

TRENDS IN MEDICALISATION OF FEMALE GENITAL MUTILATION/CUTTING: WHAT DO THE DATA REVEAL?

October 2018 (Update)

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BETTINA SHELL-DUNCAN
UNIVERSITY OF WASHINGTON, SEATTLE, WASHINGTON, USA

CAROLYNE NJUE
UNIVERSITY OF TECHNOLOGY, SYDNEY, NSW, AUSTRALIA

ZHUZHI MOORE
INDEPENDENT CONSULTANT, VIENNA, VIRGINIA, USA

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The Evidence to End FGM/C: Research to Help Girls and Women Thrive generates evidence to inform and influence investments, policies, and programmes for ending female genital mutilation/cutting in different contexts. Evidence to End FGM/C is led by the Population Council, Nairobi in partnership with the Africa Coordinating Centre for the Abandonment of Female Genital Mutilation/Cutting (ACCAF), Kenya; the Global Research and Advocacy Group (GRAG), Senegal; Population Council, Nigeria; Population Council, Egypt; Population Council, Ethiopia; MannionDaniels, Ltd. (MD); Population Reference Bureau (PRB); University of California, San Diego (Dr. Gerry Mackie); and University of Washington, Seattle (Prof. Bettina Shell-Duncan).



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Please address any inquiries about the Evidence to End FGM/C programme consortium to:

Dr Jacinta Muteshi, Project Director, jmuteshi@popcouncil.org

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List of Acronyms

ACCAF	Africa Coordinating Centre for the Abandonment of FGM/C
DHS	Demographic and Health Survey
FGM/C	Female Genital Mutilation/Cutting
GRACe	Gender and Reproductive Health and Rights Resources and Advocacy Center
HIS	Health Issues Survey
MICS	Multiple Indicator Cluster Survey
PHS	Population Health Survey
SDGs	Sustainable Development Goals
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
WHO	World Health Organization

Acknowledgments

We are grateful to the UNICEF Khartoum office for providing data on the practitioners of FGM/C among daughters from the 2014 MICS survey conducted in Sudan. Corrine Mar from the Center for the Study of Demography and Ecology at University of Washington provided advice on presentation of the data and helped prepare several figures. We would like to thank Jacinta Muteshi and Otibho Obianwu for providing detailed review comments on earlier versions of this manuscript. We thank the panel of experts on medicalisation of FGM/C interviewed: Samuel Kimani from the Africa Coordinating Centre for the Abandonment of FGM/C (ACCAF), University of Nairobi, Kenya, Nafisa Bedri and Yussra Mohamed from the Gender and Reproductive Health and Rights Resources and Advocacy Center (GRACe) at Ahfad University for Women, Khartoum, Sudan, Salma Abou Hussein from Population Council in Cairo, Egypt, and Otibho Obianwu and Adetayo Adetunji from Population Council, Abuja, Nigeria. They shared possible interpretations of the data presented in this study based on their own research on medicalisation and offered an expert consensus on the conclusions reached at the end of this paper. Any error in this manuscript are, however, solely attributable to the authors.

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Executive Summary

Medicalisation is defined by the World Health Organization as a situation in which female genital mutilation/cutting (FGM/C) “is practiced by any category of health-care provider, whether in a public or private clinic, at home, or elsewhere” (WHO, 2010: 2). Despite the emergence of international consensus that female genital mutilation/cutting (FGM/C) is a violation of human rights, a focus on medicalisation remains salient because of concerns that FGM/C is increasingly being performed by healthcare professionals and may be impeding progress toward abandonment of FGM/C. To investigate these claims, this study draws on nationally-representative survey data from 26 countries, and addresses the following three questions:

- What are the major patterns and trends in medicalisation?
- Is there an association between medicalisation and rates of change in prevalence of FGM/C?
- Is there an association between medicalisation and support for the continuation of the practice?

Results show that among women ages 15–49 years, the majority (79%) report having been cut by a traditional cutter, while an estimated 21 percent—totalling nearly 16 million girls and women—report having been cut by a health care provider. Medicalised cutting is concentrated in three countries; 93 percent of women who report having undergone medicalised FGM/C live in Egypt, Sudan, and Nigeria. Elsewhere medicalised cutting is rare or restricted to geographic pockets. Data on practitioners of FGM/C among daughters show that most cutting is carried out by traditional cutters in all countries except Egypt and Sudan, where daughter medicalisation rates are 78.4 percent and 77.5 percent, respectively. Mother-daughter comparisons reveal that in select countries, rates of medicalisation are increasing—most sharply in Egypt, where the medicalisation rate among daughters is nearly twice that of women. Successive survey data show that rising medicalisation rates are found in countries where FGM/C rates are steady (Sudan) or dropping (Egypt and Kenya), but overall across countries, there is no correlation between medicalisation rates among daughters and rates of decline in FGM/C. National-level figures on medicalised cutting of daughters are not correlated with higher support for the continuation of FGM/C. Hence, it not clear that medicalisation undermines the ability to change attitudes against FGM/C. National-level figures may mask important locally divergent factors influencing medicalisation and obscure sub-regional associations. Hence, further focused research is needed to explore this issue.

Introduction

At a United Nations summit held in 2015, world leaders adopted a new set of goals and targets known as the Sustainable Development Goals (SDGs), outlining a development agenda for the next 15 years. SDG target 5.3.2 calls for the elimination of all harmful traditional practices, including female genital mutilation/cutting (FGM/C), by the year 2030. FGM/C refers to a variety of practices involving the partial or total removal of the external female genitalia for non-therapeutic reasons. These range from nicking the tissue surrounding the clitoris to the complete removal of the external genitalia. WHO has classified different types of FGM/C as follows: Type I (clitoridectomy) involves removal of all or part of the clitoris and/or the prepuce; Type II (excision) involves removal of the clitoris and the labia minora with or without removal of the labia majora; Type III (infibulation) involves removal of all of the external genitalia, and appositioning the labia to form a seal, leaving a pinhole opening for the passage of urine and blood; and Type IV, all unclassified forms, including nicking, pricking, and scraping the skin covering or near the clitoris, but no removal of tissue (WHO, 2008). FGM/C occurs in countries extending from West to East Africa, through the Horn of Africa, and in parts of the Middle East and Southeast Asia. Surveys conducted across parts of Africa, the Middle East, and Southeast Asia document FGM/C prevalence rates ranging from 1% (Uganda, Cameroon) to more than 95% (Guinea and Somalia) (Shell-Duncan, Naik, & Feldman-Jacobs, 2016; UNICEF, 2016). Although survey data are lacking, FGM/C has been described in countries including Colombia, Iran, India, Malaysia, Oman, Pakistan, Russia, and Thailand, as well as in migrant communities throughout the world originating from countries where FGM/C is practised (BBC, 2016; Merli, 2012; UNICEF, 1998; UNICEF, 2016). It has been estimated that worldwide, more than 200 million girls and women have undergone some form of FGM/C (UNICEF, 2016), and more than 3 million girls are estimated to be at risk of being cut each year. A growing body of research has documented that most forms of FGM/C can cause not only immediate health complications such as excessive bleeding and infection, but also long-lasting genito-urinary, obstetrical, and psychological problems (Berg, Denison, & Fretheim, 2010; Berg, Underland, Odgaard-Jensen, Fretheim, & Vist, 2014; WHO, 2006).

Global efforts to end FGM/C have intensified over the last four decades through combined efforts of international and non-governmental organisations, governments, religious and civil society groups. A wide range of intervention strategies have been implemented with the goal of accelerating abandonment of FGM/C. Initially, the most common approaches used information and education campaigns that sought to educate people about the adverse health outcomes associated with FGM/C. It was assumed that as people became increasingly aware of negative health risks, they would weigh this against the perceived positive aspects, and become motivated to abandon the practice (Muteshi & Sass, 2005). Increasingly health education campaigns were complemented by more comprehensive strategies such as intergenerational dialogue programmes that facilitate conversation and critical assessment of FGM/C among members of practising communities (Muteshi & Sass, 2005), holistic community education programmes that culminate in public declarations to abandon FGM/C (WHO, 1999), and alternative rites of passage programmes that encourage upholding ceremonial aspects of girls' initiation but eliminating the cutting aspect (Chege, Askew, & Liku, 2001; Hernlund, 2000). Most, to some extent, include education on adverse medical risks.

