the child: moving toward consensus. Am J Bioeth. 2019;19:17–28.

50. Abdulcadir J, Bader D, Dubuc E, et al. Hot topic survey: discussing the results of experts’ responses on controversial issues in FGM/C. J Obstet Gynaecol Canada. 2020;42:e26.

Abbreviations Used

ACNM = American College of Nurse Midwives
ACOG = American College of Obstetricians and Gynecologists
AWHONN = Association of Women’s Health, Obstetric and Neonatal Nurses
B = beta
CDC = Centers for Disease Control
CI = confidence interval
CNM = Certified Nurse Midwife
FGM/C = female genital mutilation/cutting
IRB = Institutional Review Board
KAP = knowledge, attitudes, and practices
NP = nurse practitioner
S = standardized
WHO = World Health Organization

Publish in Health Equity

- Immediate, unrestricted online access
- Rigorous peer review
- Compliance with open access mandates
- Authors retain copyright
- Highly indexed
- Targeted email marketing