Manuscript

Title

Attitudes and Social Norms (Attitudes) of Female Genital Cutting in Kenya, Mali, Nigeria and Sierra Leon

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Abstract

Context

Methods

Main Outcome Measures

Results

Conclusions

Under the background that MC is not challenged in the West (e.g., against Jewish community), how shall we frame FGC to be process by both communities from inside and outside?

[[**JD: I don't understand the North-South framing. Isn't MC not challenged everywhere? Shouldn't the framing be gender?**]]

Funding

Keywords

female genital cutting/mutilation, multilevel model, social norms, gender, DHS

Introduction

It was estimated that more than 200 million women, of which 44 millions were girls under age 15, [[**JD: This ratio seems super-low. I would expect a majority under 15, no?**]] have undergone female genital cutting (FGC), mostly observed in Africa and the Middle East [**?**, 57] (to update), and the actual numbers might in fact higher [17] (more?). The current progress of ending FGC is insufficient to keep up with the population growth, and girls and women undergoing FGC will rise significantly over the next 15 years if the trends continue [57] (also see http://www.who.int/mediacentre/factsheets/fs241/en/ for update) [[**JD: This claim is surprising, and the sources are not academic.**]]. FGC is also known as female genital mutilation and female circumcision; we use cutting instead because it [[**JD: What: implies a degree of self-awareness and**]] is considered less judgmental [30, 25, 39, 48] (and is adapted by Tostan (http://www.tostan.org/)).

The commonly shared position for FGC is more about eradication than intervention [54, 35, 57] (more cites); but the progress is hindered due to the complicated history of the very practice. The meanings of FGC are competitively defined by various groups from local religious community to international governmental institutes, by linking the practice to religious identity in one end and to human rights on the other [6, 47, 62] (more cites). Interventions based on associating FGC with violations of human rights and health dangers also encountered challenges [64], for example, for overlooking a discrepant tolerance between FGC and male circumcision [10, 25], the complexity of woman's autonomy [39], and cultural perspectives of local history and identity, therefore was often defied by local communities, despite that the practice was often endorsed by national governments [6, 14, **?**, 18, 32, 46, 56, 51, 59] (update cites). [[**JD: I think we have two choices. Either we accept**

the WHO "consensus" that it's always bad, or start discussing types.]]

[[**JD: It's convention theory. Don't say "conventional" theory, that just means the accepted theory in a time and place.**]] There are at least three main theoretical perspectives [[**JD: WHAT: from outside the communities**]] shedding lights on the complexities of FGC [19, 67]: social convention theory [35, 36, **?**, 37, **?**], modernization theory[14, 67] (confirm, and update), and feminist theory/human rights perspective [34, 16, 31, 21, 33, 39, 42, 61, 57, 65, 67], such as women's autonomy [39] and women's body and pleasure ([42] on Gayatri Spivak) (confirm and update.) Convention theory posits FGC an important tool to control marriage fidelity and social prestige; this perspective views FGC as a social behaviour resulting from group practice, and it takes a "critical mass" to initiate a change [36, 37]. When norms within the communities are strong, individuals tend to self-enforce community norms [2, 19, 27, 35, **?**, 37, 53]; hence, intervention of FGC should target women's social networks, which are intergenerational, interdependent and interconnected across generations and genders [36, **?**]. + [**?**]: Mackie's social convention theory was supported in their findings [[**JD: Whose findings? I've lost track of this s.**]]; futher, they proposed that reasons for fgc practice go beyond the belief that it is advantageous for marriage prospects. FGC allows women to gain social capitals and access to networks. Their findings also suggested that the main deterent to marriages was not men's refusal of non-fgc women, but hostility and discrimination from fgc women to non fgc women [[**JD: It continues to be unclear who is saying what. And what you're implying about their evidence.**]].

Modernization theory proposes that traditional social relationships and values would be eroded by modernization (e.g., with the improvement of wealth and education and emphasis of individual rights) (see[41]) (and [14, 67]?). There is a wide range of gender theories on FGC (see[3, 20, 21]) and woman's empowerment on making FGC decision are shared concerns: for example, from social position [58], autonomy [39], gender equality and human rights [12], to gender identity [68, 32, 63]. Although convention theory was well studied and showed a larger effect on FGC practices than other theories of modernization and feminism (e.g, [14, **?**, **?**, 16, 19, **?**, 35, **?**, **?**, 65]), the aforementioned theories did not necessarily excluded each other, especially between modern theory and feminist theory [19].

