

# National Survey of US Plastic Surgeon Experience with Female Genital Mutilation

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**Background:** Female genital mutilation (FGM) is a growing problem in the United States, with the past few decades showing a dramatic increase in prevalence. This study aims to understand the plastic surgeon experience with FGM and inform preparedness for this rising problem.

**Methods:** A 26-question survey was developed and electronically distributed to a random cohort of 2,508 active American Society of Plastic Surgeons members. It was sent three times over a 3-week period in 2018.  $\chi^2$  statistical tests were used to analyze outcomes, assuming a  $P < 0.05$  level for statistical significance.

**Results:** There was a 7% survey response rate ( $n=180$ ). Demographic profiles reflected a range of practice types, geographical distribution, and years of experience. Ninety-five percent of respondents had heard of FGM ( $n=169$ ). Sixty-seven percent were aware that surgical reconstructive options exist for FGM ( $n=115$ ), with only 5% reporting any formal training on the topic ( $n=10$ ). Only 13.6% of those surveyed felt prepared to care for a woman with FGM ( $n=23$ ).

**Conclusions:** After surveying plastic surgeons, responses demonstrate that while the majority are familiar with FGM, very few are comfortable or prepared for the care and surgical management of this patient population. Although this study is limited by a low response rate, we believe that the results reflect an existing knowledge gap and demonstrate the need for formal training. This may help to bridge this gap and prepare surgeons to care for this population. (*Plast Reconstr Surg Glob Open* 2020;8:e2624; doi: [10.1097/GOX.0000000000002624](https://doi.org/10.1097/GOX.0000000000002624); Published online 23 March 2020.)

## INTRODUCTION

The World Health Organization (WHO) defines female genital mutilation (FGM) as any procedure that intentionally alters or causes injury to the female genitalia for nonmedical reasons.<sup>1</sup> It is practiced primarily for sociocultural reasons with the greatest prevalence in western, eastern, and north-eastern African regions. It is a violation of human rights that affects approximately 200 million girls and women worldwide.<sup>1</sup> A study carried out by the Center for Disease Control (CDC) estimated that in 2012, 513,000 women and girls in the United States were at risk for FGM, a number that has tripled in the past three

decades.<sup>2</sup> While much of that rise is due to immigration, the practice is often continued after arriving in the U.S. by taking girls abroad or to another state for the specific purpose of undergoing FGM, known as “vacation cutting.”<sup>3</sup>

The WHO classifies FGM into 4 different types, listed in [Table 1](#) and illustrated in [Figure 1](#). Immediate complications from the procedure include severe pain, hemorrhage, infections, sepsis, shock, and even death.<sup>4,5</sup> Long-term, women with FGM experience chronic pain, scarring, sexual dysfunction, chronic urinary and reproductive tract infections, as well as high rates of obstetric complications and psychological disorders.<sup>4-7</sup> Traditional practitioners, not medical professionals, are usually the ones to perform FGM in the majority of countries.<sup>8</sup> In these settings, it is often performed without anesthesia and without sterile instruments, thereby contributing to the high rate of complications seen. In rare cases, the medicalization of FGM has become more common; however, this practice is strongly condemned by the United Nations and others.<sup>4,8</sup>

Advocates have encouraged a multidisciplinary team approach to optimally address the many needs of this population, including the opportunity for reconstruction.<sup>9-11</sup>