There has been speculation that a focus on health consequences of FGM/C may have inadvertently led to medicalisation of the practice (Carr, 1997; WHO, 2010). An early comparative overview of data on practitioners of FGM/C from Demographic and Health Survey (DHS) data drew attention to the "problem" that in certain settings FGM/C was being increasingly performed by health care providers (Carr, 1997). It also characterised declines in FGM/C prevalence as "limited

and slow,” with the practice still supported by large segments of the population (Carr, 1997). This has led to ongoing speculation that messaging on health risks motivated medicalisation more so than abandonment, thereby impeding progress toward abandonment (Carr, 1997; WHO, 2010). However, divergent views exist, with debates being centred on the question of whether medicalisation can be a viable harm reduction strategy that can serve as a step toward abandonment, or whether it legitimises the practice and promotes its perpetuation. During these ongoing debates, claims about trends in medicalisation and its effect on the continuation of FGM/C are based on limited empirical data.

Advocates of harm reduction have argued that a shift toward medicalised cutting can represent a transitional step toward abandonment (Obiora, 1997). This shift may reflect an openness to reassessing the way in which FGM/C is performed, including the possibility of not performing it at all (Dawson, Homer, Turkmani, Black, & Varol, 2015; Gele, Bo, & Sundby, 2013; Modrek & Sieverding, 2016). A study analysing the 2008 Egypt DHS data found that households were less likely to opt for FGM/C when medicalisation was more common among their daughter’s peers; the authors suggested that medicalisation may be associated with changing norms surrounding FGM/C, opening possibilities for abandonment (Naguib, 2012). It is this logic that belies some, but not all, of the policies and measures that have been instituted to minimise harm from FGM/C. In countries such as Sudan and Somalia, trainings on FGM/C have been incorporated into the training curriculum for health care professionals, with the goal of promoting safer and less severe forms of cutting (Boddy, 2007; Gele et al., 2013; Gruenbaum, 1982; Kaphle, 2000; Valderrama, 2002). For a period, policies of the ministries of health in Egypt and Indonesia issued directives for FGM/C to be performed by health professionals (IRIN_News, September 1, 2011; Reefat, 2009). In parallel, beginning in the 1990’s, as host countries received an increased number of immigrants from countries where FGM/C is practised, several proposals were drafted to offer hospital-based nicking in lieu of more severe forms of cutting (Abdulcadir, Margairaz, Boulvain, & Irion, 2011; Coleman, 1998; Obiora, 1997). Each of these proposals were met with sharp criticism and have not been implemented.

Opposition to medicalisation is also now endorsed by professional medical organisations around the world, including the International Federation of Gynecology and Obstetrics, which passed a resolution in 1994 opposing the performance of FGM/C under any circumstances, in health establishments or by health professionals (WHO, 2008). On December 20, 2012, the United Nations General Assembly passed a Resolution on Intensifying Global Efforts for the Elimination of Female Genital Mutilation [A/RC.3/67/L.21/Rev.1]. Its adoption reflects agreement that FGM/C constitutes a violation of human rights, and that all countries should take action to end the practice “committed within or outside a medical institution, and to take all necessary measures including enacting and enforcing legislation to prohibit FGM/C and protect women and girls from this form of violence, and to end impunity” [A/RC.3/67/L.21/Rev.1]. Currently 27 countries in Africa and the Middle East where FGM/C is practised have banned it by law or constitutional decree (Shell-Duncan et al., 2016), and in at least six of these countries (Burkina Faso, Cote d’Ivoire, Egypt, Eritrea, Mauritania, and Senegal), the criminal code specifies an elevated penalty (prison and/or fine) specifically for health care providers who perform FGM/C, in addition to the possibility of suspending their licenses (Shell-Duncan, Wander, Hernlund, & Moreau, 2013).

Despite this emerging consensus, medicalised cutting is still occurring. Rates of medicalisation are purportedly continuing to climb despite mounting criticism, scrutiny, and legal regulation (Kimani & Shell-Duncan, 2018; WHO, 2010). Medical ethicists have argued that the unacceptably slow progress toward abandonment justifies the endorsement of “de minimis” forms of FGM/C that do not carry long-term medical risks (Arora & Jacobs, 2016). And soon courts of law will be asked to adjudicate on two landmark medicalisation cases. An upcoming case in the U.S. will decide whether medical practitioners who performed genital scraping on girls have violated a federal ban

on FGM/C (Belluck, 2017). While in Kenya a doctor has filed a claim that the ban on FGM/C among adult women is unconstitutional by denying women a right to culture, to make choices about their body, and have access to medical care should they elect to undergo this procedure (Bhalla, 2018). Against this background, concerns remain as to whether medicalisation may be legitimising the practice and impeding progress toward abandonment (Doucet, Pallito, & Groleau, 2017; Kimani & Shell-Duncan, 2018). In an effort to fill this gap, we examine data on medicalisation from nationally-representative survey data from 26 countries to make evidence-based inferences regarding some key debates surrounding the effects of medicalisation. First, we explore the patterns and trends in medicalisation. Second, to investigate the claim that medicalised cutting may slow rates of abandonment of FGM/C, we examine association between medicalisation and rates of change in prevalence of FGM/C, and the association between rates of medicalisation and level of support for the continuation of FGM/C.

Methods

Data Sources

Data on medicalisation of FGM/C are available from nationally-representative data from 26 countries in Africa and the Middle East. Reliable nationally-representative data have been generated through several major household surveys: the DHS, the Multiple Indicator Cluster Surveys (MICS), the Egypt Health Issues Survey (HIS), and the Eritrea Population Health Survey (PHS). Each survey asks a sample of women of reproductive age (15-49 years) about their own FGM/C status, as well as the person who performed the cutting for those who have undergone FGM/C. Women with at least one living daughter are asked the same questions about at least one daughter, usually the most recently cut daughter or, in recent MICS and DHS surveys, all daughters between ages 0-14 years. The survey also asks women their opinion as to whether the practise of FGM/C should continue. Data were drawn from the final reports prepared for each survey. Where data were not available in final reports, they were obtained from the publicly available data sets.

Variables

Women's self-reported data on FGM/C come from the surveys described above. For each survey a random sample of women aged between 15 and 49 years was drawn using a two-stage cluster sampling procedure. Data on daughters were reported by their mothers. Data on support for continuation of FGM/C was obtained from women who positively replied to a question about having ever heard of FGM/C. Most surveys posed the question as "Do you think this practice should continue? Or should it be discontinued?" This was followed by pre-coded responses: continued, discontinued, and it depends/not sure (UNFPA-UNICEF, 2013). The number of women who indicated they think FGM/C should continue was used to compute the percent of women who favour continuation of the practice. Questions about practitioners of FGM/C on women or on their daughters vary in form across surveys, and survey reports compiled categories in different forms. In many instances data on health personnel are divided as doctor and nurse/midwife/other health worker. Data on traditional circumcisers are often categorised as traditional practitioner and 'other traditional practitioner'. Some surveys have unique categories; for instance, the Egypt survey asks about the three categories (daya, barber, and ghagarie) that are found only in the Egypt female genital cutting module. Data from The Gambia and Yemen are reported in only two categories: health personnel and traditional practitioners. To allow comparisons across countries, we grouped practitioners into the two larger categories: traditional practitioners and health personnel. In the Cameroon survey (DHS 2004), data on type of practitioner of FGM/C were collected for women, but not daughters.

