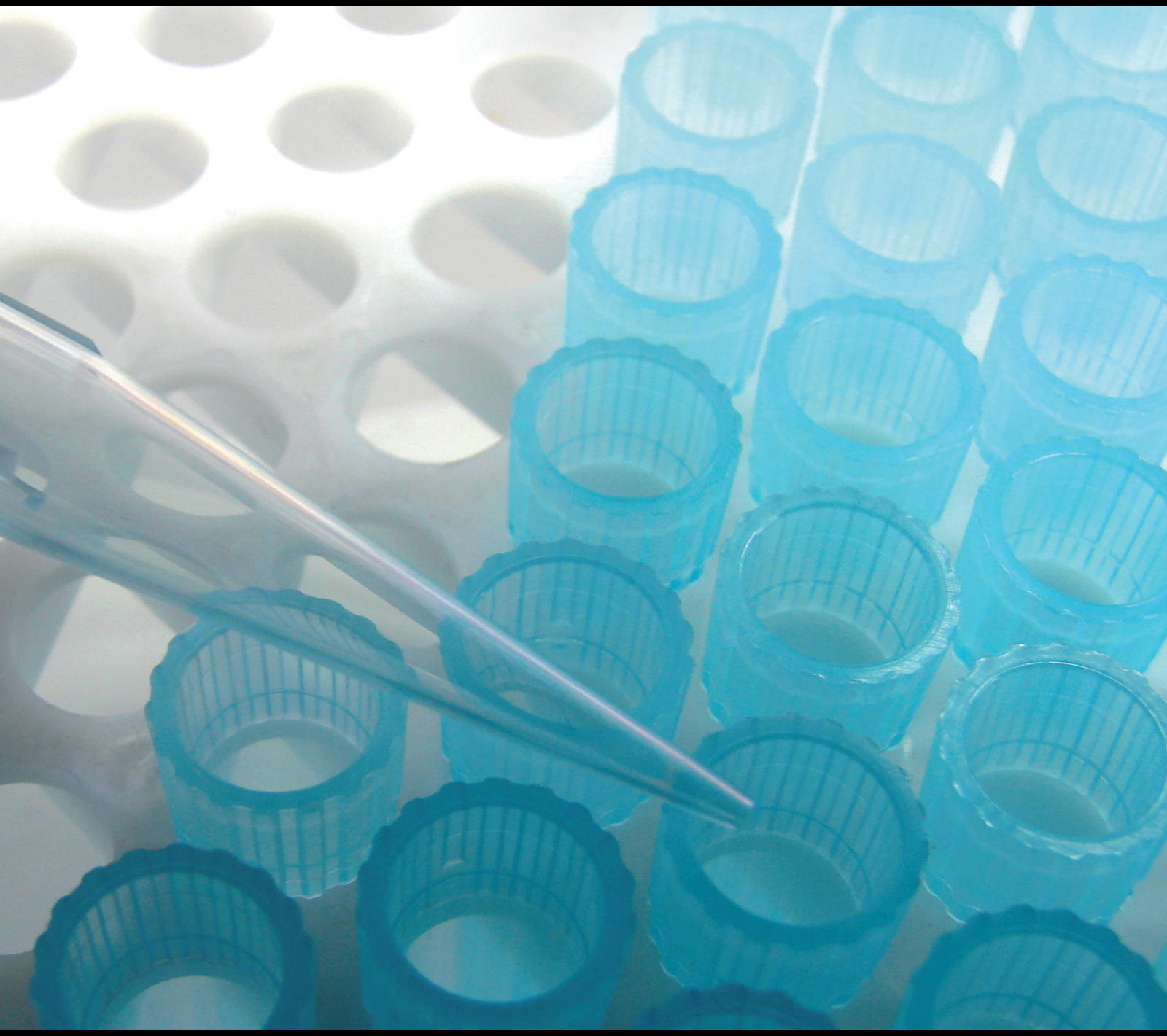
Obstetrics and Gynecology International

Female Genital Mutilation, Cutting, or Circumcision

Guest Editors: Johanne Sundby, Birgitta Essén, and R. Elise B. Johansen



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Editorial

Female Genital Mutilation, Cutting, or Circumcision

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Female genital mutilation (FGM), female genital cutting, or female circumcision of women, the theme addressed in this special issue has many terms. The short form acronym FGM is understood by most, and it does contain the notion that we are talking about a traditional practice that is harmful. The practice affects women in diaspora as well as African countries, and men are involved as decision makers and attitude changers. Cutting is a neutral term, and circumcision is a more traditional terminology. Each term carries a certain value. But the practice is the same regardless of name.

In order to understand the tradition, assist women who have undergone it, and promote action against it, it is important to have solid knowledge. This knowledge is partly medical and partly social. Thus, research based on a multitude of methods is warranted. This special issue is indeed a combination of social science and medical research on different aspects of the practice, that is also a genital health hazard for women.

The special issue addresses FGM from different angles and geographical places. Somalis are heavily affected as well with the most extensive form of FGM, and several studies presented are from Somalia or about Somalis elsewhere. There is a paper on health provider issues from Somalia that reveals how health workers may view the practice in a country where cutting is the norm (Lazar et al.). The other side of the issue in Somaliland, the care needed by clients, is described in another paper (Fried et al.). But also in West Africans, where most practice less extensive forms of FGM, its gender aspects is addressed, as the studies from the Gambia and Sierra Leone demonstrate (Kaplan et al. and Bjälkander et al.). In Sierra Leone, as in other countries, there are some difficulties encountered in how to assess the types and magnitude of FGM.

The phenomenon of FGM is important to gynaecologists for several reasons. Firstly, as it is a harmful practice that affects women, OB/GYN professionals may want to participate in initiatives that lead to its abandonment. As this is a topic that many people feel strongly about, some work on but fewer actually know how to handle, several articles in this issue may assist those who want to do their share in defining appropriate community interventions that they may want to engage in. The review of strategies presented here and the paper on attitude change are important contributions to the know-how literature. Some may think that harm reduction is a way forward, and others claim that full abandonment is the only way (Gele et al.).

Secondly, as this harmful practice is associated with health risks that OB/GYN professionals have to manage, many OB/GYN face problems when delivering babies of women who have undergone FGM, yet others have to provide different types of care to alleviate the problem, especially the obstetric consequences and their management. This special issue provides evidence for the harmful effects (Berg, Underland). As there may be an increased attempt to medicalize the cutting, and requests for doctors to involve themselves in "harm reduction" strategies, it is important that OB/GYN and nursing professionals are also fully aware of the reasons for wanting to be cut, male and female resistance to change, and knowledge about how harmful this practice is (Isman et al.).

The issue of harm reduction is indeed controversial, as the bottom line message is to end the practice altogether.

If one thinks that taking one step at a time and involving professionals in the procedure will eventually eliminate the practice, it may violate the very reason for medical people to practice "do no harm." This is an issue that should be transparent and heavily debated everywhere. To perform FGM for "harm reduction" may as well turn into yet another profit operation for some health workers, because consumers ask for it. To have solid evidence on the damage done to women is therefore important. The systematic meta-analysis paper in this issue is the best of that knowledge (Johansen et al.).

This special issue tries to link some evidence and experience from the social sciences into clinical obstetrics and gynaecology. We, as OB/GYN doctors, know that culture, social position, and gender also form our work environments, cause disease and complications are determinants for choices we and our patients make. Therefore, we hope you will enjoy this issue and join the growing group of colleagues who take this practice seriously as a step to a better health for girls and women everywhere.

Johanne Sundby
R. Elise B. Johansen
Birgitta Essén

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Research Article

Providers' Perceptions of Challenges in Obstetrical Care for Somali Women

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Background. This pilot study explored health care providers' perceptions of barriers to providing health care services to Somali refugee women. The specific aim was to obtain information about providers' experiences, training, practices and attitudes surrounding the prenatal care, delivery, and management of women with Female Genital Cutting (FGC). *Methods*. Individual semi-structured interviews were conducted with 14 obstetricians/gynecologists and nurse midwives in Columbus, Ohio. *Results*. While providers did not perceive FGC as a significant barrier in itself, they noted considerable challenges in communicating with their Somali patients and the lack of formal training or protocols guiding the management of circumcised women. Providers expressed frustration with what they perceived as Somali patients' resistance to obstetrical interventions and disappointment with a perception of mistrust from patients and their families. *Conclusion*. Improving the clinical encounter for both patients and providers entails establishing effective dialogue, enhancing clinical and cultural training of providers, improving health literacy, and developing trust through community engagement.