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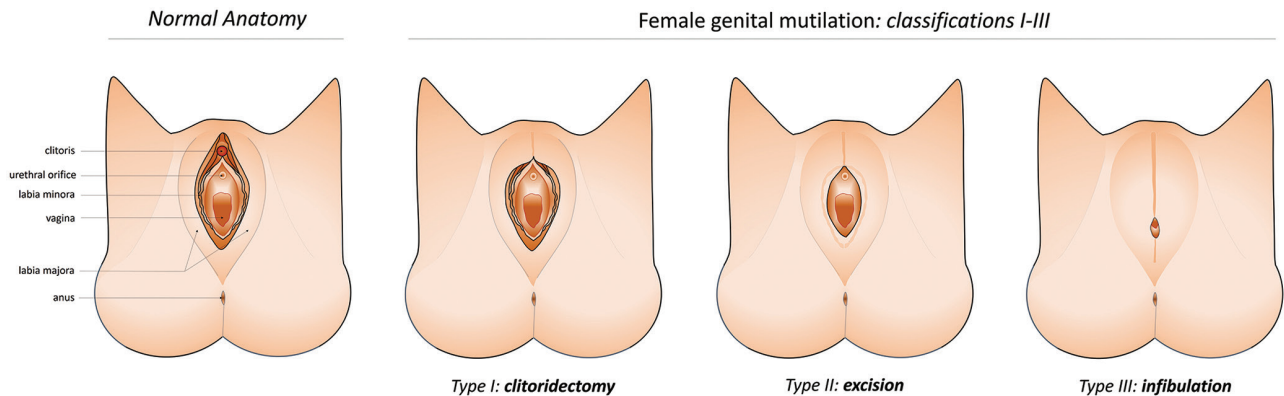
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**Table 1. World Health Organization Classification of FGM**

Type	Description
Type I: Clitoridectomy	Partial or total removal of the clitoris and/or prepuce
Type II: Excision	Partial or total removal of the clitoris and the labia minora with or without excision of labia majora
Type III: Infibulation	Narrowing of the vaginal orifice with creation of a covering seal by cutting and apposition of the labia minora and/or the labia majora, with or without excision of the clitoris
Type IV: Other	Any other harmful procedure to the female genitalia for nonmedical purposes (pricking, piercing, incising, scraping, or cauterization)

**Fig. 1.** Graphical illustration of the World Health Organization's classification system for female genital mutilation.

Surgical reconstruction for FGM was first performed in the early 21st century and continues to evolve and become more prevalent.<sup>12–18</sup>

The practice of FGM has been illegal in the United States since 1996 (18 US Code § 116). In 2013, Congress amended the original law in an attempt to prevent vacation cutting and made it illegal to transport a child outside of the United States for the purpose of being cut.<sup>2</sup> Much work has been done by the WHO and other national and international organizations in an effort to eradicate FGM and prevent the harmful consequences that come with it.<sup>4,19–22</sup> Globally, the prevalence of FGM has been slowly decreasing, though there is concern for a reversal of this trend due to population growth.<sup>8</sup> Further, the pace of decline has been uneven across countries; for example, the United States has seen a rapid growth in the prevalence of FGM over the past few decades.<sup>2,8</sup> In 1990, the CDC estimated that 169,000 girls and women in the United States already had undergone FGM or were at risk.<sup>23</sup> A 2012 estimate found that 513,000 women and girls in the U.S. were at risk for undergoing FGM, notably not including those who may have already had FGM in this estimate.<sup>2</sup> Those most at risk are young girls from infancy to adolescence who were born, or whose parents were born, in a country with a high FGM prevalence.<sup>1,2,23</sup> Due to this alarming rise in the United States and the harmful health consequences associated with FGM, it is critical that health care providers are educated and prepared to address the needs of this vulnerable population.<sup>11</sup>

Understanding healthcare provider experience with FGM is the first step to ensuring knowledgeability of the topic. The majority of research on provider experience has been done outside the United States.<sup>24–29</sup> A recent meta-analysis of the literature assessed the experience of healthcare

providers with FGM.<sup>24</sup> Most of the studies examined knowledge and attitudes, and occasionally practice patterns of OBGYNs, midwives, nurses, pediatricians, and family practitioners.<sup>24</sup> Very little has been done in the United States to understand provider experience, knowledge, attitudes, or preparedness, especially from the surgeon's perspective. Until recently, the only articles examining experience in the United States with FGM assessed nurse midwives.<sup>30,31</sup> The first result of a physician experience in the United States was published in 2018.<sup>32</sup> This work by Lane et al shows the results of a survey conducted in 2013 examining OBGYN providers (PAs, nurse midwives, physicians). They concluded that women's healthcare providers are inadequately prepared to meet the needs of FGM-affected women.<sup>32</sup> To date, there has been no assessment of surgeons' experience with FGM. Our study sought to understand reconstructive physicians' experience with FGM to inform preparedness of this growing problem.