[[JD: Can you figure out how to not use "smart" quotes? They mess up the latex.]]

Multiple theoretical frameworks would have to be incorporated to grasp a full explanation of the persistence and decline of FGC due to the heterogeneity of the population [19, 13, 40]. Identifying benefits of FGC practice is crucial to promote sustainable change [13], and a community-based FGC perspective [15, 12, 19, 18, 20, 27, 43] (to confirm) should also be recognized. This study takes both the dynamics of attitudes and intention of FGC practices (beliefs of FGC benefits, and intention of cutting) into account at both a population and a community level to test the three theories aforementioned. **[[JD: This P. seems insufficient to tie the theoretical explanation to our research questions. We should study Efferson's approach.]]**

Research Questions

The main focus of this study is to analyze associations of attitudes of FGC benefits (see the list of FGC benefits at table xx) and intention (planned behavior) to cut daughters. Additionaly, we also study the association of attitudes of FGC benefits and of FGC continuance; and the association of attitudes of FGC benefits, FGC continuance and intention (planned behavior) of cutting daughters (structural models) (to explain why) **[[JD: I can work on the structural part, but we need a clear explanation of what we are trying to learn from the main question.]]** **[[JD: I guess this is also a good place to discuss our community variables?]]**

[[CF: read [4, ?]]]

Methods

Data and Samples

There are two primary sources of FGC data: the Demographic and Health Surveys (DHS) by USAID and the Multiple Indicator Cluster Survey (MICS) directed by UNICEF [8, 66]. We used DHS data for this study because of certain questionnaires **[[JD: "Certain questions" sounds weaselly. Also, it's not clear we need to talk about MICS; using DHS seems**

very reasonable.]] only available in DHS. Countries with the following criteria were selected: high FGC prevalence [57], DHS surveys with modules of FGC benefits, and index of gender awareness; and that resulted in four nations: Kenya 2008/9, Mali 2006, Nigeria 2008 and Sierra Leone 2008. We did not analyze the newest dataset due to the lack of FGC benefits modules before this study finished for publication (checked in 09/17).

Only women [[**JD: What does this mean: with daughters to be considered**]] for fgc were included in the main model (the daughter model) and the future-dughter model, while the future model included all the women in the samples; that resulted in xxx, xxx and xxx (or three more if sample sizes in individual models are different from the full models) respectively. [[**JD: We need to know how DHS decided who to ask the question.**]]

Measurements and Concepts

[[**JD: Is this s. about us or not? Why is it in our Methods?**]] The main constructs analyzing FGC practice were based on the theory of planned behavior [**?**, 2, 53] and applied in fgc studies (e.g., {IloDarf18, PashPonn16(more cites?). The theory of planned behaviors proposed that intentions to perform behaviors could be predicted from three determinants: attitudes toward the behavior, subjective norms, and perceived behavioral control [**?**]. Attitudes refer to the degree of favorable or unfavorable evaluation to which a person has of the behavior; subjective norm refers to the perceived social pressure to perform the behavior (or not); and perceived behavioral control refers to perception of the ease or difficulty of performing such behaviors [**?**]. Here, we refer the attitudes to women's attitudes of FGC benefits (see the list of FGC benefits at table XX in Appendix); perceived behavioral control to perception of gender awareness (i.e., women's attitudes towards domestic violence (see the list of attitudes towards domestic violence against women at table xx) and to their social resources (education, and job?) (feminism and modernization?); and the perceived social pressures (subjective norms) as the community level of attitudes of FGC benefits and FGC prevalence (to reflect the convention norms of FGC under the convention theory). [[**CF: need comments!!!**]] [[**JD: Not sure what you're trying to do here. What do you mean by "refer"? Seems loose.**]]

The main response variables in this study were woman's intention to cut

their daughters in the daughter's FGC status model and the daughter-future model, and woman's attitude on whether they think FGC should be continued in the FGC future model. The main predictors were attitudes of FGC benefits and woman's FGC status. In order to test other theories mentioned above, we also included woman's gender awareness and other socio demogramic variables (see below).