1. Introduction

Somalis represent the largest influx of African refugees to the United States of America (USA) [1]. They began arriving in the early 1990s when their country became engulfed in armed conflicts and its citizens were forced to flee for survival [1–3]. Repeated humanitarian crises in Somalia contributed to the continual exodus of millions of Somalis throughout the years. The 2011 report from the US Department of Homeland Security [4] identifies Somalia as one of the leading African countries for refugee admissions in the USA. In Ohio, the Somali Community Association of Ohio (SCAO) estimated that more than 45,000 Somali refugees/immigrants had resettled in Columbus, Ohio, in 2010, with an estimated 200 arriving each month due to both direct resettlement and secondary migration [5, 6]. Columbus and Franklin county officials projected this number to be closer to 80,000, which would represent the second largest population of Somalis in the USA (behind Minnesota) and would account for 42% of all immigrants in Ohio [1, 7]. This increasing demographic diversity among Columbus residents has a profound impact on local population health profiles and health care needs. Somali immigrants form a very homogeneous population linguistically, religiously, and culturally. According to the Ohio Department of Public Safety [8], 99.9% of Somalis in Columbus are Sunni Muslims and share the same ethnic background (except for a minority Bantu group). They are also linked by similar experiences of violence, trauma, loss, food insecurity, and grief. An important shared cultural factor among Somali women is the traditional practice of Female Genital Cutting (FGC), otherwise known as Female Circumcision (FC) or Female Genital Mutilation (FGM),

which consists of varying degrees of excision of tissue involving the periclitoral region, labia minora, and/or majora. Somalis have among the highest prevalence rates of FGC in the world (97.9%) [9]. A prospective study across six African countries has demonstrated a trend towards adverse obstetric and neonatal outcomes with increasing severity of FGC when compared to those without FGC, including cesarean delivery, postpartum hemorrhage, extended maternal hospital stay, resuscitation of the infant, and inpatient perinatal death [10]. Furthermore, emerging research among Somali communities who have resettled in the USA and Europe demonstrate unexplained disparities in reproductive health outcomes [11–14]. Somali immigrants in the USA are a high-risk subpopulation possessing an increased risk for adverse pregnancy outcomes (cesarean deliveries associated with fetal distress, failed induction of labor, delivery beyond 42 weeks gestation, significant perineal lacerations, and poor neonatal outcomes), when compared to US-born Blacks and Whites [13]. Small and colleagues (2008) [14] conducted a meta-analysis of pregnancy outcomes among 10,431 Somalia-born women living in Australia, Belgium, Canada, Finland, Norway, and Sweden, who were compared to native-born women in the respective countries. While Somalia-born women were less likely to have preterm births (pooled OR 0.72, 95% CI 0.64–0.81) or infants with low birth weight (pooled OR 0.89, 95% CI 0.82–0.98), there were increased caesarean sections, particularly, in first births (pooled OR 1.41, 95% CI 1.25–1.59) and increased stillbirths (pooled OR 1.86, 95% CI 1.38–2.51).

Consequently, Somali women appear to have unique needs during pregnancy and childbirth. However, given the high prevalence rates of the most severe form of FGC among Somali women, there is a dearth of evidence providing a direct and clear causal link between FGC and adverse reproductive health outcomes among migrant populations in Western societies [15, 16]. While some studies have exposed negative feelings and perceptions of discrimination in obstetrical settings as being associated with FGC and leading to difficult childbirth experiences, [17–20] other evidence suggests that various confounding factors, including clinical, cultural, linguistic, ethical, and personal beliefs, may contribute to a strong aversion to obstetrical interventions [15, 21, 22], consequently influencing suboptimal obstetric outcomes among this particular population in the West [13, 17, 19, 23–26]. As is the case for many immigrants, the Western biomedical approach to health care tends to be new to Somalis who also find the Western health care system overwhelming and difficult to comprehend and navigate [8]. For health care providers, caring for Somali women with FGC may present a challenge due to a host of sociocultural factors [17–19, 21, 22, 27, 28]. Hence discordant perspectives on health care expectations and recommended interventions between Somali women and their providers fuel patient-provider misunderstanding and miscommunication, which may have a negative impact on perceived quality of care and reproductive outcomes [21, 28]. Moreover, a growing body of evidence from different regions of the world, namely, Norway [20], Sweden [29], USA [30], UK [16, 31], and Spain [32], indicates the persistence of significant gaps in training providers, as well as gaps in general knowledge about caring for FGC-affected populations [33–35], even despite the availability of existing care protocols [16, 31]. This prompted an exploration of health care providers' perspectives surrounding reproductive care for Somali women. The specific aims of this study were to (1) explore providers' experiences, practices, and attitudes towards prenatal care and delivery of women with FGC, (2) examine providers' specific training on caring for women affected by FGC, and (3) determine the factors that influence the provision of quality care for Somali women with FGC.

2. Methods

Development of the interview guide for this pilot study was informed by a review of existing literature as well as previous conversations with key informants from the Somali community. This was an exploratory questionnaire with open-ended questions arranged by themes and aimed at obtaining information about providers' knowledge, training, and practices related to the obstetrical management of circumcised women, providers' attitudes and perceptions of barriers (or facilitators) to the reproductive care of circumcised women, and providers' communication with circumcised patients.

Investigators also developed a purposive sample of eligible participants by accessing the web sites of local hospitals and medical centers in areas where Somalis are known to access care and identified obstetricians at these hospitals or centers, where contact information of providers is usually available. In addition, based on the understanding that nurse midwives are often involved in the care of Somali women, a decision was made to interview licensed nurse midwives who cared independently for patients. Information about nurse midwives was obtained via the hospital and clinics' public websites or/and through referral from interviewed physicians. The study protocol and interview were approved by the Ohio State University Institutional Review Board.

2.1. Sample and Data Collection. Between July 2007 and July 2008, an initial invitation letter was sent by e-mail to a list of OB/GYNs and nurse midwives in Columbus describing the purpose of the project and the expectation in time commitment should they decide to participate. Subjects were asked to reply to the letter and indicate their willingness to contribute to the project and to be contacted by the investigators by providing a telephone number and a time at which they could be reached. Each respondent received a follow-up phone call at which the meeting place and time were agreed upon; recruitment continued through snowball sampling. Thirty providers from six hospitals and clinics that care for a large volume of the city's Somali patients were contacted over a period of two months. Fourteen providers responded to our invitation and were recruited in the study. The returned letter signed by the provider was considered as an informed consent. Fourteen semistructured interviews (approximately 45 minutes in length) were conducted by a nurse midwife student in public health (Jalana N. Lazar)

assisting the physician investigator (Michele P.-L. Shipp); these interviews took place over a period of two months in the spring of 2007. Each interviewee was offered a $15.00 restaurant gift card in appreciation for their contribution to the project (most of them declined). Interviews took place in hospitals' cafeteria, in hospitals' staff lounge, or in physicians' offices. Each interview was audiorecorded with the interviewee's explicit permission. All interviewees but one were White. There were 5 men and 9 women, including 9 obstetricians and one family practice physician with an OB concentration who was Somali, 3 nurse midwives, and 1 women's health nurse practitioner, ranging in age from 30 to 70, with self-reported 3–18 years of experience caring for Somali patients.

2.2. Data Analysis. After each interview, the team reviewed the process, listened to the recording, shared impressions about the participant's responses, and made notes of salient perceptions about the interview. Throughout the data collection process, investigators continued to share their observations and insights about the interviews, informing the development of a coding theme. After interviews were completed, the recorded interviews were divided among the investigators (Michele P.-L. Shipp and Jalana N. Lazar) and transcribed verbatim. Each investigator then reviewed the transcripts individually, identifying frequent words or groups of words, making notes about perceived patterns or differences between respondents, proposing initial codes, and later reviewing them together for divergences or consensus. Subsequently, a qualitative analysis tool (QSR NVivo 9 software) [36] was used to facilitate a thorough content analysis of the collected text, to sort and arrange the transcribed information and to identify nodes and linkages. Codes were then arranged into subthemes and assessed for connections to prior research, allowing for discussion of areas of discrepancy and agreement. All identified subthemes were included in the results of this pilot study, with the exception of provider attitudes and perceptions towards the sexual experience of circumcised Somali women. This subtheme was not included in this paper as it was not identified by providers as a barrier to care. Those results were later published as an abstract [37].

3. Results

Our findings did not point directly to FGC as a primary barrier to the delivery of obstetrical care to Somali women. Instead, several themes were identified which elucidated barriers to the provision of quality care including: challenges in patient-provider communication, providers' frustration with perceived Somali women's resistance to obstetric interventions, providers' perception of mistrust by their Somali patients, and suboptimal provider training in the care and management of women with FGC.

3.1. Challenges in Patient-Provider Communication. Many participants reported communication difficulties as an important barrier in their care of circumcised Somali women. These difficulties appear to stem from the following factors.

3.1.1. Language. For some providers the Somali language posed a barrier as its non-Latin cadences, patterns, and sentence structure made providers completely reliant on interpreter services.