## METHODS

There is no established or validated survey to assess provider experience or knowledge regarding FGM. Thus, we developed a novel 26-question Likert-style survey based on prior studies<sup>25–27</sup> and incorporated surgery-specific questions. The questionnaire surveyed provider demographics, knowledge of FGM and laws surrounding it, and provider experience with FGM in their plastic surgery practice. We collaborated with the American Society of Plastic Surgeons (ASPS) to distribute the survey to its members. The survey was distributed by the ASPS to a random cohort of 2,508 active ASPS members. It was sent by email three times over a 3-week period in November and December 2018. This study was granted exemption by the University of Pennsylvania's Institutional Review Board.

$\chi^2$  statistical tests were used to analyze outcomes, assuming a  $P < 0.05$  level for statistical significance.

**RESULTS**

A total of 180 survey responses were received (7% response rate). Demographic profiles of survey respondents reflect a range of practice types and years of experience, shown in Table 2. Respondents represented 43 different states and showed a diversity of practice settings.

Ninety-five percent of respondents (n = 169) stated that they had heard of FGM (Table 3).

Sixty-seven percent were aware that surgical reconstructive options exist for FGM (n = 115). When divided by region, plastic surgeons from Northeast states were most aware that reconstructive options existed (P = 0.67). Although many respondents were aware that reconstructive options exist, few reported being somewhat familiar (16.7%, n = 28) or very familiar (3.5%, n = 6) with the reconstructive options for FGM. Only 5% of those surveyed reported receiving any formal training on FGM (n = 10). Of those who received training, the majority (80%) felt that their training was insufficient.

Figure 2 illustrates the results of questions regarding knowledge of FGM laws, surgeon comfort level, and preparedness for caring for a woman with FGM. Twenty-one percent of respondents felt somewhat or very comfortable counseling women with FGM (n = 35). Sixty-three percent of respondents did not feel prepared to care for a woman with FGM (n = 105), while only 13.6% of those surveyed felt prepared (n = 23). Most respondents were unfamiliar with their state’s laws (or lack thereof) and the national laws regarding FGM (84%, 85%, respectively). Only 9% reported being familiar with available resources for women with FGM.

When asked about their clinical experience with FGM, 6% reported being involved in the care of a woman with FGM within the past 5 years (n = 11). For those surgeons who had any experience with FGM (n = 16), partial genital excision (Type II) was most often encountered (Table 4). When questioned about the primary focus of FGM reconstruction, 81% of respondents felt that the focus should be both functional and cosmetic (n = 26).

**DISCUSSION**

Female genital mutilation is a growing concern in the United States, in part due to immigration and the desire to maintain cultural traditions after migration from native countries.<sup>2</sup> As key players in the reconstructive process, we sought to measure the preparedness and knowledge base of plastic surgeons regarding this at-risk population. While many of the plastic surgeons surveyed (67%) were aware that reconstructive options exist for FGM, few were very or somewhat familiar (3.5%, 16.7%, respectively) with the reconstructive options, indicating a knowledge gap. There is a need for greater education on the topic either during medical school, residency or continuing medical education, to enable surgeons to better serve these women.<sup>11,29</sup> In addition to understanding the surgical needs of this population, a broad multidisciplinary approach is optimal

**Table 2. Demographics of Respondents**

Characteristics	% (n)
Practice type	
Solo practice	43 (77)
Small PRS group (2–5 surgeons)	18 (32)
Large PRS group (>6 surgeons)	5 (9)
Medium multi-specialty (6–20 physicians)	2 (3)
Large multi-specialty (>20 physicians)	7 (13)
Academic practice	16 (26)
Military	2 (4)
Employed physician	7 (12)
Years in practice	
<5 years	12 (21)
5–9 years	16 (28)
10–14 years	9 (16)
15–19 years	13 (23)
20–24 years	13 (24)
>25 years	37 (66)
Practice setting	
Urban	44 (78)
Suburban	48 (85)
Rural	8 (15)
Practice location*	
Northeast	17 (30)
Midwest	24 (43)
South	37 (65)
West	22 (40)
Clinical volume in practice	
Cosmetic	47 (84)
Reconstructive	40 (71)
Microsurgery	2 (4)
Craniofacial	1 (2)
Hand	5 (9)
Other	5 (8)

\*Regions as listed by the US Census Bureau.