The sociodemographic variables included age, education, religion (see the list of religion recode at table xx in appendix; with a footnote on how we recoded it), marital status, work status, and residence (urban vs. rural) in addition to country. The followings were treated as random variables: cluster ID (villages) and ethnicity (see the list of ethnicity recode at table xx in appendix; with a footnote on how we recoded it).

In order to address the significance of community impact on the practice of fgc, education, wealth, media use, FGC beliefs, gender awareness and FGC prevalence were also tested at the community level [[**CF: on a cluster leve, not national, right?**]] in response to the degrees of modernization, conventional values and gender awareness within- and among-community (see [1, 14, 19, 27, 40, 43]).

[[**JD: How did the comments get so messed up? Can it not happen again?**]] [[**CF: Cluster, which is usually larger than a village but small enough to be a social community, was used to represent a community level of impact [19] (is Hayf05 correct or DHS method changes afterwards?**]] [[**JD: Ideally, we would make ethnicity a random effect, but we are back to the Gilmour problem I guess.**]] [[**CF: Ethnicity is an important factor (see Hayf05), more so than religion, associating with FGC status, and I don't think it shall be coded as a random factor. But as J said, it is too hard!**]] [[**CF: Bayesian model [27] "Conversely, one cannot assume that the clusters selected in each district are fully representative of the states in which they are located because surveys only attempted to generate a fully representative sample at the regional level. Consequently, the spatial analysis will be affected by some random fluctuations. Some of this random variation can be reduced through structured spatial effects because it includes neighboring observations in the analysis. However, it should be pointed out that such a spatial analysis should preferably be applied to census data, where the**

precision of the spatial analysis would be much higher." (p. 788)]]

Statistical Model

We used cumulative link mixed models (CLMMs) in the statistics package R [**?**, **?**] to analyze the models. The CLMM framework allows us to model a binary or ordinal response variable (i.e., intention of cutting daughters and whether to continue FGC practice), while treating clusters and ethnicity as random effects.

[[CF: Our response ARE categorical not binary; AND still need to explain why ethinicity is a random effect. AND media use was supposed to be incorporated as a random factor at the country level, based on the assumption that media content likely varied among countries.]]

[[CF: reference: Methods and the first paragraph of Discussion[?]]]

Scripts

Codes are be available upon request.

——stop reading ——

Results

Baseline socio-demographic and sample characteristics are shown in xxx.

Tables and figures including: table of basic sociodemographic results figure: proportion of FGC daughters and FGC future

Kenya 21Mali 89Nigeria 25Sierra Leone 90(We want DHS fgc rate and the rate from our samples)

[[CF: findings on convention theory vs. modernization theory vs. gender theory]]

Basic Sociodemographic background

The FGC Future

Daughters' FGC Status

full model

In the results of association of cutting daughter and mother's fgc status, the individual model and the community model were consistent; the effect of fgc prevalence among mothers, attitudes of fgc benefits and education were clear at the community level but not wealth, gender awareness and media consumption were not clear at the community level (meaning media use, gender awareness and education were less homogeneous?)

In the results of association of fgc future and mother's fgc status,

Discussion

–Main interpretation – — conventional [**?**, 19, 35, 50] vs. modernization (cite-BoylMcMo02, Youn02, education and wealth as index of modernization), vs. gender [34, 16, **?**, 39, 61, 65, 67] (more and confirm). — community levels of impact and intervention [**?**, 18, 26] (both on cultural perspective, and maybe norm), [23](community -based approach), [7, 45] — attitudes vs. norm (beliefs) vs. intention (intended behaviors, planned behavior, controlled behavior) [2, 53] [11]: subjective norm on attitude and planned behavior. There were three main predictors of intentio: attitude, norm and perceived behavioroal control. [13]: Efferson proposed that cutting is not a social norm based on "coordination." The problem is that he and his colleages conclusion was based on a marraige market associating with cutting. But it is likely that fgc is much less an action for marraige proposal but a social indentity to the group they indentify with. [**?**]The social construction of reality: a treatise in the sociology of knowledge Anchor Books, New York, NY (1966))