> The language barrier, it's not like Spanish where you almost can pick it up because it does have some things that are the same in English language or fairly close or if you've spoken French or another European language where you can almost have some crossover. It sounds completely different, it has a totally different rhythm and doing that interview for your first visit is a long process and I've never over four years of residency learned any Somalian words and my Spanish, at least what I understand in Spanish has definitely improved over four years, and so it's just got a different rhythm to it, it's not like English at all and that is one of the hardest things to get over. (Female OB/GYN resident, 4th year (chief) caring for circumcised patients/Somalis)

> I think I have sometimes some discomfort communicating because I'm not sure, and it's different from a romance language where even if you don't know the language you have some concept potentially of what's being said, whereas with Chinese or Somali you really have no idea, whether what I said in two sentences is really translatable into two words or vice versa or it takes half an hour to say the thing I just said in five minutes. (Female OB/GYN, 15 yrs. experience with circumcised patients/Somalis)

> We don't speak their language and they only get enough of our language to feel we're denigrating their position although we aren't denigrating their position as much as they think we are. (Male OB/GYN, 18 yrs. experience)

> We insist on an interpreter . . . even though they think they are getting along fine with English . . . we don't think they are and so we get an interpreter in that case. (Male OB/GYN, 11 yrs. experience)

3.1.2. Interpretation. Several providers expressed concern about the objectivity and quality of interpretation services.

> I think the Somali interpreters are, I don't mean to sound pejorative, not as reliable as some of the other interpreters, because they're filtering through the eyes of the tribe and what they need to do is to tell the patient what I tell them and I know that they don't, they modify it, because I've had others chime in and say "that's not what he said" so I'm suspicious that it's one of the problems we have in communicating, with the interpreter putting her own two cents in. (Male OB/GYN, 18 yrs. experience with Somalis/FGM)

> I've actually had interpreters who don't exactly say what we say and sort of side with the family act as the patients advocate because they think we're trying to do something that's a problem. (Male OB/GYN, 10 yrs. experience)

> I also think it's interesting because the Somali culture is so well knit here, most of the Somali patients know the interpreter on a personal level and then you wonder, you know I have no idea what they're saying cause I talked a lot and she said "blah blah" and that was it and I was like wow, I have no idea if that's right, I guess that is. (Female OB/GYN resident, 3 yrs. experience)

3.1.3. Patient Autonomy. Providers also cited communication difficulties that arose when patients insisted on having a family member or male partner interpret for them. This was especially frustrating to providers because they perceived that the woman was not communicating her own wishes. Providers had strong responses when their patients abdicated communication to their male partners and suggested that the male dominance of the communication deprived the patient of the autonomy they felt she should have in decisionmaking around her care.

> I think for us, with women's health, it's the influence the men have over the women [that] is very difficult for us to understand, because again if a Somali woman is there and I'm consenting her for a C-section, I want her opinion, I don't want his opinion. They can talk amongst themselves but she needs to answer me and a lot of times they'll just look to the side and you have to talk to somebody else. (Female OB/GYN resident, 3 yrs. experience)

> One of the things I find is that Somali women will just refuse to answer because they defer the question to their partner or their significant other. So if you have the discussion of the C-section, they say it is not up to me, it's up to my husband. Well actually, it is up to you. I have had that happen too, but not always, just sometimes. (Female OB/GYN resident, 3 yrs. experience)

> . . . their male family members, who insist that they don't need an interpreter, that they or their family member speaks enough English. We usually try to insist pretty strongly that we get an interpreter because the message is never being communicated as well as we think. (Female OB/GYN, 6 yrs. experience)

> It may be that the husband or the family member is doing the interpretation . . . it is impossible to know exactly who is making the decisions . . . she could be saying "no. I don't want that" and he is saying "we will have it" . . . and you don't know what she said . . . so you just take him at his word. (Male OB/GYN, 12 yrs. experience)

> It's a culture that, to this day, I don't really understand; the role of the woman, the role of the pregnancy, the male domination . . . even for people who've been in America for a while, they still follow that, and how the male really dictates exactly what happens to the woman. We have interpreters come ad they'll even tell us that if we want to get a point across, we have to explain it to the husband first so that the wife will say ok and I don't understand why it's that way. (Male OB/GYN, 10 yrs. experience)

3.1.4. Discomfort Discussing FGC with Patients. Providers possessed varying levels of discomfort communicating with their patients about circumcision.

> There are circumstances where a patient will ask questions and somehow open the door for me and then I feel more comfortable, but I don't really know how to communicate about that effectively . . . I guess my biggest fear is coming across really judgmental. I don't want to hurt a woman's feelings during an exam . . .. So I feel like that's a real deficit. (Nurse midwife, 6 yrs. experience)

> It is really hard . . . my experience is that patients are pretty reticent about the procedures they have had . . . either the primary procedures or any corrective procedures . . . whether it is perceived in the communities that it is something not to be undone and they are trying to hush hush about it . . . I don't know . . . but my experience is that they are fairly reticent about it. (Male OB/GYN 12 yrs. experience)

> I just try to be blunt about it and not make a big deal and hopefully that decreases their embarrassment about it. (Female OB/GYN 6 yrs. experience)

> I've never had any problems with that. I realize it's their choice and it's just like the male mutilation we do, called circumcision. (Male OB/GYN, 18 yrs. experience)

> I think the residents understand the medicine and the anatomy . . . but as to communicating . . . you know . . . medical necessity or certainly understanding the sociologic issues related to it . . . I don't think they are necessarily . . . especially the latter . . . well-grounded in that . . .. (Male OB/GYN, 12 yrs. experience)

3.2. Providers' Frustration with Perceived Somali Women's Resistance to Obstetric Interventions. All the providers interviewed were aware of Somali resistance to cesarean delivery and expressed strong conviction that Somali caesarean section rates were not appreciably higher than those of

the general population. Many participants felt that the Somali perception that obstetrical interventions were higher than those of the general population was distorted by the fact that the rate of cesarean delivery in Somalia was certainly lower than in the USA. Participants seemed concerned at the possibility that Somalis perceived them as not having their patients' best interest at heart and were insulted by the Somali perception that providers performed cesarean sections because they were quicker, more convenient, or more lucrative.

> Our sense of it is that they perceive we want to do C-sections because it is somehow faster, easier, or more financially rewarding for us, and that we don't want to wait for the vaginal delivery, we just want to push them to have a C-section. We sense that they think we are very quick to jump on C-sections, perhaps because of the language barrier or the cultural barrier. I don't feel that it is accurate. (Female OB/GYN, 6 yrs. experience)

> We're not looking for C-sections to do. We try to do as many vaginal deliveries as we can. (Male OB/GYN, 18 yrs. experience)

> they don't why know the doctors are doing the C-section . . . because of money, because they don't care . . . because it is easier . . . or there is some assumption that they are doing it more often for Somali women . . .. (Female family practice physician specializing in OB, 3 yrs. experience)

> We definitely have a higher cesarean rate here then back in Somalia; I think it's just a US thing, medico-legal (Female OB/GYN, resident 3 yrs. experience)

Several participants alluded to incidents in which a Somali patient's refusal to have a cesarean delivery resulted in fetal death. Participants discussed these incidents in terms of cultural differences and values. Several talked about the Somali attitude that all decisions were in fact in the hands of God which they felt rendered the opinions and skills of medical providers irrelevant.

> We said we thought she should have a C-section and they said, "No, it's Allah's will, it's Allah's will" and we watched the baby die and it was difficult. (Male OB/GYN, 18 yrs. experience)

> They also have a lower expectation in terms of success with a pregnancy . . . we often hear . . . when we tell them: "You need a C-section or this baby is going to possibly die or have brain damage" . . . they say: "Whatever Allah wills"; so they are a lot more inclined to refuse C-section than the rest of our population . . .. (Male OB/GYN 10 yrs. experience)

Some participants spoke of the conflict they felt in the face of adverse outcomes that were a result of Somali patients' refusal to have a cesarean delivery . . . Many spoke of the difficulty of respecting the parents' cultural values when they felt these values endangered the baby, and they had been trained to save the baby whenever possible.

> I certainly had an experience . . . that was very upsetting to me . . . here's what it is, she refused a C-section and we delivered a dead baby and in the US that just doesn't happen anymore, that's why we do so many C-sections cause we don't even let that possible opportunity occur, and for her that was her wish and it's very hard because you have to tell nursing staff and the med students because everyone's walking around in a huff "that's not good." Well that's her belief. (Female OB/GYN resident, 3 yrs. experience)

> We've seen patients in labor and delivery, on the heart rate monitor, where we all just watched the heart rate go away because they refused the C-section. (Female OB/GYN, 6 yrs. experience)

> We've had some tragedies here with regard to infant death; which as a physician when you know that you can intervene in that situation and not have that outcome it's very, very difficult. (Female OB/GYN, 15 yrs. experience)

Many providers attributed the reluctance of Somalis to undergo cesarean delivery to the fact that it potentially limits their ability to have many children. Participants acknowledged this as a valid concern. However one provider expressed difficulty in understanding why a Somali patient would refuse an intervention that might result in a healthy baby in order to preserve the possibility of having more children later: "Cultural differences such as really not wanting the C-section I agree, because if she really wants to have seven babies I do not want to do seven C-sections because it gets more and more dangerous; but at the same time I'm not willing to sacrifice this child for six more whereas she might be willing to do that." (Female OB/GYN resident, 3 yrs. experience). Overall providers conveyed that they knew these differences to be cultural and that they attempted to respect them in spite of not always understanding them.