Statistical analysis

The data reported throughout this report are weighted based on sampling design. Descriptive statistics to facilitate comparisons across countries and to discern patterns and trends are presented as frequencies and percentages. The outcome variables of interest are national prevalence of FGM/C, rates of medicalisation (defined as the percent of girls and women with FGM/C who report cutting performed by a health professional), percent of women who support the continuation of FGM/C, and type of health personnel who performed cutting (doctor versus nurse midwife or other health professional). For countries with consecutive surveys with comparable data on medicalisation and prevalence of FGM/C (Benin, Burkina Faso, Chad, Cote d'Ivoire, Egypt, Eritrea, Kenya, Mali, Niger, Nigeria, Senegal, Sudan, Togo, and the United Republic of Tanzania), trends across time were plotted and described. The U.S. Census Bureau's International Data Base (U.S. Census Bureau) was used to obtain midyear population estimates by five-year age cohorts by country for the year in which the survey data were collected. To estimate the total number of women aged between 15 and 49 years who are cut in any one of the countries, we tally the total number of women in this age range in the year that the most recent survey was conducted and multiply the number by the prevalence of FGM/C among women aged 15-49 years (based on self-reported FGM/C status). The total number of women cut by health practitioners was estimated by multiplying the total number of women cut by the medicalisation rate. Following the methods of UNICEF (2013) we also use prevalence figures on age-specific cohorts to determine trends in change in FGM/C prevalence. Specifically, we compare the prevalence of FGM/C in the oldest age cohort (45-49 years) to the prevalence in the youngest age cohort (15-19 years). The percent change between the oldest and youngest age cohorts is used to compute the rate of decline in FGM/C. The Pearson correlation coefficient was computed between rates of medicalisation among daughters and two different measures: 1) percent of change in the prevalence of FGM/C between the eldest and youngest cohort, and 2) proportion of women aged 15-49 years who support the continuation of FGM/C.

Expert group analysis

To maximise understanding of the data, the interpretation of results was done in consultation with a panel of experts on medicalisation of FGM/C who are conducting focused studies on this topic in their own countries. The experts interviewed were Samuel Kimani from the Africa Coordinating Centre for the Abandonment of FGM/C (ACCAF), University of Nairobi, Kenya; Nafisa Bedri and Yussra Mohamed from Gender and Reproductive Health and Rights Resources and Advocacy Center (GRACe) and Ahfad University for Women, Khartoum, Sudan; Salma Abou Hussein from Population Council in Cairo, Egypt; and Otibho Obianwu and Adetayo Adetunji from Population Council, Abuja, Nigeria. They offered possible interpretations of the data presented in this study based on their own research on medicalisation and offered an expert consensus on the conclusions reached at the end of this paper. This took place during a meeting of partners involved in the Evidence to End FGM/C: Research to Help Girls and Women Thrive research consortium, held in Nairobi, Kenya in February and March 2018.

Results

Patterns and trends in medicalisation

Self-reported data on the prevalence of FGM/C and person who performed cutting are reported in Table 1. The prevalence of FGM/C among women aged 15-49 ranges from as low as 1-2 percent (Cameroon and Niger) up to 97 percent (Guinea). Among women with FGM/C, rates of medicalisation among women aged 15-49 are highest in five countries: Sudan (67%), Egypt (42%),

Guinea (15%), Kenya (15%), and Nigeria (13%). Elsewhere, medicalised cutting is rare and restricted to geographically defined pockets.

Table 1. Prevalence of FGM/C, medicalisation and total number of women (age 15-49) cut by health professionals from the most recent survey available*

Country	Data Source	Prevalence (%)	Medicalisation Among Women Cut (%)	Total Number of Women (15-49)	Total Number of Women Cut	Total Cut by Health Professionals
Benin	MICS 2014	9.2	0.9	2,367,594	217,819	1,960
Burkina Faso	MICS/DHS 2010	75.8	0.2	3,688,866	2,796,160	5,592
Cameroon	DHS 2004	1.4	4.0	4,098,869	57,384	2,295
CAR	MICS 2010	24.2	2.3	1,172,050	283,636	6,524
Chad	DHS 2014-15	38.4	0.9	2,785,163	1,107,229	9,626
Côte d'Ivoire	MICS 2016	36.7	1.0	6,117,646	2,022,276	22,452
Djibouti	MICS 2006	93.1	6.0	193,365	180,023	10,801
Egypt	HIS 2015	87.2	42.2	23,857,123	21,534,578	8,820,646
Eritrea	PHS 2010	83.0	0.3	1,289,441	869,559	3,211
Ethiopia	DHS 2016	65.2	1.0	24,091,527	15,707,676	157,077
Gambia	DHS 2013	74.9	0.3	486,629	364,485	1,093
Ghana	MICS 2011	3.8	1.2	6,041,140	229,563	2,755
Guinea	DHS 2012	96.9	15.4	2,518,996	2,440,907	375,900
Guinea-Bissau	MICS 2014	44.9	0.6	419,549	189,846	1,130
Iraq	MICS 2011	8.1	6.3	7,623,574	617,509	38,903
Kenya	DHS 2014	21.0	14.7	10,877,750	2,284,328	335,796
Mali	MICS 2015	82.7	2.3	3,807,075	3,221,836	72,414
Mauritania	MICS 2015	66.3	11.9	934,407	580,939	3,112
Niger	DHS 2012	2.0	0.0	3,423,589	68,472	0
Nigeria	MICS 2016-17	18.4	12.7	42,889,199	9,787,758	939,102
Senegal	DHS 2016	22.7	0.5	3,625,663	854,176	0
Sierra Leone	DHS 2013	89.6	1.8	1,391,263	1,246,572	13712
Sudan	MICS 2014	86.6	66.8	8,752,649	7,579,794	5,063,302
Togo	DHS 2013-14	4.7	0.5	1,755,425	63,105	413
Tanzania	DHS 2015-16	10.0	1.8	11,902,487	1,482,789	21,424

Table 1. Prevalence of FGM/C, medicalisation and total number of women (age 15-49) cut by health professionals from the most recent survey available*

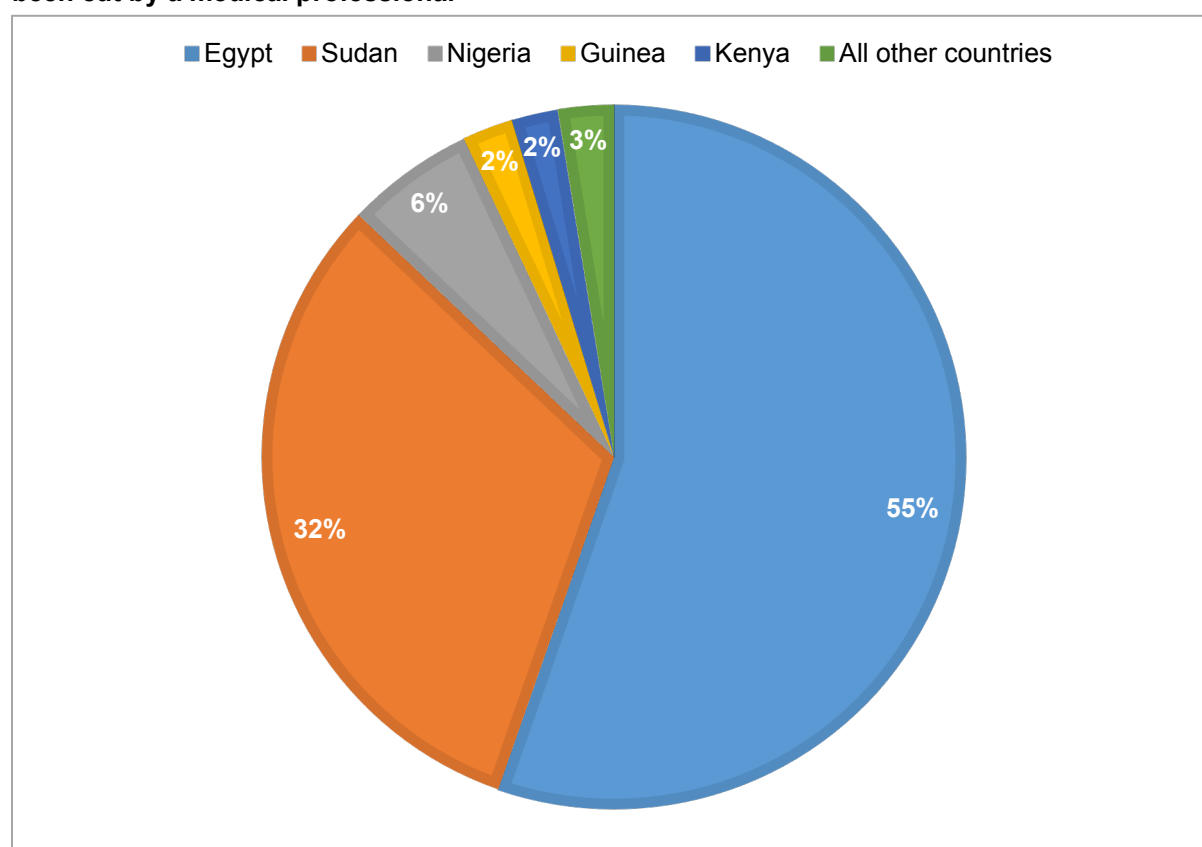
Country	Data Source	Prevalence (%)	Medicalisation Among Women Cut (%)	Total Number of Women (15-49)	Total Number of Women Cut	Total Cut by Health Professionals
Yemen	DHS 2013	18.5	3.0	6,040,827	1,117,553	33,527
Total			26.2		74,326,742	15,941,674