– Second interpretation – — socio demographic interpretation at both levels (link this to modernization?) [19, 44] (more)

— by nations —- Kenya: legal background: Kenya [**?**]; [55]; 1. comparison: [**?**, 19], and [http://kenya.usaid.gov/programs/women/182 PEPFAR/kenya] —- Mali: "The occurrence of FGM/C is also concentrated in certain West African countries where prevalence rates range from 72âĂŞ96 percent: Burkina Faso, the Gambia, Guinea, and Mali. The populations of these countries share certain social and historical ties, which suggests that a strategy to eliminate FGM/C in one of these countries might be successful in others. FGM/C is practiced as part of the initiation into a secret society in Liberia and Sierra Leone. We should expect that the repercussions for mothers there who do not send their daughters to be initiated would be different than for mothers in nearby Mali or Guinea [**?**]

—- Nigeria: "Modernization (education and high socioeconomic status) had minimal impact on the likelihood of FGM, but education plays an important role in the mother's decision not to circumcise her daughter. It follows from these findings that community factors have a large effect on FGM, with individual factors having little effect on the distribution of FGM" [27]

—- Sierra Leon: [49, **?**] (Are they on Senegal or Sierra Leone?)

========== Concerns:

We did not consider ages of women's daughters. For those whose daufhter is over 15(?), they were not likely to fgc them, but it doesnt' mean they are againt fgc. It might just mean the daughters were too old to be fgced. ==========

Attitude was the strongest predictor of mothers' intentions for their daughters' FGC status, followed by subjective norms [44]. It implied that community norm (social norm) was not as clear as suggested [13], but believed otherwise [**?**, **?**, 35, 36, **?**, 67] (to confirm).

[[cf: how to cite [?, 13] and compare these two?]]

[**?**]: supporting Mackie's convetion theory "expections regarding fgc are interdependent...."

FGC is still in practice or a preference among women after migrated to a western environment from their original communities where FGC was a common practice, in the hope (wording?) of preserving their ethnic and gender identity despite its conflict against the norms and laws of the newly settled society []; however, a baseline study in Sweden showed that a majority

of female immigrants, including those newly arrived, opposed all forms of FGC with increased opposition over time after migration, and suggested that an attitude change had occurred [60]; that suggested a likely influence of convention theory.

(There are also studies proposing various factors impacting FGC practices, such as women's education [27, 58], social economic status [] etc, community levels of influences.) (What is conventional in convention theory can also be focal points to gender awareness and modern development. Question: What is the differences between convention theory and community level of impact on FGC? the same or?)

[[CF: empirical norm: enough others follow the norm- community level of FGC [9] normative norm: enough others think we need to follow the norm - FGC beliefs, decision on daughter's FGC status (already and future), [9]]]

Gender/feminist perspective: [39] Meyers questions the idea of social norm and autonomy "It seems to me that we would need far more consensus than we presently have (or are likely to get) about human nature and social justice before we could conclude that women who opt for compliance with female genital cutting norms never do so autonomously. We would have to be persuaded, in other words, that all women's interests are such that this decision could not accord with any woman's authentic values and desires under any circumstances."

Egypt: "Literate, better educated and employed women are more likely to oppose FGM" [58] Sinegal: [**?**] West Africa: [52] (law and current practices) Theory:

A multicultural egalitarian approach respecting both cultural identity and basic legal human rights was addressed [**?**, 59]. Instead of straightforward campaigns against traditional culture, "culturalconstestaion" characterized by politicized negotiation and, at times, resistance, was proposed. [32].

A synthesis of context studies of Africa showed that the main factors that supported FGC were tradition, religion, and reduction of women's sexual desire, and the main factors hindered FGM/C were medical complications and prevention of sexual satisfaction. [5]. For example, in Ethiopia, the majority of women who were aware of the negative reproductive health effects had not stopped the practice highlighted the possible fear of isolation and

being alienated from the cultural system where FGC could be seen as a force of social cohesion [65]. In Kenya, woman's decision on whether to cut their daughters' genitals were likely to relate to collective identity within ethnic groups against broader social changes [1, 19]; similarly findings observed in Nigeria [**?**, **?**].