The Somali resistance to induction of labor for postdates pregnancy and/or oligohydramnios was also a common theme. Although providers expressed admiration for the Somali desire to go into labor spontaneously, they felt the adamant stance against labor induction sometimes resulted in complications that might increase the chances of undergoing a cesarean delivery.

> The other thing that Somali women are frequently very resistant to is the idea of inducing the labor. They want to wait for the labor to start spontaneously, which I agree with. I think the labor goes much nicer and is better for all involved if it starts spontaneously. Unfortunately, there are exceptions to that and sometimes we're concerned about the well-being

> of the mother or the baby and we have good reason to want to induce and it's a battle to convince Mom of that. (Female OB/GYN, 6 yrs. experience)

> Just last week we had a problem where the fluid around the baby was gone and we were worried the baby was going to die, and we have to tell you that induction is the best thing and that probably labor isn't going to work because there's no fluid around the baby and we can try amnioinfusion and in fact the baby tolerated labor for half an hour and looked really bad and luckily they accepted the section, but if she'd had an induction two weeks earlier she might have had a different outcome, and it's hard to get that through to them. (Male OB/GYN, 18 yrs. experience)

> I know that they're very resistant and it's hard, like with postdates. All the American women, when they're a day or two over they want us to induce them and the Somali women they're two weeks over and we're still nagging them, we'll schedule an induction and they don't show up. I think all that goes back to they're afraid that we're going to section them. I don't know how we can overcome that perception. (Nurse midwife, 4 yrs. experience)

> But it is very difficult to talk to them . . . it does take a long time to convince them and encourage them to be induced . . . they show up two days later . . . then I have to talk to them to encourage them . . . sometimes they come forward . . . it may take two, three days . . . So . . . but I tell them about my personal experience . . . and then there are . . . misconceptions about why the induction . . . it is very linked to culture . . .. (Female family practice with OB training, 3 yrs. experience)

3.3. Providers' Perception of Mistrust by Their Somali Patients. Many providers stated that they perceived a sense of mistrust from their Somali patients and their spouses/partners and families, and they felt that this impacted their care. They felt this mistrust was a much greater barrier to providing quality care to Somali women than their circumcision status or other cultural factors. Providers were unsure about the origins of this mistrust and what could be done to mitigate it. However, a desire to understand and lessen the mistrust and misunderstanding was evident throughout the interviews.

> I think they come in with some preconceived notions as well; that we're forcing health care on them, we're forcing tests on them that are unnecessary . . . so getting over that boundary, that's a barrier. (Female nurse practitioner, 5 yrs. experience)

> The bigger problem is the belief in the community that we're somehow not acting in their best interest, especially when it comes to recommending induction of labor or cesarean section, or even limiting the number of children. (Female OB/GYN, 6 yrs. experience)

> I think it's mistrust; I think they think we're trying to hurt them. I don't know why. I wish it wasn't there. It's very common and I don't understand it. (Male OB/GYN, 10 yrs. experience)

> I think the trust issue is a big one. I would be very interested to understand their concerns about our care and this issue of C-sections. So I think this issue of trust is an enormous one and we should develop a better understanding of what that is. (Female OB/GYN, 15 yrs. experience)

3.4. Suboptimal Provider Training in the Care and Management of Women with FGC. Only one out of the 14 interviewed providers stated that she had received any type of formal training on the management of circumcised women prenatally and during labor and delivery. All the other study participants had learned on the job, either during residency training from a more senior resident or by being confronted with a circumcised patient at the time of delivery or during a pelvic exam. Some providers indicated that they would have appreciated more formal training while others felt it was unnecessary because they had become competent without training.

> You sort of get dropped into it, I think we try to talk when there's a patient that we know is Somali whose having her 1st baby and is going to have a significant tear, I think we try to talk about how to manage that when we can. (Female OB/GYNB, resident 4 yrs. experience)

> No formal training . . . we have such a large Somali population here in the clinic. You're taught early in your residency these are type I, type II, type III, here's what that entails, here's what we'll tell them, here's what we'll do for them. (Female OB/GYN resident, 3 yrs. experience)

> I think the training is adequate now because of the numbers they see . . . it's really just a part of the training of episiotomy and episiotomy repair now . . . it is always part of that . . . as far as the procedure of de-infibulation . . . if they have cases in their GYN rotation where it is being done then it becomes part of their training . . . it is like any other surgery where it is not really a formalized piece of the training . . . because it is not that common of a surgery so . . .. (Male OB/GYN, 12 yrs. experience)

> "I think they can muddle through it (circumcision management) . . .. I think we do OK with that . . . we do a pretty good job with our education in general . . . and in making those

kind of decisions . . . " (Male OB/GYN, 10 yrs. experience)

None of the clinical sites where study participants worked had formal protocols on the management of circumcised women. One participant mentioned that they had considered adopting a protocol to address requests for reinfibulation (re-approximation of the vulvar scar after vaginal delivery to resemble original circumcision); however, the protocol was never created.

> There was an incident about 2 or 3 months ago where a patient of ours had delivered before out of state and the circ. was taken down during the delivery and then I don't know if it was a suture repair or if the tissue had just (come) together, so the way it healed, it looked as if it would need to be taken down again. With her delivery there was a big issue about that not being repaired the way that she wanted it to be done (post-delivery). So that kind of got some wheels turning in our department about maybe we should have a meeting to write things down. (Nurse midwife, 4 yrs. experience)

4. Discussion

Although the results of our study do not reveal FGC to be a significant barrier to appropriate and effective care of pregnant Somali women as we had hypothesized, our findings point to other factors related to FGC that can indirectly influence the care of this group of patients. Based on these findings, we generated a conceptual model of barriers and facilitators that play a role in providing care to Somali women. As illustrated in Figure 1, our model takes into account the health care context, the providers' experience, and the behavioral mechanisms that could improve the quality of care.

The Western health care context is focused primarily on the body, on physical disease processes, and on illness, depends significantly on results of biological tests and evidence to guide treatment, and is usually aggressive in its pursuit of a cure and prevention of death. This approach tends to separate mind and body and often fails to consider other factors (psychosocial, spiritual, cultural, etc.) that might influence illness. On the other hand, a non-Western approach to health, such as is familiar to Somali immigrants, focuses on the person as a whole, where religion/spirituality, culture, traditions, and social network/support may play an important role in understanding and curing illness [38]. Moreover, Western medical and cultural attitudes towards FGC are generally negative and can provoke moral discomfort and ethical conflict for providers who care for circumcised women [28, 39]. Culture does matter and providers bring their own beliefs, biases, and cultural perspectives to their patient encounters. Understanding the cultural context around birth and the impact of FGC on delivery is crucial for providers to be able to create positive birth experiences for Somali women [15]. Lack of understanding or knowledge of patients' cultural background and beliefs has been found to be a significant barrier to appropriate and effective Western care delivery to ethnic minority groups, especially immigrants [40–42].

There is a notable intersection between patient-centered and culturally-competent care. Both models rely on the patient-provider partnership and the provider's recognition of the agency of the patient for effective health communication (the culture-centered approach) [42, 43]. In this study, providers' perceptions demonstrates a significant need for providers to feel valued as partners by Somali patients and to have their own input and competence recognized. There has been a limited examination of existing models of culturally competent care and the impact cross-cultural interactions have on provider attitudes and practices. In seeking to discover whether FGC presented a barrier to caring for Somali women, this study instead unearthed underlying mechanisms by which the existing Western health care context, patient mistrust, provider frustration, and cultural/value differences may erect barriers to effective patient-provider communication between Somali patients and their providers.

Our finding of linguistic difficulties and doubt in the quality of interpretation services is also supported by evidence in the literature wherein providers did not deem interpreters sufficiently qualified to accurately convey provider information [39, 44]. Moreover, our findings that providers who care for circumcised women often experience conflicts between their own personal views on female empowerment, particularly in regards to male dominance over communication and decision making, have been substantiated by other studies [39, 45, 46]. The social, economic, and political structure of Somali society espouses a patriarchal community wherein gender inequality is pervasive and may pose a conflict with gendered norms in their host country of resettlement [47]. Furthermore, discordant views by Somali women and their providers may result in unmet needs and perceptions of diminished quality of care [28]. In our study, providers expressed concern that patients and their families feel they are being denigrated and at times may refuse an interpreter perceiving that their English fluency was sufficient. This has also been reported by Pavlish et al. where Somali women expressed frustration in the health care system's requirement that they receive a language interpreter, which they deemed condescending and time consuming [28].