* To calculate the total number of women cut by health professionals, data on mid-year population size of women aged 15-49 years (in the year the survey was conducted) were obtained from the U.S. Census Bureau International Database.

CAR: Central African Republic

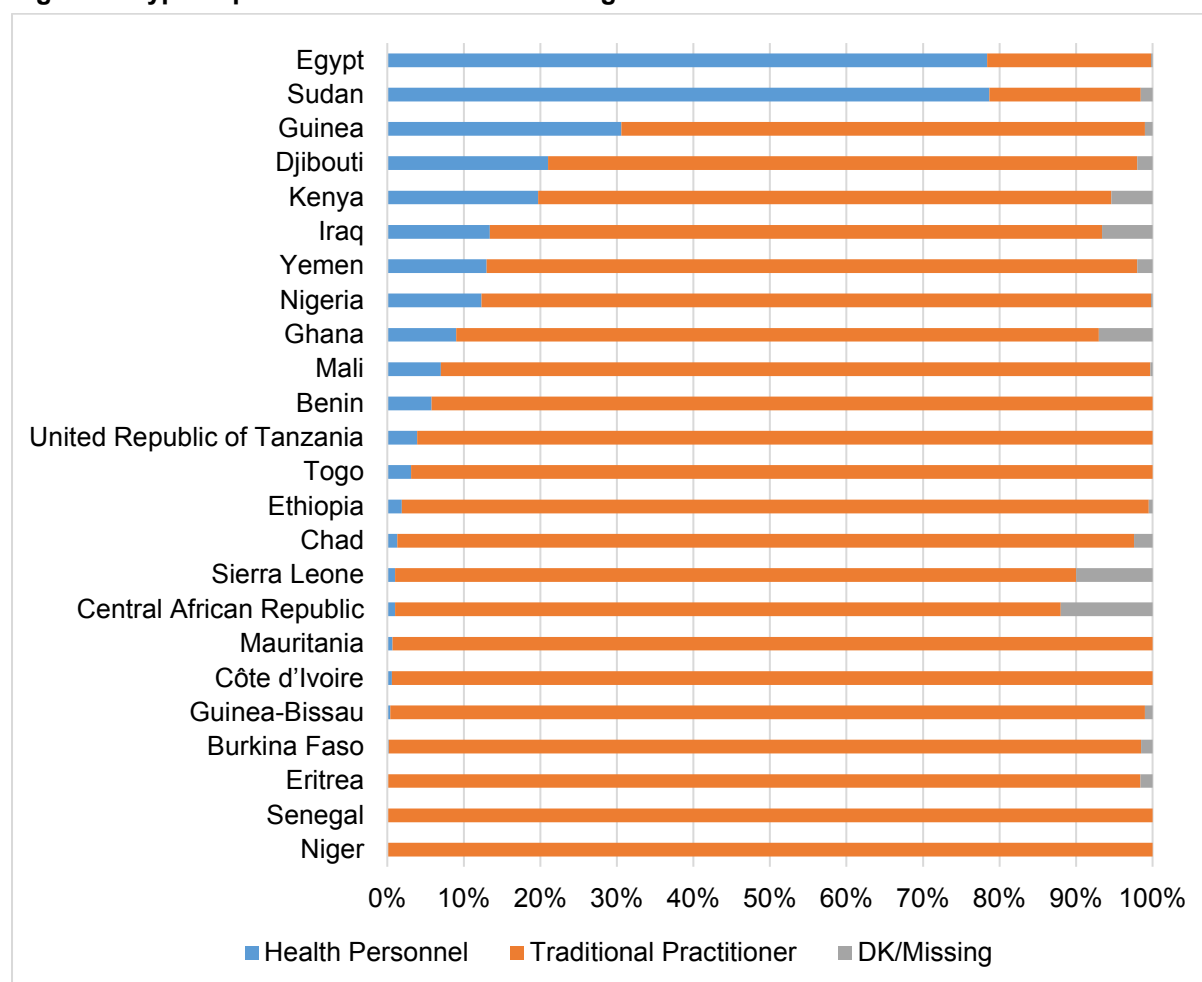
In the 26 countries for which we have data on medicalisation, most women with FGM/C (79%) report being cut by a traditional practitioner; and 21 percent, totalling 15,941,674, were reportedly cut by a health care provider. Of women who report medicalised cutting, more than half (55%) reside in Egypt alone. Ninety-three percent of women who were cut by a health professional live in just three countries: Egypt, Sudan, and Nigeria (Figure 1).

Figure 1. Geographic distribution of women aged 15-49 years with FGM/C who report having been cut by a medical professional



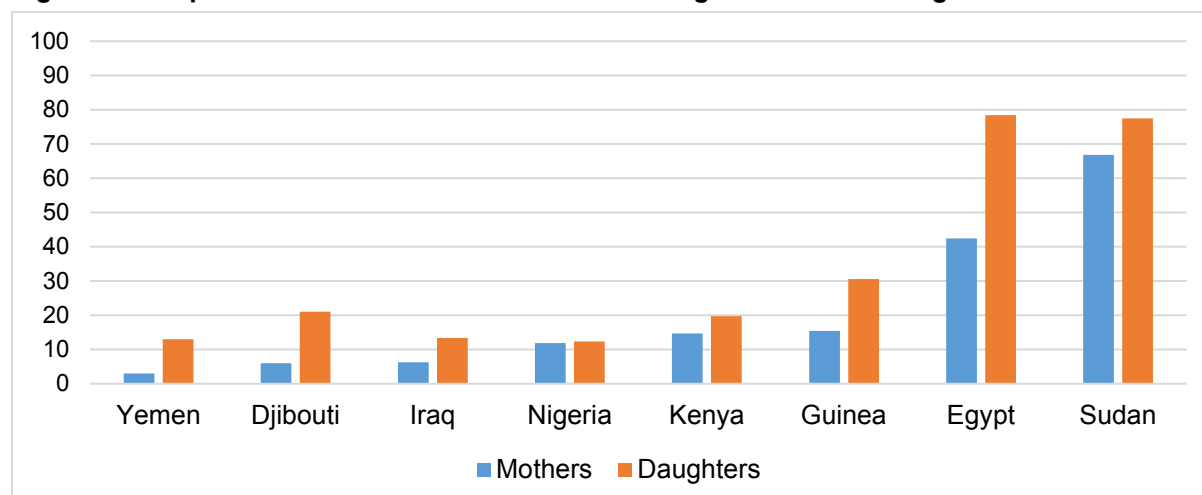
In 16 out of 24 countries, less than 10 percent of daughters with FGM/C were cut by medical professionals (Figure 2). Overall, like in all women, the majority of FGM/C is most often performed on daughters by traditional practitioners.