"support HCPs in the integration of FGM/C preventive interventions within the public health system, to address arguments favoring medicalization, and to use data to design appropriate strategies." [28]

behaviour: What the responder do personal normative behaviour: What the responder believes she should do empirical expectation: What the responder believes others do normative expectation: What the responder believes others think she should do [**?**] First, what is the association of woman's beliefs in FGC benefits (see the list of FGC benefits at table–) [[**CF: normative norm?**]] and their position on continuing FGC in the future (also normative norm?) It is called FGC future model. Second, what is the association of woman's beliefs in FGC benefits and their daughters' FGC status

[**?**, 57]

suggestions and Limitations

out structured efforts between health systems, governments or legal institutions and the cultural society." [22] and

Analyzing why MC is a much accepted behaviour might help us to re-think the meanings of FGC (see [10]) and, if, to certain extent, to accept a form of FGC practice (e.g, a "nick" [59]).

* Festinger (1950?): Social pressure in informal groups

[**?**]: Each family may have its own threshold of fgc. I think fgc norm has shifted from marraige advantage of social capital of social networking as proposed by Shell-Duncon and her colleagues [50]. To elaborate the shifted values of fgc, what it imply and how to apply the change to policy.

[38]: "We find that much of the variation in a woman's support for FGC can be attributed to individual- and household-level factors rather than to village-level factors or to factors beyond the village level."

Conclusion

Reasons of FGC is not universal and different from community to community and from society to society; campaigns of reducing and preventing FGC need to incorporate with local history and believes.

Eradication of FGC is more controversial than expected. FGC practice and its nature tended to be morally embraced, and deeply internalized [47]. Decisions on undergoing FGC was often a result of a collective practice than an individual choice [34, **?**, **?**, **?**, 35, **?**, 49, 50, 65]. Public denouncements and anti-FGC laws could push FGC into private practices [17, **?**]. Given the regional FGC prevalence, variations among countries and the social context of FGC practices (e.g., see Burkina Faso [29] vs. Nigeria [27]), a "one size fits all" strategy for the abandonment of FGMC would not be effective [24, 66].

It is inevitable to compare male circumcision to female genital cutting and question how male circumcision gain its cultural recognition but not FGC. Considering the acceptance of Alternative rights of passage [17] may be an alternative without criminalize the practice. (I'm not sure if I'm comfortable with this position, but it is an alternative thought.)

To study types of FGC for the future to understand correlation/assocaition between types of fgc and fgc beneifts.

— questions worth addressing 1. Is there a tipping point? Can our findings disclose some ideas on fgc intervention in terms of behavioural change in order to reach a tipping point?

Funding

CF was funded by a grant from the James S. McDonnell foundation. JD holds a New Investigator award from the Canadian Institutes of Health Research.

Conflicts of interest

The James S. McDonnell foundation and the Canadian Institutes of Health Research had no role in study design; collection, analysis, and interpretation of data; the writing of the manuscript; or in the decision to submit the

manuscript for publication. The views expressed herein do not necessarily represent the views of the founding bodies.

Authors' contributions

Disclaimer

The findings and conclusions of this article are those of the authors and do not necessarily represent the views of the funding agency.

Acknowledgement

Ben Bolker, Marta Wayne

Appendix

References

[1] T. N. O. Achia. Spatial modelling and mapping of female genital mutilation in Kenya. *BMC Public Health*, 14:276, 2014 Mar 25.

[2] Ajzen I. Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. *Journal of Applied Social Psychology*, 9:665–683, 2002.

[3] K. Antinuk. Forced genital cutting in North America: feminist theory and nursing considerations. *Nurs Ethics*, 20:723–8, 2013 Sep.

[4] I. Askew. Methodological issues in measuring the impact of interventions against female genital cutting. *Cult Health Sex*, 7:463–77, 2005 Sep-Oct.

[5] Berg, Rigmor C., Denison, Eva. Interventions to reduce the prevalence of female genital mutilation/cutting in african countries. 2012.

[6] Boyle, Elizabeth Heger. *Female Genital Cutting: Cultural Conflict in the Global Community.* John Hopkins University Press.âĂİ, address =, 2002.