In contrast, however, Binder et al. stress the importance of optimizing language congruence through the use of formally trained interpreters, as well as respectful, culturally competent, and professional encounters, which was deemed more important than cultural/ethnic or even gender concordance [44]. Recurrent themes that emerge in the literature are cultural/value clashes manifested in patients' reliance on religious beliefs and fatalistic attitudes [21, 39, 44], differing perceptions about FGC by patients and providers, a lack of antenatal discussion about FGC by providers [15], a feeling of being rushed to delivery, misperceptions about C-section [15], and a fear of dying from C-section [22]. These clashes played an important role in providers' attitudes towards Somalis' resistance to obstetrical interventions [15, 17, 22, 27]. Participant providers in our study identified these clashes as challenges to caring for their Somali patients, which may

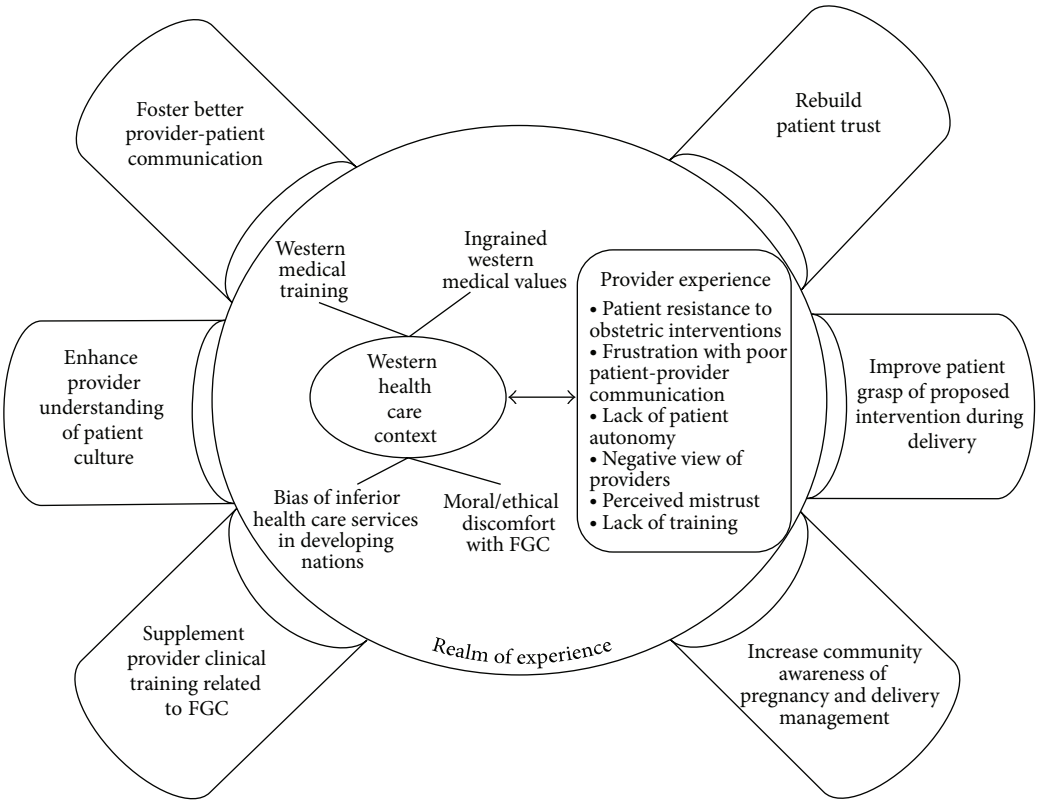

Figure 1: Mechanisms to improve the quality of care. Adapted from [48].

induce a generalized sense of frustration among providers. In agreement with the literature [21, 22], our results reveal provider frustration with their Somali patients' resistance to obstetric intervention, particularly labor induction and cesarean delivery, and further elucidate the factors which may explain the strong aversion to obstetric interventions, namely, poor patient/provider communication, provider frustration with the perceived lack of Somali women's autonomy in decision making, and sadness/indignation about Somalis' negative perceptions of provider intentions.

Of note, our finding of providers' sense of powerlessness in averting unnecessary fetal death is in direct conflict with Somali women's fatalistic approach and religious coping mechanisms which further fueled providers' frustration. This is also congruent with the evidence-based literature wherein providers' personal and cultural values, as well as the contextual platform of Western medical training, may create conflict which may hinder the way they perceive their patients, communicate with, and provide care to them [21]. Moreover, it is possible that what may be deemed by providers as noncompliance and resistance to interventions from Somali women and their families, may in fact be a consequence of miscommunication and discordant misperceptions by both providers and patients [44].

All participants expressed deep concerns about a perceived lack of trust among Somali patients. The providers repeatedly identified a perceived mistrust among Somali patients as a significant barrier to providing quality obstetric care to this population. Other studies have correlated these conclusions [27, 49, 50] from the perspective of the Somali patient, but our findings highlight that providers perceive Somali patients' mistrust keenly although many seemed uncertain as to its etiology. Pavlish and colleagues [28] reveal that Somali women wished for a more personal relationship with their health care providers, felt rushed during encounters, and wanted longer consultations, whereas providers felt they spent too long with patients who need translator and try to take care of the problem as fast as they can. As one participant of the Pavlish study expressed, misunderstandings between well-intentioned providers and well-intentioned patients foster distrust and undermine relationships, and as a result, patients' health and well-being suffer. It is notable that our providers appeared to feel personally hurt by the perception of patient mistrust, and while they were able to appreciate Somali resistance to obstetric interventions in a wider historical cultural context, none applied this lens to the issue of trust. Improved culturally competent communication would likely improve this.

It is interesting to note that our findings did not point directly to FGC itself as a primary barrier to the delivery of obstetrical care to Somali women but rather to the challenges in patient-provider communication, providers' frustration with perceived Somali women's resistance to obstetric interventions, providers' perception of mistrust by their Somali patients, and suboptimal provider training in the care and management of women with FGC. This is similar to the findings of Essén et al., 2011 [21], wherein providers did not describe FGC as a concern for Somali women's

maternal care experience. However, we did not interpret this as a positive sign that knowledge about FGC had been effectively incorporated into the local health system. Thus, not perceiving FGC as a concern for the provision of quality care does not necessarily imply that adequate knowledge on the care of FGC-affected populations exists among health care providers.

Studies in regions with significant number of immigrants from Somalia have found that often providers were not fully informed or prepared when encountering a circumcised patient and at times were uncertain as to how to best care for them in delivery. In a qualitative study conducted by Vangen and colleagues in Norway [20], health care professionals admitted to occasionally performing cesarean section in place of defibulation as they were uncertain how to perform a defibulation procedure. In the context of this study, one doctor reported that she was shocked after her first delivery with an infibulated woman, because she stated she did not recognize the anatomy. Other studies throughout North America and Europe have shown that a significant number of health care providers involved in the reproductive care of circumcised women have difficulty providing culturally competent care to these women and at times did not feel confident in their management of these patients. In a study by Ameresekere et al. in the USA [15], most women participants reported that their health care providers never discussed FGC or its potential for related complications of their delivery. Focus groups with circumcised women conducted by Thierfelder et al. (2005) in Switzerland [29] revealed a "striking lack of communication" about FGC between health care providers and their patients. Moreover, despite the availability of existing hospital protocols, and national guidelines, inappropriate management of FGC-affected patients, inadequate training of health care providers, and significant gaps in the provision of quality care still persist and have been attributed to language barriers, late initiation of prenatal care, provider discomfort, failure to identify FGC, and lack of a core training curriculum for providers [16, 31].

Despite expressing comfort in caring for circumcised women, a significant number of providers appear to be doing so without formal training, protocols and guidelines [29–32, 34]. Formal clinical protocols and guidance on overcoming communication barriers with circumcised women would result in more effective and satisfactory care [51, 52]. An educational tool has been developed by the American Congress of Obstetricians and Gynecologists (ACOG) in the form of a slide lecture kit on the clinical management of FGC [53]. However, unknown is the extent to which this educational resource is readily available and being actively utilized by residency training programs and providers across the USA, and how it is enhancing the quality of care and outcomes for women affected by this practice. A recent study by Jacoby and Smith [54] evaluated the effectiveness of an education program targeting midwives in the USA. This training included a didactic portion with a comprehensive review of ACOG guidelines and a hand-on training to build clinical management skills such as deinfibulation; the training was delivered to a group of midwives with the goal of improving their understanding of the unique needs of women with FGC and enhancing their ability to care for them. A pre- and posteducational survey demonstrated a significant increase in knowledge about FGC and improved confidence in being able to provide culturally competent, safe care to women with FGC. Similarly, Zenner and colleagues [16] examined the quality of care provided to circumcised women by obstetricians and midwives in a teaching hospital in the UK after the adoption of national and local protocols. Results of the study highlighted significant gaps in the practical application of these guidelines by health care providers and persistent deficits in the management of these women with FGC. These findings reinforce our assertion of the need for an increase in provider cultural competency in caring for FGC-affected populations, formal training to enhance knowledge on the care of circumcised patients, and an improvement in communication between patients and providers. Further research is necessary to inform the development of clinical training protocols and health policy recommendations to guide clinicians in the counseling and management of FGC, especially when ethical conflicts arise.