Figure 2. Type of practitioner of FGM/C on daughters



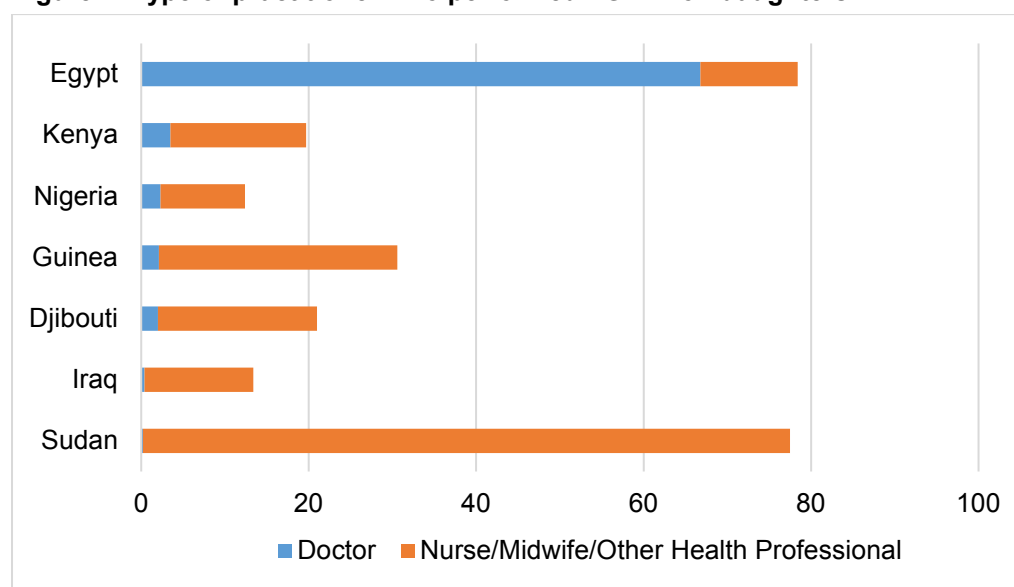
In eight countries, rates of medicalised cutting among daughters are 10 percent or higher (Figure 3). Comparing rates of medicalisation among mothers and daughters, rates are higher among daughters in each of these countries except Nigeria. The trend toward increased medicalisation in daughters, as compared to mothers, is most pronounced in Egypt, where medicalisation rates among daughters (78%) are nearly twice those among women (42%).

Figure 3. Comparison of rates of medicalisation among mothers and daughters



From the results, two categories of health professionals were identified to perform FGM/C on daughters: 1) doctors, and 2) nurses, midwives, or other health professionals for the same countries (i.e., Sudan, Egypt, Guinea, Kenya, Nigeria, Djibouti, and Iraq) except Yemen, where only aggregated figures are reported (Figure 4). Egypt is unique in that doctors most commonly undertake FGM/C. In most countries where health care providers provide FGM/C on daughters, it is carried out by nurses, trained midwives, or other trained healthcare professionals.

Figure 4. Type of practitioner who performed FGM/C on daughters

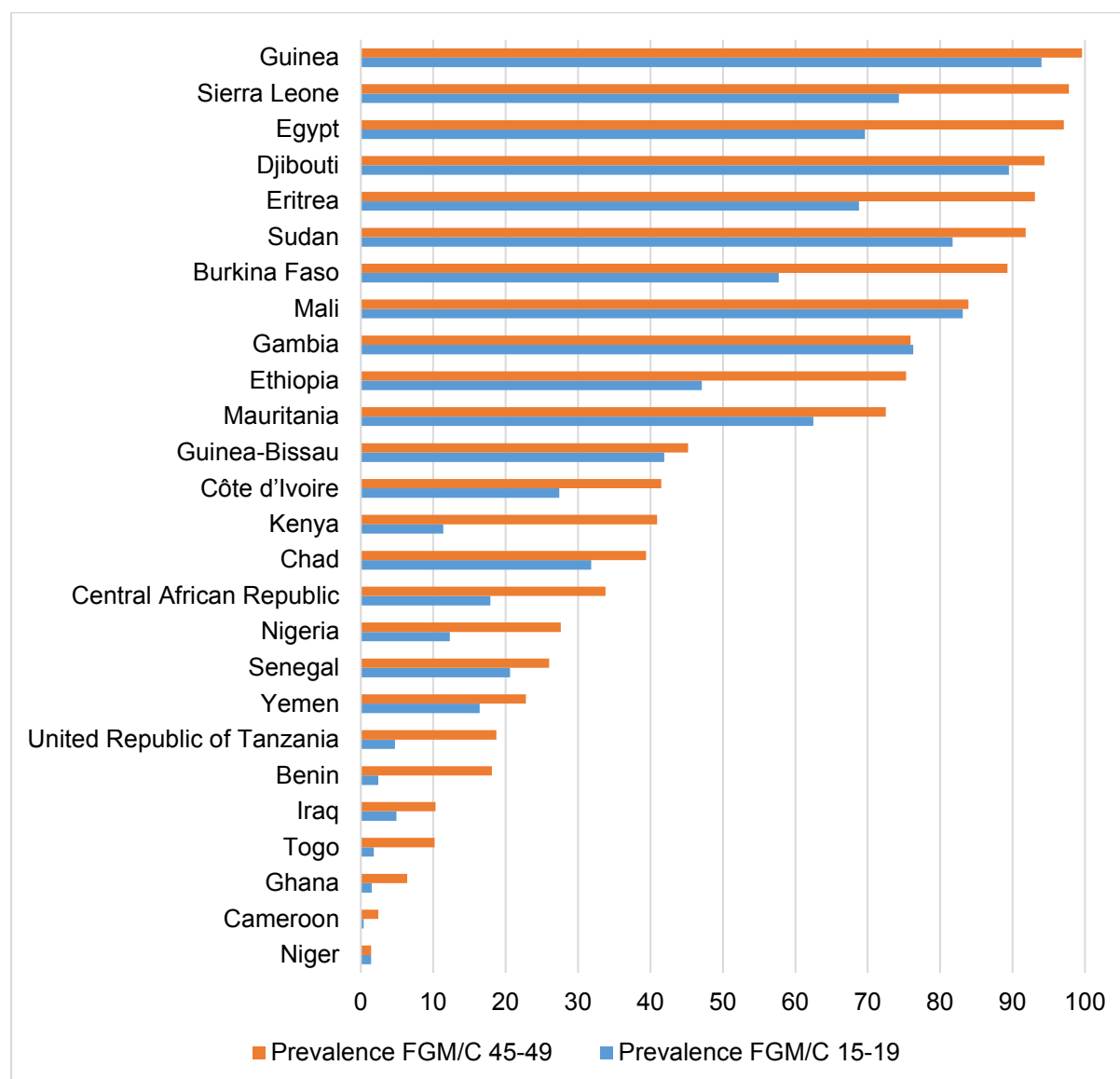


Association between medicalisation and change in prevalence of FGM/C

A key question is whether medicalisation counteracts efforts to eliminate FGM/C and reduces rates of decline in FGM/C. This is a causal question for which counterfactual data do not exist; that is, we cannot answer the question, “would rates of decline have been higher had medicalisation not occurred?” With the data at hand, the change in prevalence of FGM/C is examined two ways: first by computing the percent change in prevalence between the youngest (15-19 years old) and oldest (40-49 year old) age cohorts of women, and second, by examining change in prevalence of FGM/C in women 15-49 years across successive surveys.

Comparison of prevalence in these age cohorts are shown in Figure 5. The data show that the prevalence of FGM/C is declining across age cohorts in all countries except The Gambia and Niger.