[7] K. Brown, D. Beecham, and H. Barrett. The Applicability of Behaviour Change in Intervention Programmes Targeted at Ending Female Genital Mutilation in the EU: Integrating Social Cognitive and Community Level Approaches. *Obstet Gynecol Int*, 2013:324362, 2013.

[8] C. Cappa, F. Moneti, T. Wardlaw, and S. Bissell. Elimination of female genital mutilation/cutting. *Lancet*, 382:1080–1, 2013 Sep 28.

[9] Cristina Bicchieri. Norms, preferences, and conditional behavior. *Politics Philosophy Economics*, 9(3):297, 2010.

[10] R. Darby and J. S. Svoboda. A rose by any other name? Rethinking the similarities and differences between male and female genital cutting. *Med Anthropol Q*, 21:301–23, 2007 Sep.

[11] Deborah J. Terry, Michael A. Hogg. Group norms and the attitude-behavior relationship:a role for group identification. *Personality and Social Psychology Bulletin*, 22(8):776–793, 1996.

[12] Drolet, Julie. Integrating culture, gender, and human rights: supporting community-level strategies to eradicate female genital mutilatino/cutting fgm/c) in africa. *The Heart of Justice: Social Work Innovations in Africa*, 17(1):54–64, 2011.

[13] C. Efferson, S. Vogt, A. Elhadi, H. E. F. Ahmed, and E. Fehr. BEHAVIOR. Female genital cutting is not a social coordination norm. *Science*, 349:1446–7, 2015 Sep 25.

[14] Elizabeth Boyle; Barbara McMorris; Mayra GÃşmez. Local conformity to international norms: The case of female genital cutting. *International Sociology*, 17(1):5–33, March 2002.

[15] Elizabeth Heger Boyle and Amelia Cotton Corl. Law and culture in a global context: Interventions to eradicate female genital cutting. *Annu. Rev. Law Soc. Sci*, 6:195–215, 2010.

[16] S. Fried, A. Mahmoud Warsame, V. Berggren, E. Isman, and A. Johansson. Outpatients' perspectives on problems and needs related to female genital mutilation/cutting: a qualitative study from somaliland. *Obstet Gynecol Int*, 2013:165893, 2013.

[17] M. Galukande, J. Kamara, V. Ndabwire, E. Leistey, C. Valla, and S. Luboga. Eradicating female genital mutilation and cutting in Tan-

zania: an observational study. *BMC Public Health*, 15:1147, 2015 Nov 19.

[18] E. Gruenbaum. Socio-cultural dynamics of female genital cutting: research findings, gaps, and directions. *Cult Health Sex*, 7:429–41, 2005 Sep-Oct.

[19] S. R. Hayford. Conformity and change: community effects on female genital cutting in Kenya. *J Health Soc Behav*, 46:121–40, 2005 Jun.

[20] Hodgson, Dorothy. *Gender and Culture at the Limit of Rights.* University of Pennsylvania Press, Philadelphia, 2011.

[21] Hope Lewis. Between irua and "female genital mutilation": Feminist human rights discourse and the cultural divide. *Harvard Human Rights Journal*, 8(1):1–55, 1995.

[22] I. Iyioha. Public health, cultural norms and the criminal law: an inconvenient union? A case study of female genital cutting. *Med Law*, 31:451–72, 2012 Sep.

[23] J. N. Chege, I. Askew, S. Igras, and J. K. Mutesh. Testing the effectiveness of integrating community-based approaches for encouraging abandonment of female genital cutting into care's reproductive health programs in ethiopia and kenya. 2004.

[24] R. E. B. Johansen, N. J. Diop, G. Laverack, and E. Leye. What works and what does not: a discussion of popular approaches for the abandonment of female genital mutilation. *Obstet Gynecol Int*, 2013:348248, 2013.

[25] S. Johnsdotter and B. Essen. Genitals and ethnicity: the politics of genital modifications. *Reprod Health Matters*, 18:29–37, 2010 May.

[26] S. D. Jones, J. Ehiri, and E. Anyanwu. Female genital mutilation in developing countries: an agenda for public health response. *Eur J Obstet Gynecol Reprod Biol*, 116:144–51, 2004 Oct 15.