In order to improve trust and patient and provider communication on obstetrical care and aid in decision making, enhanced dialogue and anticipatory guidance are necessary early on and throughout antenatal care between providers, patients, and their families [15]. Somali women have clearly voiced their fear that undergoing a C-section will lead to death, or their body not returning to normal after surgery; that labor is rushed in the USA and they are pressured to delivery before they are ready; that patient-provider communication is important during labor and delivery; and that providers should discuss the implications of FGC on their care early in pregnancy [15]. Likewise, it is important to seek input from the Somali community on their views concerning obstetrical interventions, and cesarean delivery could provide an opportunity to enhance community health literacy, dispel fears, and reduce tensions with the health care system. Results from Somali focus groups and individual interviews conducted as a separate arm of a larger study may provide further insight into the nature of this distrust in the Somali community [55].

This study achieved thematic saturation in a number of areas including communication challenges, the lack of formal training for providers on the management of women with FGC, provider frustration with Somali attitudes towards obstetric intervention, and perceived mistrust. While the method of recruitment may have introduced a certain degree of selection bias, snowball sampling and purposive sampling have demonstrated reliability in the field. Efforts were made to mitigate this by recruiting obstetric care providers through a variety of communication channels. Some interview bias may have been introduced as both the interviewers and participants were health care providers, although concomitantly this may have contributed to enhanced disclosure among participants. Given the demands placed on the time of providers, interviews were occasionally rushed or interrupted which may have impacted the depth of some responses. Furthermore, the gender of the providers may have introduced some bias in patient-provider communication as well as influenced providers' perceptions of Somali women's

receptivity to obstetrical care and interventions. Some studies have examined gender concordance in communication within multiethnic populations [44, 50]. While gender concordance is considered a priority and should be optimized for communication on highly sensitive gynecologic concerns such as FGC [50], having a competent and respectful provider has been shown to far outweigh a predilection toward sex distinction among providers [44].

Nonetheless, creating a true partnership between refugee communities and health care providers may lead to improved reproductive health outcomes and quality of care. Strategies to improve the quality of care for this population are to (1) Foster better patient-provider communication, (2) nurture patient trust, (3) enhance provider understanding of patient culture, (4) improve patient grasp of proposed intrapartum interventions, (5) supplement provider clinical training on FGC, and (6) increase community understanding of Western practices in pregnancy and delivery management. Future research should explore factors impacting communication between providers and their circumcised patients by examining the perceptions Somali women have of their reproductive care experiences and interactions with their providers.

5. Conclusion

This paper presents unique perspectives of challenges providers face in caring for Somali refugee women with Female Genital Cutting (FGC). It also highlights communication challenges and cultural factors influencing Somali women's resistance to obstetrical interventions. We offer a model that illustrates various factors influencing patient/provider interactions and measures which may improve quality of care. This study adds to the growing body of evidence on the unique reproductive health care needs of Somali refugee women.

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Research Article

Female Genital Mutilation in Sierra Leone: Forms, Reliability of Reported Status, and Accuracy of Related Demographic and Health Survey Questions

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Objective. To determine forms of female genital mutilation (FGM), assess consistency between self-reported and observed FGM status, and assess the accuracy of Demographic and Health Surveys (DHS) FGM questions in Sierra Leone. *Methods.* This cross-sectional study, conducted between October 2010 and April 2012, enrolled 558 females aged 12–47 from eleven antenatal clinics in northeast Sierra Leone. Data on demography, FGM status, and self-reported anatomical descriptions were collected. Genital inspection confirmed the occurrence and extent of cutting. *Results.* All participants reported FGM status; 4 refused genital inspection. Using the WHO classification of FGM, 31.7% had type Ib; 64.1% type IIb; and 4.2% type IIc. There was a high level of agreement between reported and observed FGM prevalence (81.2% and 81.4%, resp.). There was no correlation between DHS FGM responses and anatomic extent of cutting, as 2.7% reported pricking; 87.1% flesh removal; and 1.1% that genitalia was sewn closed. *Conclusion.* Types I and II are the main forms of FGM, with labia majora alterations in almost 5% of cases. Self-reports on FGM status could serve as a proxy measurement for FGM prevalence but not for FGM type. The DHS FGM questions are inaccurate for determining cutting extent.

1. Introduction

Female genital mutilation (FGM), also known as female genital cutting or female circumcision, is the term used to describe the non therapeutic, surgical alteration of female genitalia which is a traditional practice in mainly African countries [1].

The term "*mutilation*" is controversial and rejected by members of practising communities whose intention is not to mutilate [2]. The term "female genital cutting" has been argued to be more value neutral and nonjudgemental than FGM [3]. It does, however, not accurately describe what has actually taken place, the removal of parts of the body. The name "female circumcision" is often the English translation of the practice from indigenous African languages into English and was commonly used in the 1970s [4]. The term "*female circumcision*" is likely to cause the erroneous comparison with male circumcision which would be wrong both from anatomical and religious aspects.

The WHO and the Inter-African Committee on Traditional Practices Affecting the Health of Women and Children (IAC) have adopted the term "female genital mutilation" because not only is it used as an effective policy and advocacy tool [3] but also is a more apt description of the physical act and extent of injury on the genitalia when the procedure is performed [5]. Thus, whilst recognising that the intention

of practising communities is not to mutilate, the term FGM indicates the harm and damage caused by the practice [6].

In this paper, the term FGM is used to emphasise that although in most cases in Sierra Leone the intention is to satisfy traditional and cultural reasons, the effect of the practice remains mutilation. In addition, the nature of the paper is original research on the different forms of FGM that are present in Sierra Leone.

FGM is performed mainly in Africa as well as a number of countries in Asia and the Middle East [7]. Whilst worldwide estimates of women who have undergone FGM vary from 130–140 million [8], recent estimates indicate that FGM occurs in 27 African countries affecting 67.7 million girls and women aged 15–49 [9]. This number rises to 85.9 million women aged 50 and older who have undergone FGM in the 27 African countries [9]. An estimated 3 million girls are at risk of FGM in Africa every year [10]. Sierra Leone is one of the five countries in Africa where the prevalence rate exceeds 90% for the age 15–49 years and is the only country in southern western Africa with a very high prevalence rate [9].

FGM is a risk factor for several negative health effects. The severity of health consequences of FGM vary considerably and depend on the anatomical extent of the cutting [11, 12].

In the short term, these can include excessive bleeding, local infections, shock, and delay in or incomplete healing [13–15].

Late complications can include scarring, keloid formation of the vulva, genital ulcers and dermoid inclusion cysts, lower abdominal pain, and infertility [16–23].

Studies have also shown that FGM can cause gynaecological and obstetric complications, negative psychological outcomes, and can affect the sexual function of women [24–29].

2. Classifying FGM Forms

One of the difficulties associated with providing information on the type of FGM taking place is that clinical verification is required to confirm occurrence of FGM and the extent of the cutting. Then, this data has to be classified. For classification to be consistently accurate, rigorous training needs to be given to both data collectors and the research team for accurate type classification [30, 31].

3. WHO FGM Classification

The World Health Organisation (WHO) has classified the forms of FGM into four types [7]. Given the variations in types of clitoridectomy (type I), excision of labia minora and/or majora (type II), and narrowing the vaginal orifice by cutting and appositioning the labia minora and/or majora (infibulation, type III); subdivisions have been created to distinguish between these variations (Table 1). All other harmful procedures to the female genitalia for nonmedical purposes are covered by Type IV such as pricking, piercing, incising, scraping, and cauterization [7].

The WHO classification is important for studies where genital inspections are performed to determine the anatomical extent of cutting. Genital inspections which can yield systemically consistent and reliable data on FGM forms can be limited by cost, knowledge of data collectors, and willingness of respondents to the inspection [11].

A study among girls and women in Sudan which compared the extent of the cutting verified by clinical examination with the corresponding WHO FGM classification found that many respondents who reported they had undergone "sunna" were found to have a form of FGM extending beyond the clitoris, and as many as 39% girls and 54% of the women reporting sunna had actually undergone type III FGM. Not only did the girls and women inaccurately describe the extent of anatomical alteration but also these did not fit into WHO classification [32]. The WHO classification has, since then, been updated with subcategories which make it possible to distinguish between different anatomical alterations.

4. Demographic and Health Surveys

The Demographic and Health Survey (DHS) developed by Macro International (now ICF International) collects data from representative samples of households of adult women (15–49 years) and men to give national representative estimates on demographics, fertility and reproductive health, maternal and child health, and nutrition and knowledge of and practice related to HIV/AIDS [32].

Within the DHS questions, should FGM be a concern in a country, a module of questions on FGM is added to the women's questionnaire, and the answers are used to generate information on FGM prevalence and types for women and their daughters [10]. As well as being asked whether they have heard of FGM and have been circumcised, respondents are asked if their genital area was "*nicked with nothing removed;*" "*something removed,*" or "*sewn shut*" [10].

The responses to these questions generate information on national prevalence rates and types of FGM for the women themselves and for their daughters.

5. Agreement between Reported and Observed Forms of FGM

Knowing girls' and women's FGM status is important for research studies that examine prevalence trends, determinants of the practice, and for evaluating the effects of interventions to address the practice [33].