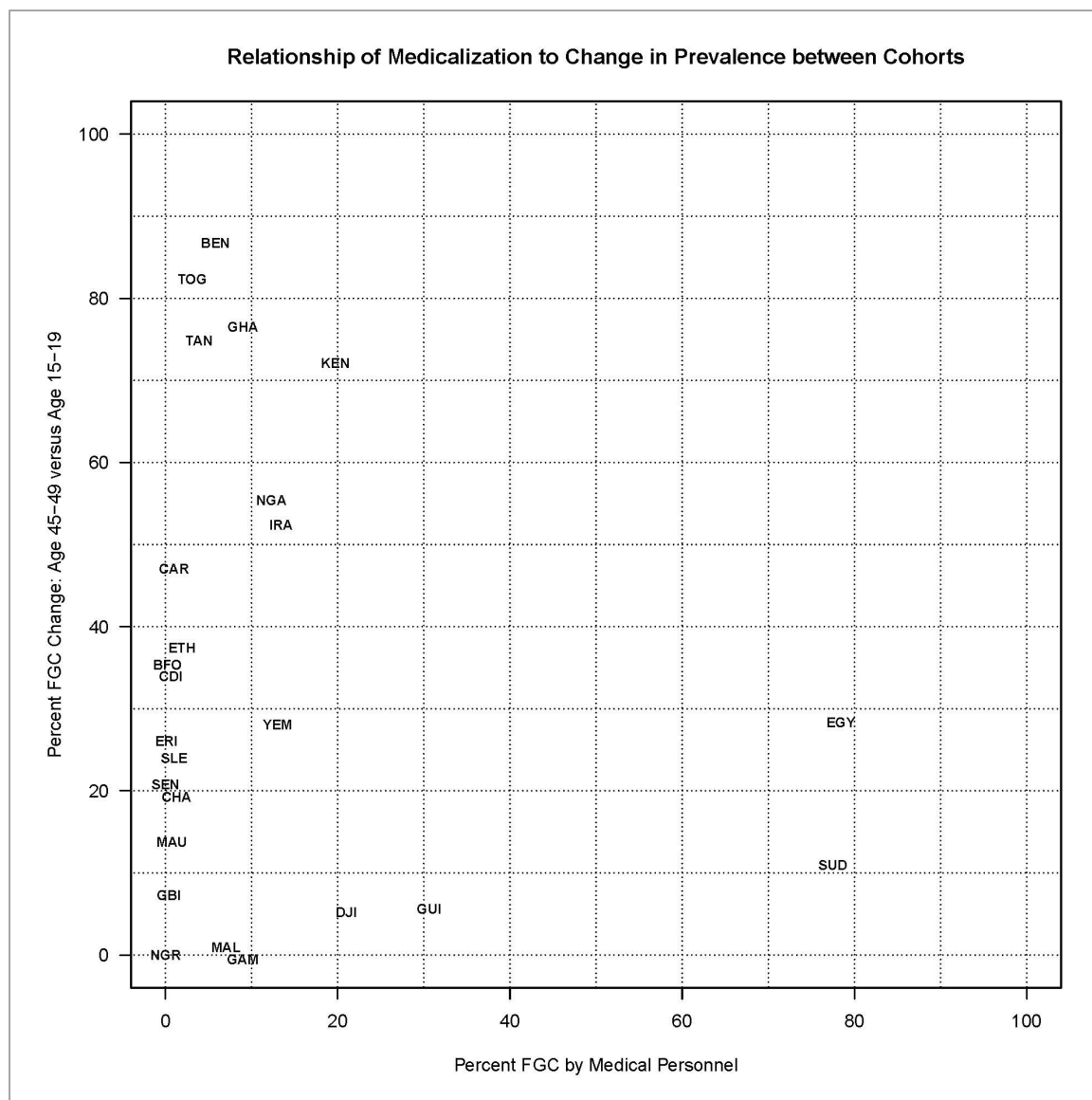
Figure 5. Comparison of prevalence of FGM/C in the oldest (45-49) and youngest (15-19) age cohorts*



*For Ethiopia the oldest age cohort is 35-49 years because of small n.

The rate of change across cohorts is computed as the percent change in prevalence between the oldest and youngest age cohorts. Figure 6 shows the association between the percent change in FGM/C prevalence in the oldest and youngest age cohorts and rates of medicalisation among daughters. The data show that the countries with the highest rates of medicalisation among daughters (Egypt, Sudan, Guinea, and Djibouti), have a low percent change in prevalence of FGM/C. At the same time, the country with the greatest decline in FGM/C across age cohorts, Kenya, has a 20 percent rate of medicalisation among daughters. Low rates of medicalisation are found in countries with widely ranging rates of change in FGM/C. Overall, there is not a significant correlation between the rate of decline in FGM/C and medicalisation ($r=-0.25$, not significant). Thus, it is not clear that motivation to seek medicalised cutting is influenced by rates of abandonment of FGM/C.

Figure 6. Relationship between medicalisation rates among daughters and percent change in prevalence of FGM/C between youngest (15-19 years) and oldest (45-49 years) cohorts of women*

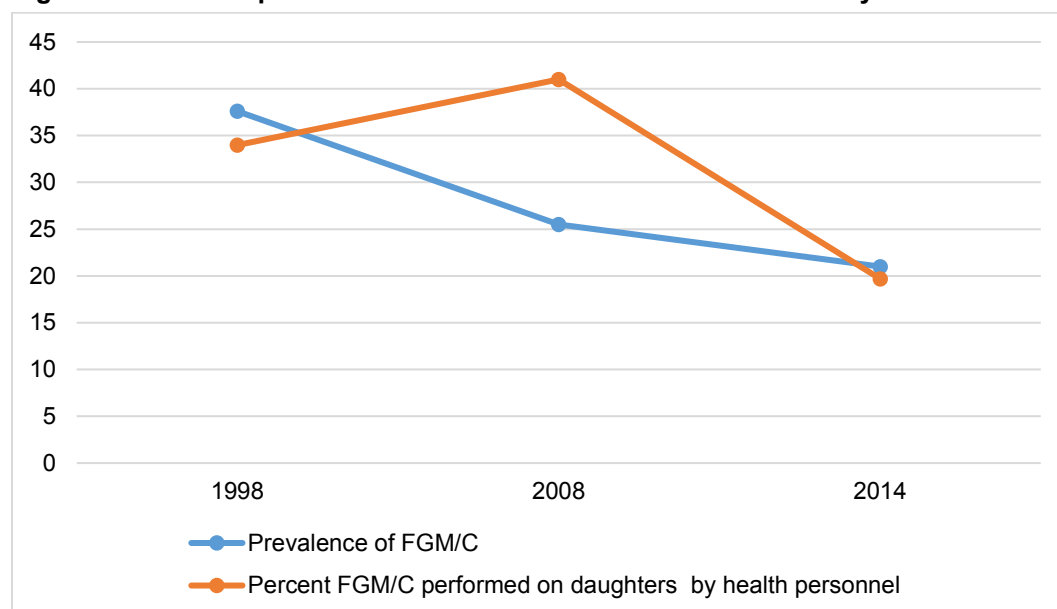


*Country codes: BEN – Benin; BFO – Burkina Faso; CAR – Central African Republic; CHA – Chad; CDI – Côte d'Ivoire; DJI – Djibouti; EGY – Egypt; ERI – Eritrea; ETH – Ethiopia; GAM – Gambia; GHA – Ghana; GUI – Guinea; GBI – Guinea Bissau; IRA – Iraq; KEN – Kenya; MAL – Mali; MAU – Mauritania; NGR – Niger; NGA – Nigeria; SEN – Senegal; SLE – Sierra Leone; SUD – Sudan; TOG – Togo; TAN – United Republic of Tanzania; YEM – Yemen

Members of the expert panel on medicalisation suggested that national-level figures may mask regional variation in changes in FGM/C prevalence and medicalisation with countries, and that local contexts and drivers of medicalisation vary substantially. For instance, in Nigeria, where Type I FGM/C is common, medicalisation is not being driven by parents' concerns about safety of the practice (it is already seen as a relatively benign practice) (Obianwu, personal communication). Instead, as women seek medicalised delivery services, FGM/C is being offered as part of routine neonatal services (Obianwu, Adetunji, Dirisu, Ishaku, & Adebajo, 2017). By contrast, in Egypt and Sudan, medicalisation has been linked to policies aimed at regulating harm (Bedri and Mohamed, personal communication, Hussein, personal communication), and may entrench the practise of FGM/C (Bedri, Sherfi, Elhadi, Rodwan, & Elamin, In preparation; El-Gibaly & Aziz, In preparation).