[27] N. B. Kandala, N. Nwakeze, and S. N. I. I. Kandala. Spatial distribution of female genital mutilation in Nigeria. *Am J Trop Med Hyg*, 81:784–92, 2009 Nov.

[28] A. Kaplan Marcusan, L. Riba Singla, M. Laye, D. M. Secka, M. Utzet, and M. A. Le Charles. Female genital mutilation/cutting: changes and trends in knowledge, attitudes, and practices among health care professionals in The Gambia. *Int J Womens Health*, 8:103–17, 2016.

[29] B. Karmaker, N. B. Kandala, D. Chung, and A. Clarke. Factors associated with female genital mutilation in Burkina Faso and its policy implications. *Int J Equity Health*, 10:20, 2011 May 18.

[30] Khadija Khaja, Carenlee Barkdull, Marva Augustine and Dianne Cunningham. Female genital cutting : African women speak out. *International Social Work*, 52(6):727–741, 2009.

[31] R. Khosla, J. Banerjee, D. Chou, L. Say, and S. T. Fried. Gender equality and human rights approaches to female genital mutilation: a review of international human rights norms and standards. *Reprod Health*, 14:59, 2017 May 12.

[32] Koomen, Jonneke. Global governance and the politics of culture: Campaigns against female circumcision in east africa. *Gender, Place and Culture*, 21(2):244–261, 2014.

[33] Lewis, Hope. Female genital mutilation and female genital cutting. encyclopedia of human rights. *Northeastern University School of Law Research Paper*, 2(40):200–213, 2009.

[34] Liselott Dellenborg. A reflection on the cultural meanings of female circumcision. experiences from fieldwork in casamance, southern senegal. in s arnfred (ed.), re-thinking sexualities in africa, pp. 79-96. 2004.

[35] Mackie, Gerry. Ending footbinding and infibulation: A convention account. *American Sociological Review*, 61(6):999–1017, 1996.

[36] Mackie, Gerry. Female genital cutting: the beginning of the end. 2000.

[37] Mackie, Gerry, and John LeJeune. Social dynamics of abandonment of harmful practices: A new look at the theory. working paper. 2009.

[38] Marc F. Bellemarea, Lindsey Novaka, Tara L.Steinmetz. All in the family: Explaining the persistence of female genital cutting in west africa. *Journal of Development Economics*, 116:252–265, Sep 2015.

[39] Meyers, Diana Tietjens. Feminism and women's autonomy: the challenge of female genital cutting. *Metaphilosophy*, 31(5):469–91, Oct 2000.

[40] S. Modrek and J. X. Liu. Exploration of pathways related to the decline in female circumcision in Egypt. *BMC Public Health*, 13:921, 2013 Oct 3.

[41] H. L. Moore. Female genital mutilation/cutting. *BMJ*, 347:f5603, 2013 Sep 24.

[42] Morrison, Barbara S. Feminist theory and the practice of female genital mutilation (fgm). *åőĞéČ · åőőådğåŋęåŻ · éŽŻåŋęéČĺçăŤçlűèńŰéŻĘ*, 26:125–130, 2008.

[43] A. T. A. Odukogbe, B. B. Afolabi, O. O. Bello, and A. S. Adeyanju. Female genital mutilation/cutting in Africa. *Transl Androl Urol*, 6:138–148, 2017 Apr.

[44] T. Pashaei, K. Ponnet, M. Moeeni, M. Khazaee-pool, and F. Majlessi. Daughters at Risk of Female Genital Mutilation: Examining the Determinants of Mothers' Intentions to Allow Their Daughters to Undergo Female Genital Mutilation. *PLoS One*, 11:e0151630, 2016.

[45] S. Patra and R. K. Singh. Attitudes of circumcised women towards discontinuation of genital cutting of their daughters in Kenya. *J Biosoc Sci*, 47:45–60, 2015 Jan.

[46] L. Perron, V. Senikas, M. Burnett, and V. Davis. Female genital cutting. *J Obstet Gynaecol Can*, 35:1028–1045, 2013 Nov.

[47] J. H. Schultz and I. L. Lien. Meaning-making of female genital cutting: children's perception and acquired knowledge of the ritual. *Int J Womens Health*, 5:165–75, 2013.