Self-reporting is the basis for determining FGM status in the DHS and most other surveys. The assumption is that women respond truthfully when asked about their FGM status and that they know what action was performed on the genitalia. It is not possible to provide information from DHS on the accuracy of self-reporting of FGM status as genital inspections are not conducted as part of the survey.

The possibility that the validity of DHS and other survey responses might be biased is great in situations where legislation and information campaigns are used against the practice [6]. It may be more likely, for example, to imagine that in

Table 1: WHO typology, 2007.

Type I: partial or total removal of the clitoris and/or the prepuce (clitoridectomy).
When it is important to distinguish between the major variations of type I mutilation, the following subdivisions are proposed: type Ia: removal of the clitoral hood or prepuce only; type Ib: removal of the clitoris with the prepuce.
Type II: partial or total removal of the clitoris and the labia minora, with or without excision of the labia majora (excision).
When it is important to distinguish between the major variations that have been documented, the following subdivisions are proposed: type IIa: removal of the labia minora only; type IIb: partial or total removal of the clitoris and the labia minora; type IIc: partial or total removal of the clitoris, the labia minora, and the labia majora.
Note also that, in French, the term "excision" is often used as a general term covering all types of female genital mutilation.
Type III: narrowing of the vaginal orifice with creation of a covering seal by cutting and appositioning the labia minora and/or the labia majora, with or without excision of the clitoris (infibulation).
When it is important to distinguish between variations in infibulations, the following subdivisions are proposed: type IIIa: removal and apposition of the labia minora; type IIIb: removal and apposition of the labia majora.
Type IV: unclassified: all other harmful procedures to the female genitalia for nonmedical purposes, for example, pricking, piercing, incising, scraping, and cauterization.

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countries where FGM is outlawed, women may deny their positive FGM status [34].

The self-reported circumcision status of women aged 15–49 was obtained by interview in 1995 in a longitudinal study in northern Ghana. The women were interviewed again in 2000 after the enactment and enforcement of a law against FGM and public campaigns against the practice. The study found that 13% of women who reported in 1995 that they had been circumcised denied that they were circumcised in the 2000 interview, with denial rates as high as 50% in the youngest age group [33]. This study also showed that women who denied being circumcised were significantly younger, more likely to be educated and less likely to practice traditional religion than the women who reported that they were circumcised.

There are relatively few studies which provide information about self-reports and clinical information on FGM status thus making it possible to assess the level of agreement between reported and observed forms of FGM [19, 23, 30, 32, 35–37]. In these studies, the accuracy between self-reported and observed FGM status ranged from 94% in Egypt [35] to 57% in Nigeria [36], suggesting that results based only on self-reporting might be unreliable.

In southwest Nigeria, two research studies examined the accuracy of self-reports of FGM status by also conducting a medical examination and found high levels of agreement of 92% [17] and 79% [30]. It is likely that the level of disagreement between self-reports and examination reflects the respondents' inaccurate knowledge about their status or incorrect examination assessments, rather than women wilfully, wrongfully declaring their FGM status [33], especially as in both studies, they knew that their self-reports were to be corroborated by medical examination.

6. Sierra Leone

Sierra Leone is a country on the west coast of Africa with a population of approximately 6 million people [38]. There are about 14 main ethnic groups, each with its own language, the largest being the Mende in the southeast region and the Temne in the northern region [39].

About 11 years ago, the country recovered from a civil war, which renowned for its brutality by rebel soldiers who amputated the arms and limbs of civilians [38]. The third democratic presidential elections took place in November 2012.

7. FGM in Sierra Leone

FGM in Sierra Leone is one activity of the initiation ceremony of the Bondo Society, a powerful all women led and run group [40]. Initiation into the Society is a rites of passage ceremony which recognises when a girl becomes a woman in her community. Girls are therefore around the age of puberty when they become members [40].

The initiation ceremony takes place in the Bondo Bush, a private enclosure usually erected several kilometres from the village. The Bushes are run by a Sowei, the traditional woman Bondo leader who also performs the cutting and is responsible for the smooth running of the Bondo Bush whilst it is in session.

Formerly, the time spent for initiation in the Bondo Bush could take up to a month, but latterly, this period has been reduced to a couple of weeks [40].

FGM is the first act performed, and as the girls heal, they are prepared for marriage and keeping a home as well as taught about the rights and responsibilities of a Bondo Society member [40].

There is a strong connection between ethnicity and the Bondo Society as each ethnic group has its own "Bondo Bush." So, for example, a Mende girl will attend a Mende Bondo Bush and will not attend a Limba Bondo Bush. There is no national law against FGM in Sierra Leone.

The most common forms of FGM believed to be practised in Sierra Leone are clitoridectomy and excision [40]. No study has been conducted in Sierra Leone which compared self-reported FGM status with genital inspection to validate self-reported FGM status.

This study describes anatomical changes to the genitals following FGM, classifies them using the WHO FGM classification, and compares the findings from genital inspection with reported FGM status and responses from the DHS FGM module.

8. Materials and Methods

8.1. Data for the Study. The population from which the sample for this study was derived was the controls of a larger clinic-based case control study to determine the association between FGM and obstetric fistula. These controls were matched to cases with fistula, based on ethnicity, age range and number of previous pregnancies, and were recruited from among pregnant women visiting antenatal clinics, ten in northeastern Sierra Leone and one in the main maternal hospital in the capital, Freetown. Pregnant women were recruited because this sample was appropriate for representing a normal healthy population of women and from whom a genital inspection was ethically acceptable.

Six of the clinics were located in town hospitals: Kambia Town Hospital located in Kambia District; Makeni Regional Hospital located in Bombali District; Port Loko Town Hospital located in Port Loko District; Magburaka Town Hospital located in Tonkolili District; and Kono Town Hospital located in Kono District, as well as the Princess Christian Margaret Hospital (PCMH) located in the Western Urban Area of the Capital.

The remaining centres were community health centres in rural areas of the five districts: Rokupr in Kambia District; Binkolo in Bombali District; Mange in Port Loko District; Yele in Tonkolili District; and Tombodu in Kono District.

All centres were chosen because of the high ANC clinic attendance serving a mixture of urban and rural populations. The percentage of women receiving antenatal care from a skilled provider in the eastern region of Sierra Leone is 89.6%, and in the northern region 81.9% [39].

8.2. Preliminary Studies and Sample Size Calculations. Power calculations were performed for the case-control study mentioned above, based on preliminary studies conducted between 2006 and 2007, resulting in an estimation of 300 fistula cases and 600 controls. It was the control sample that was used for this study.

8.3. Training of Data Collectors and Supervisors (Including Pretesting of the Tool). Each participating centre provided at least two members for the research team: at least one woman data collector and one supervisor. The data collectors were selected from different health cadres within the Ministry of Health. These were maternal and child health aides, state enrolled community health nurse, midwives, nurses, and sisters. Supervisors were selected from community health officers, matrons, and sisters. Both data collectors and supervisors received initial training of three days which included research methodology, followed by another seven days during pilot testing. Particular focus was given to data collectors and supervisors being able to recognise and accurately describe the anatomy of the female external genitalia. The interviewing technique and the genital inspection procedure were pilot tested from November 2009 to July 2010 during which 122 completed control questionnaires were collected. These are not included in the present sample.

The woman had to be pregnant and a first time visitor to the ANC clinic, to ensure that the same attendee was not interviewed twice. Participants were informed of the purpose and format of the study and assured that the data was confidential and that refusal to participate would not compromise care or treatment. Thus, oral consent was obtained prior to the start of the interview, which was verified by the signature on the consent form by the data collector. After consent had been obtained, the trained women health professionals interviewed the participants and performed the genital inspections. The same procedure was used for all respondents independent of age.

8.4. The Tool. Data for this study was obtained using a questionnaire which had been used in the Sudan [14] and adapted for use in Sierra Leone.

Participants were asked for their social and demographic details, pregnancy, and childbirth history, as well as their age at which they underwent FGM and their experience of FGM.

Age was assessed on current age and in cases where respondents did not know their age, a year of birth was estimated from additional questions on age at FGM (such as "*How long have you been a member of Bondo?*"), year of marriage, year of first child, or age of first child.

Education was measured from questions on school and level at which schooling stopped.

Religion and ethnicity were determined by open-ended questions which were then coded from a comprehensive list on the interview sheet.

8.5. Reporting and Observing Anatomical Description of External Genitalia. Only those respondents who said they had undergone FGM were asked to describe the extent of cutting using the same of questions used by the DHS on FGM [41]. The questions, which were asked one after each other were "*was the genital area pricked?*"; "*was flesh removed?*"; "*was the*

genital area sewn closed?" For each question, the response was "*Yes,*" "*No*" or "*Do not Know.*"

All respondents (whether they reported that they had undergone FGM or not) were requested to undergo a genital inspection by the same woman health professional who had administered the questionnaire. The inspector was therefore aware of the participant's self-reported FGM status.