Trends in prevalence of FGM/C among women aged 15-49 years and medicalisation rates among daughters were examined through repeat survey data (available for 13 countries). Discernible changes in medicalisation are detectable in only three countries: Egypt, Kenya, and Sudan. In Sudan, consecutive surveys from 2010 and 2014 also revealed a sharp increase in daughters' medicalised cutting, rising from 55 percent to 78 percent. Over this period, the prevalence of FGM/C among women aged 15-49 years remained steady (88% to 87%). In Egypt between 1995 and 2015, rates of medicalised cutting among daughters rose sharply from 55 percent to 74 percent. During this period, the prevalence of FGM/C among women aged 15-49 years declined from 97 percent to 87 percent. Data from Kenya shows a mixed pattern of medicalisation and prevalence rates of FGM/C across successive surveys. There was an increasing trend to have FGM/C performed by health care personnel (Figure 7), rising from 34 percent in 1998 to 41 percent in 2008-09, followed by a subsequent drop in 2014. This fluctuation in medicalisation rates has occurred simultaneously with a substantial decrease in the prevalence of FGM/C among women aged 15-49 years, dropping appreciably from 38 percent in 1998 to 21 percent in 2014. However, these data do not allow us to test causal associations nor whether the decline in FGM/C might have been even larger if health professionals were not performing FGM/C. Nonetheless, the results for Kenya indicate that medicalisation rose whilst FGM/C prevalence fell. The expert panel member from Kenya (Samuel Kimani) suggested that this pattern may be attributable to the fact that in Kenya, decreases in the prevalence vary dramatically along lines of ethnicity, and medicalisation is concentrated in communities that have been resistant to abandoning FGM/C (Kimani & Kabiru, In preparation; Shell-Duncan, Gathara, & Moore, 2017).

Figure 7. Trends in prevalence of FGM/C and medicalisation in Kenya

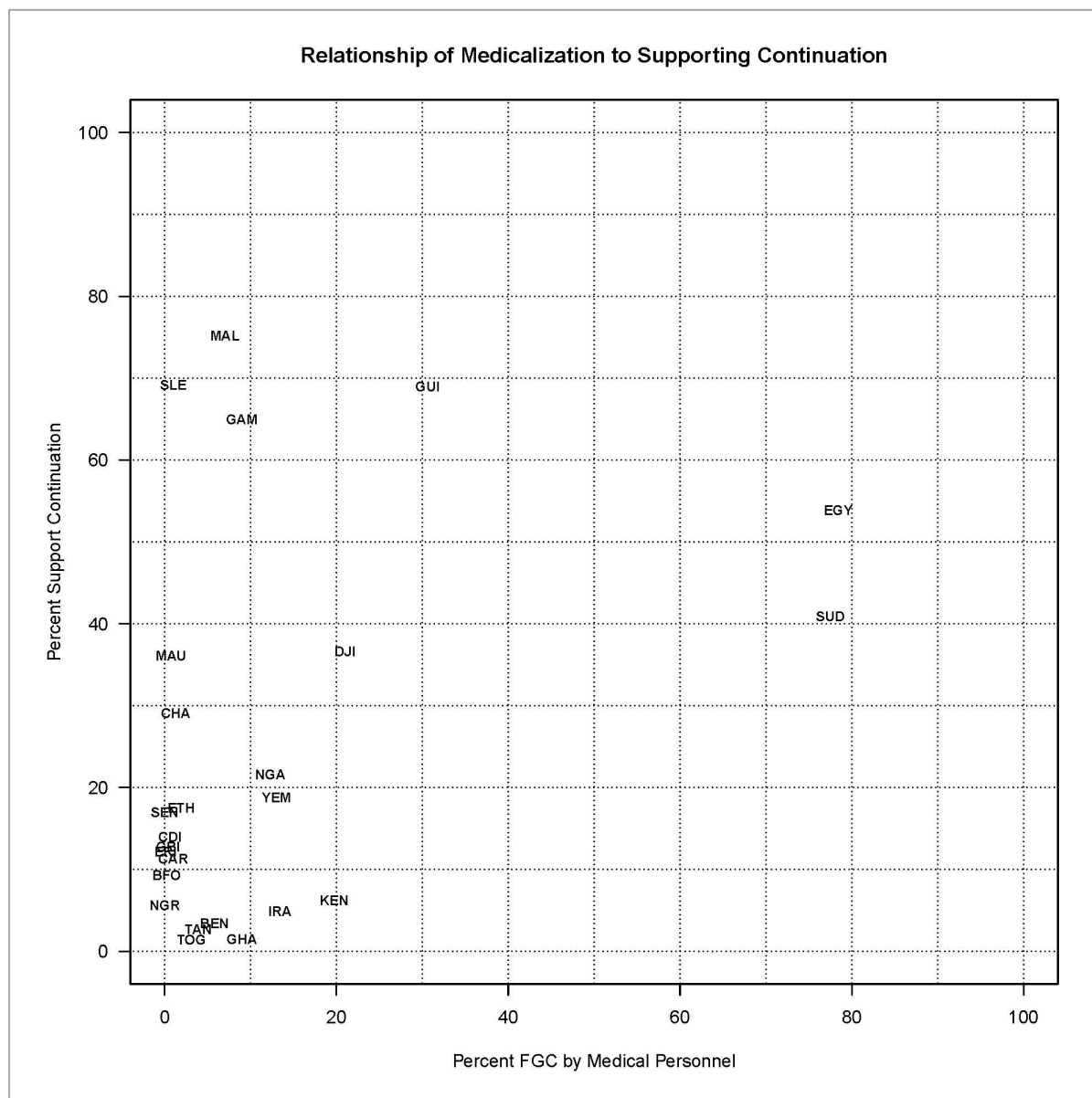


Association between medicalisation and support for the continuation of FGM/C

A related question is whether medicalisation influences support for the continuation of FGM/C. It has been posited that the availability of medicalised cutting may lead to continued support for FGM/C by creating the impression that it can be performed safely. Alternatively, mothers who opt for medicalised cutting for their daughters may be persuaded about the harmfulness of FGM/C and may be more likely to favour abandonment.

Women's self-reported support for the continuation of FGM/C ranges from as high as 72 percent in Mali to as low as 1.5 percent in Ghana. Figure 8 plots the percentage of women who support the continuation of FGM/C against rates of medicalisation among daughters. The results show that there is not a significant correlation between medicalisation and higher support for continuation of FGM/C ($r=0.50$, not significant). This finding may also be linked to the fact that there is tremendous variation in factors motivating medicalisation and is not universally linked to concerns about health risks (expert panel and Kimani & Kabiru, in preparation; Obianwu et al., 2017).