[48] B. Shell-Duncan. The medicalization of female "circumcision": harm reduction or promotion of a dangerous practice? *Soc Sci Med*, 52:1013–28, 2001 Apr.

[49] B. Shell-Duncan and Y. Herniund. Are there "stages of change" in the practice of female genital cutting?: Qualitative research findings from Senegal and The Gambia. *Afr J Reprod Health*, 10:57–71, 2006 Aug.

[50] B. Shell-Duncan, K. Wander, Y. Hernlund, and A. Moreau. Dynamics of change in the practice of female genital cutting in Senegambia: testing predictions of social convention theory. *Soc Sci Med*, 73:1275–83, 2011 Oct.

[51] Shell-Duncan, B., Wander, K., Hernlund, Y. and Moreau, A. Legislating change? responses to criminalizing female genital cutting in senegal. *Law Society Review*, 47:803âĂŞ835, 2013.

[52] H. L. Sipsma, P. G. Chen, A. Ofori-Atta, U. O. Ilozumba, K. Karfo, and E. H. Bradley. Female genital cutting: current practices and beliefs in western Africa. *Bull World Health Organ*, 90:120–127F, 2012 Feb 1.

[53] Thomas J. Madden, Pamela Scholder Ellen, Icek Ajzen. A comparison of the theory of planned behavior and the theory of reasoned action. *Personality and Social Psychology Bulletin*, 18(1):3–9, 1992.

[54] N. Toubia. Female circumcision as a public health issue. *N Engl J Med*, 331:712–6, 1994 Sep 15.

[55] UNICEF. *Female Genital Mutilation/Cutting: A statistical overview and exploration of the dynamics of change.* UNICEF, New York, 2013.

[56] UNICEF. *From Health to Human Rights: Female Genital Cutting and the Politics of Intervention.*, volume 110. 2013.

[57] UNICEF. United nations childrenâĂŹs fund, female genital mutilation/cutting: A global concern. 2016.

[58] R. Van Rossem, D. Meekers, and A. J. Gage. Women's position and attitudes towards female genital mutilation in Egypt: A secondary analysis of the Egypt demographic and health surveys, 1995-2014. *BMC Public Health*, 15:874, 2015 Sep 10.

[59] Wade. The politics of acculturation: Female genital cutting and the challenge of building multicultural democracies. *Social Problems*, 58(4):518–537, 2013.

[60] A. Wahlberg, S. Johnsdotter, K. E. Selling, C. Kallestal, and B. Essen. Baseline data from a planned RCT on attitudes to female genital cutting after migration: when are interventions justified? *BMJ Open*, 7:e017506, 2017 Aug 11.

[61] Wairimu Ngaruiya Njambi. Dualisms and female bodies in representations of african female circumcision: A feminist critique. *Feminist Theory*, 5:281–303, 2004.

[62] WHO. *Understanding and addressing violence against women: Female genital mutilation.* World Health Organization 2012, 2012.

[63] Winterbottom, Anna; Jonneke Koomen and Gemma Burford. Female genital cutting: Cultural rights and rites of defiance in northern tanzania. *African Studies Association*, 52(1):47–71, 2009.

[64] Yemen Jane Muthumbi1*, Joar Svanemyr1 , Elisa Scolaro2 , Marleen Temmerman3 and Lale Say. Female genital mutilation: A literature review of the current status of legislation and policies in 27 african countries and yemen. *African Journal of Reproductive Health*, 19(3):32–40, 2015.

[65] W. S. Yirga, N. A. Kassa, M. W. Gebremichael, and A. R. Aro. Female genital mutilation: prevalence, perceptions and effect on women's health in Kersa district of Ethiopia. *Int J Womens Health*, 4:45–54, 2012.

[66] P. S. Yoder, S. Wang, and E. Johansen. Estimates of female genital mutilation/cutting in 27 African countries and Yemen. *Stud Fam Plann*, 44:189–204, 2013 Jun.

[67] K. M. Yount. Like mother, like daughter? Female genital cutting in Minia, Egypt. *J Health Soc Behav*, 43:336–58, 2002 Sep.

[68] Yount, Kathryn M. Symbolic gender politics, religious group identity, and the decline in female genital cutting in minya, egypt. *Social Forces*, 82(3):1063–1090, Mar 2004.