**Table 3. Survey Results**

Question	Yes % (n)	No % (n)
Have you heard of female genital mutilation (FGM)?	95 (169)	5 (9)
Are you aware there are surgical reconstructive options for FGM?	67 (115)	33 (54)
Have you received formal training on FGM at any point in your career?	5 (10)	95 (158)

to address the other medical, sexual, and psychological problems often encountered. Women are unlikely seek out a plastic surgeon for FGM reconstruction if, like the majority of healthcare providers, they are unaware that such options exist. Therefore, it is of paramount importance that all providers who are likely to contact these patients be aware that reconstructive options exist, thereby ensuring that women get the care they need.

As mentioned previously, we found that most respondents had heard of FGM, though few were familiar with their state or the national laws on FGM. On a federal level, FGM has been illegal in the United States since 1996 (18 US Code § 116). Currently, 31 states have laws of varying degrees against FGM, though only 7 states have mandatory reporting laws.<sup>33</sup> The first federal case against FGM in the United States was brought in Detroit in 2017 and ultimately dismissed. One judge wrote that “Congress overstepped its bounds by legislating to prohibit FGM” because “FGM is a ‘local criminal activity’ which, in keeping with longstanding tradition and our federal system of government, is for the states to regulate, not Congress.”<sup>34</sup> This ruling was a setback for FGM survivors and their

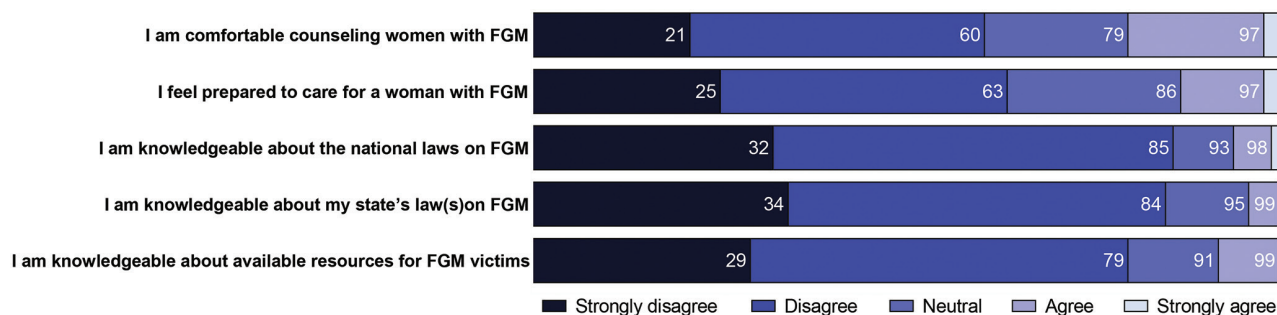


Fig. 2. Survey results.

Table 4. Plastic Surgeon Experience with FGM

Types of FGM Encountered	% (n)
Type I: Clitoridectomy	34.5 (10)
Type II: Excision	44.8 (13)
Type III: Infibulation	17.2 (5)
Type IV: Other	3.4 (1)

advocates. It further emphasizes the need for each state to have strong anti-FGM legislation to help protect girls and women at risk.

Our study was limited, as it only assessed plastic surgeon experience and does not capture other specialties who may perform reconstruction for FGM (ie, OBGYN, urogynecology). An additional limitation of this study is the low response rate of 7%; similar surveys administered to ASPS members in recent years have response rates from 9% to 21%.<sup>35–40</sup> Despite this, we believe that our results demonstrate an existing knowledge gap that needs to be addressed with formal education and training. We encourage education of all health professionals on FGM and hope that with improved knowledge of the topic and available resources, FGM victims will receive the care and support they deserve.

### CONCLUSIONS

This is the first study to assess plastic surgeons' experience with FGM and only the second to report on US physician experience, in general. While the majority of plastic surgeons surveyed are familiar with FGM, very few feel prepared for the care and surgical management of this patient population. Although this study is limited by a low response rate, we believe that the results reflect an existing knowledge gap. The development of formal training is necessary to prepare current and future generations of surgeons for the reconstructive care of this ever-expanding population of women.

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