Figure 8. Relationship between medicalisation rates among daughters and the proportion of mothers who support the continuation of FGM/C*



*Country codes: BEN – Benin; BFO – Burkina Faso; CAR – Central African Republic; CHA – Chad; CDI – Côte d'Ivoire; DJI – Djibouti; EGY – Egypt; ERI – Eritrea; ETH – Ethiopia; GAM – Gambia; GHA – Ghana; GUI – Guinea; GBI – Guinea Bissau; IRA – Iraq; KEN – Kenya; MAL – Mali; MAU – Mauritania; NGR – Niger; NGA – Nigeria; SEN – Senegal; SLE – Sierra Leone; SUD – Sudan; TOG – Togo; TAN – United Republic of Tanzania; YEM – Yemen

Discussion

This study draws on population-based survey results from 26 countries and the perspectives of members of the expert panel conducting focused studies on the medicalisation of FGM/C. Findings from the study reveals an estimated 21 percent of women with FGM/C had the procedure performed by a health care provider (doctor, nurse, trained midwife, or other health professional), while the majority (79%) reported being cut by a traditional circumciser. All told, nearly 16 million girls and women experienced medicalised cutting. Medicalised cutting is highly concentrated geographically. Of women who report having been cut by a health care provider, more than half (55%) live in Egypt alone. Overall, 93 percent of women who reportedly experienced medicalised cutting live in Egypt, Sudan, and Nigeria. Elsewhere, medicalisation is rare or restricted to geographic pockets. Comparing medicalisation rates between survey respondents and their daughters, rates of medicalisation are increasing sharply in both Egypt and Sudan, but not in Nigeria.

Egypt appears to be unique in terms of being the only country in which medicalised cutting is carried out primarily by doctors, as opposed to nurses or other health workers. This trend is historically linked to health policies from the 1990's. In an effort to reduce the harm of what was viewed as an inevitable practice, the Ministry of Health issued a decree that lifted a 35-year ban on performing FGM/C in public hospitals in 1994 (El-Gibaly, Ibrahim, Mensch, & Clark, 2002). The Ministry asked state hospitals to set aside one day a week for performing FGM/C "by trained physicians under hygienic conditions" (Reefat, 2009). This policy came under sharp criticism, was reversed to banning FGM/C in both state and private hospitals. A "loophole", however, allowed for "medically necessary circumcision," (Modrek & Liu, 2013) and was not closed until 2007 by a Ministerial Decree prohibiting doctors, nursing staff, or others from performing FGM/C, whether in governmental or non-governmental hospitals. This decree was bolstered by the adoption of a 2008 law making FGM/C a crime punishable by imprisonment or fine. In January 2015, the first successful FGM-related prosecution took place, convicting a doctor of involuntary manslaughter for his role in the death of a 13-year-old girl and sentencing him to two years and three months in prison (Michaelson, 2016). In 2016, the law banning medical professionals from performing FGM/C in either state or privately-run clinics was amended to raise the maximum sentence from three to 15 years in prison (Sirgany, 2016).

In Sudan, where 67 percent of women with FGM/C report having undergone medicalised cutting, the procedure is in most instances performed by trained midwives. During the colonial era, government officials introduced measures intended to reduce the harm of infibulation by restricting the severity of cutting. Knowing that traditional birth attendants were the primary providers of FGM/C, midwifery schools established in Sudan in the 1920's taught a modified or "intermediate" (mitwasit) form of cutting that involved the same amount of cutting, but less stitching (Boddy, 2016). In 1946, a law was passed banning infibulation but allowing less severe forms of cutting. The law was ratified in 1956 when Sudan became independent but was dropped from the 1983 Penal Code. Although the Sudanese Medical Council has now banned FGM/C by any medical professional (Sharfi, Elmegboul, & Abdella, 2013), there is no national law regulating FGM/C or medicalisation. Currently, WHO is conducting trials of interventions aimed at de-medicalisation of FGM/C in two states (Ahmed, 2017; Bukuluki, 2017). Such investigations are needed, as it is unclear how de-medicalisation might influence strategies aimed at abandonment of FGM/C. One recent study in Egypt found that when a daughter's peers had undergone medicalised FGM/C, her own likelihood of being cut was in some instances reduced. The author suggests medicalisation may reflect shifting social norms that open change possibilities, including abandonment of FGM/C (Naguib, 2012). Whether this is also true in Kenya is unclear (Kimani & Kabiru, In preparation).

In Nigeria, girls and women who have experienced medicalised cutting are in most cases reportedly cut by nurses (Ashimi, Aliyu, Shittu, & Amole, 2014; Obianwu et al., 2017). A recent qualitative study in Nigeria questions how often these providers are formally trained nurses or informally trained auxiliary nurses or midwives (Obianwu et al., 2017). It also showed that medicalisation is not driven primarily by harm reduction concerns, as it is widely considered to be a relatively benign procedure; instead it appears to be linked to an uptake in labour and deliver services in centres that offer FGM/C as part of routine neonatal care options (Obianwu et al., 2017).

Findings from the study also indicate that there is no significant correlation between rates of medicalisation among daughters and rates of decline in prevalence of FGM/C at the national level. Further multivariate analyses are needed to control for potentially confounding factors and account for subnational variation. Repeat survey data on medicalisation among daughters are available for 13 countries, and substantial changes in medicalisation are found in Egypt, Kenya, and Sudan. In Egypt and Kenya, medicalisation has occurred alongside declines in rates of FGM/C. At the same time, Sudan shows persistently high rates of FGM/C alongside rising medicalisation rates. Whether medicalisation is hindering this decline is unclear but can be addressed in focused research.

Debates have also centred on whether medicalisation legitimises the practise of FGM/C by creating an impression that the procedure may be performed safely, or whether parents who opt for medicalised cutting may be more open to change in FGM/C and less likely to support continuation of the practice (Dawson et al., 2015; Modrek & Sieverding, 2016; Naguib, 2012). To investigate these claims, we examined the association between rates of medicalisation among daughters and mothers' stated support for the continuation of FGM/C and found no significant correlation.

There are a number of limitations in this study. We examined trends and correlations, which may be influenced by outliers, and as such further multivariate analyses are needed to control for potentially confounding factors, and to examine within-country patterns. Moreover, there are some concerns regarding the validity of the survey data used in this study. Self-reported data on FGM/C need to be treated with caution as inaccuracies may arise because of unwillingness to disclose having undergone FGM/C due to the sensitivity of the topic or because of criminalisation of the practice (Askew, 2005; Shell-Duncan, 2017). Additionally, particularly when FGM/C is performed at an early age, women may be unaware of whether they have been cut or the extent of the cutting or may not accurately recall the circumstances surrounding the procedure. A number of studies have attempted to determine the reliability of self-reports of FGM/C status (being cut or not) by verifying them through clinical examinations, and have reported variable rates of concordance (Adinma, 1997; Elmusharaf, Elhadi, & Almroth, 2006; Klouman, Manongi, & Klepp, 2005; Morison, Dirir, Elmi, Warsame, & Dirir, 2004; Msuya et al., 2002; Snow, Slanger, Okonofu, Oronsaye, & Wacker, 2002). The general consensus is that self-reports of being cut or not provide reasonably reliable estimates of FGM/C prevalence (Yoder & Wang, 2013).

Conclusion

Among girls and women aged 15-49 who have undergone FGM/C, 21 percent have been cut by professional health care workers. For those working to deter or prevent medicalised cutting, it is important to recognise that it is concentrated in three countries namely Egypt, Sudan, and Nigeria. Mother-daughter comparisons indicate that medicalisation rates are increasing in several countries, most sharply in Egypt where rates have more than doubled. Further studies are needed to understand the rationale for selecting medicalised cutting, and whether or how medicalisation influences readiness to change FGM/C. The data do not show a significant association between medicalised FGM/C among daughters and rates of decline in prevalence of or support for the continuation of the practice. An expert panel on medicalisation suggested that it is likely that

national-level figures mask important subnational variation in changes in FGM/C prevalence and medicalisation rates, as well as differences in factors driving medicalisation. Rising rates of medicalisation occur alongside both modest declines in FGM/C (in Egypt) and substantial declines in FGM/C (Kenya). In Sudan, medicalisation rates rose while the prevalence of FGM/C remained steady. Whether medicalisation is hindering abandonment of FGM/C is unclear. The question remains as to whether this shift represents reluctance to stop an intractable practice or signifies openness to change that can be leveraged to promote abandonment. This is a pressing matter that influences actions needed to achieve the international community's recently adopted set of SDGs, including target 5.3.2 calling for the elimination of all harmful traditional practices such as FGM/C by 2030. Further focused research taking into account local contexts is needed to address this issue.

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