Data collectors were instructed to describe the anatomy in a structured way. The clitoris, labia minora, and labia majora were observed and recorded if they were fully present, partially removed, or totally absent. Totally absent in this instance meant every visible part of the organ had been removed.

8.6. Ensuring Accuracy and Consistency in the Recording of Genital Inspections. Given the different cadres of health professionals that were used as data collectors, not only were their experiences and skills vastly different but also their health education level and understanding of the anatomy.

We were concerned that if the data collectors did not consistently and uniformly perform the genital inspection and interpret what they saw, this might introduce observer bias into the results. To address this, we developed a systematic approach to genital inspections which all data collectors used, and we also conducted genital inspection training for data collectors on site, during which they were examined in order to be certified that they were using the procedures correctly and consistently for the genital inspections.

8.7. The Development and Use of a Systematic Approach to Genital Inspections. A standardised procedures checklist was developed by the Fistula Surgeon and the training team during training which was distributed to all data collectors. This document was used at all sites for all genital inspections.

8.8. Genital Inspection Examination and Certification on Site. This consistency training and certification was carried out in the following manner: the fistula surgeon, based at Aberdeen Women's Centre, had worked with and trained all the data collectors who performed genital inspections.

For the controls, training on genital inspection was provided for all data collectors, regardless of their education and experience by the Principal Investigator and the Fistula Surgeon (February 2010). During pilot testing, extensive and regular follow-up training and exercises were conducted on a monthly basis during the site visits. In addition, at the end of the period of pilot testing, the Fistula Surgeon visited each control centre and examined each data collector to conduct a number of genital inspections on site.

The research team noted that the data collectors for the controls were not only more knowledgeable about the anatomy of the genital area but were also more confident and had nurtured good approaches for working with the patients.

Completed questionnaires were collected once monthly for the first four months and then once every two months thereafter. The data collection period was from October 2010 to May 2012.

8.9. Translating Anatomical Descriptions from Genital Inspections to FGM Types Using WHO Classification. In a subsequent activity, the anatomical descriptions were classified into WHO types by two researchers (L. Almroth and O. Bjälkander).

8.10. Statistical Analysis. Univariate and multivariate logistic regression analyses were used to calculate odds ratios with 95% confidence intervals, for possible associations between FGM status and independent social variables. Age was treated as a continuous variable, while other factors were grouped into categories as tables show. All variables with $P < 0.1$ in the univariate model were included in the multivariable model.

Statistical analyses were performed using SPSS software.

Ethical permission for the study was given by the Ethics Board in Sierra Leone and the WHO Ethics Board (Review Committee).

9. Results

All participants agreed to be interviewed, and the four who refused genital inspection were excluded from the analysis.

A total of 554 females completed both interview and genital inspection. They were aged 12–47 with an average age of 22.4 years. The median age was 21 years, with girls in the 15–19 age range accounting for 44.58% ($n = 247$) of the sample.

Respondents were mainly urban dwellers, married, and from the Temne ethic group. FGM prevalence for the three largest ethnic groups—Temne, Mende, and Limba—is around 80%. The prevalence in the other ethnic groups varies, but due to small numbers, it is difficult to draw any conclusions from these (Table 2).

Although most participants had been to school, the majority had stopped school at the junior secondary school level, and slightly over a third had never been to school. Main occupations were housewives, traders, and students (Table 2).

On genital inspection, it was determined that 451 respondents had undergone FGM and 103 had not, giving an FGM prevalence rate of 81.4%. The average age at FGM was 12.6 ± 3.2 years (range 3–22 years). A total of 110 did not know their age at FGM (data not shown).

Table 3 provides results of univariate and multivariate logistic regression analysis for the outcome variable FGM. In both models, increasing number of previous pregnancies, rural residency, religion (Islam), being married, and illiterate are factors associated with higher prevalence of FGM. In the univariate model, there was an association between increasing age and FGM, but this was not significant in the multivariate model.

9.1. Forms of FGM. The form of FGM (using observed anatomical descriptions of genital alterations) and how these correspond to WHO modified typology are presented in Table 4. They show that 31.7% ($n = 143$) respondents had type Ib (removal of the clitoris with the prepuce); 64.1% ($n = 289$) had type IIb (partial or total removal of the clitoris and labia minora); and 4.2% ($n = 19$) had type IIc (partial or

Table 2: Sociodemographic characteristics among 554 women 14–47 years, Sierra Leone, 2010–2012.

Characteristic	No FGM *n* (%)	FGM clinically determined *n* (%)	All respondents
Total	**103**	**451**	**554**
Age			
<14	2 (25)	6 (75)	8
15–19	63 (25.5)	184 (74.5)	247
20–24	24 (18.2)	108 (81.8)	132
25–29	8 (10.9)	65 (89.1)	73
30–34	4 (5.9)	64 (94.1)	68
35–39	2 (8.7)	21 (91.3)	23
40–44	0 (0)	2 (100)	2
45–49	0 (0)	1 (100)	1
Residency			
Rural	56 (23)	187 (77)	243
Urban	47 (15.1)	264 (84.9)	311
Civil status			
Divorced			
Married	46 (12.2)	330 (87.8)	376
Never married	54 (32.3)	113 (67.7)	167
Other	1 (20)	4 (80)	5
Separated	1 (25)	3 (75)	4
Widowed	1 (50)	1 (50)	2
Ethnic group			
Fulah	0 (0)	29 (100)	29
Kissi	1 (33.3)	2 (66.7)	3
Kono	7 (28)	18 (72)	25
Koranko	5 (20.8)	19 (79.2)	24
Krio	2 (50)	2 (50)	4
Limba	13 (17.6)	61 (82.4)	74
Loko	2 (33.3)	4 (66.7)	6
Madingo	1 (10)	9 (90)	10
Mende	15 (20.5)	58 (79.5)	73
Susu	1 (12.5)	7 (87.5)	8
Temne	56 (19.1)	237 (80.9)	293
Yalonka	0 (0)	5 (100)	5
Religion			
Christian	51 (26.2)	144 (73.8)	195
Muslim	52 (14.5)	306 (85.5)	358
Other	0	1	1
Education			
Never been	19 (9.0)	193 (91)	212
Up to primary	11 (11.2)	87 (88.8)	98
Up to JSS	45 (29.2)	109 (70.8)	154
Up to SSS	23 (39)	36 (61)	59
Up to tertiary	4 (13.3)	26 (86.7)	30
Other	1 (100)	0 (0)	1
Occupation			
Farmer	0 (0)	67 (100)	67
Housewife	23 (13.5)	148 (86.5)	171
Student	53 (38.1)	86 (61.9)	139

Table 2: Continued.

Characteristic	No FGM n (%)	FGM clinically determined n (%)	All respondents
Trader	12 (9.9)	109 (90.1)	121
Unemployed	11 (28.9)	27 (71.1)	38
Other	4 (22.2)	14 (77.8)	18
Parity			
0	59 (24.2)	185 (75.8)	244
1–3	42 (17.7)	195 (82.3)	237
3+	2 (2.7)	71 (97.3)	73

Table 3: Results of univariate and multivariate logistic regression analyses for the outcome variable FGM.

	Univariate			Multivariable		
	OR	(95% CI)		OR	(95% CI)	
Age	1.10	1.05	1.14***	0.99	0.92	1.07
Number previous pregnancy	1.59	1.30	1.94***	1.41	1.03	1.93*
Residency	1.61	1.05	2.47*	1.98	1.21	3.22**
Ethnic group[a]	0.97	0.64	1.49			
Civil status married (Ref.)						
Single	0.31	0.20	0.48***	0.55	0.32	0.93*
Others	0.39	0.10	1.53	0.63	0.14	2.91
Religion Muslim (Ref.)	2.09	1.36	3.21**	2.09	1.28	3.39**
Education illiterate (Ref)						
Primary	0.75	0.35	1.60	1.00	0.45	2.20
Junior Secondary School	0.25	0.14	0.45***	0.48	0.25	0.92*
Senior Secondary School	0.16	0.82	0.33***	0.31	0.14	0.66**
Tertiary	0.68	0.22	2.15	0.97	0.30	3.12

*$P < 0.05$ **$P < 0.01$ ***$P < 0.001$.
[a]Ethnicity was tested both by each ethnic group and Temne compared to all others, both tests not significant.
All variables with $P < 0.1$ were included in the multivariable model.

total removal of the clitoris, the labia minora, and the labia majora).

Anatomical descriptions of alterations in vulva following genital mutilation show three combinations of cutting extent to be the most common (Table 5). These are "*clitoris absent, labia minora and labia majora present*"—referred to as Combination 1 ($n = 129$, 28.6% of all cutting combinations, type Ib)—"*clitoris absent, labia minora partially removed, and labia majora present*"—referred to as Combination 2—($n = 124$, 27.5% of all cutting combinations, Type IIb); and "*clitoris absent, labia minora absent, labia majora present*"—referred to as Combination 3 ($n = 149$, 33% of all cutting combinations, type IIb).

Combinations 1 and 2 are twice as likely to occur among those girls living in urban than among girls living in rural settings. Combination 3 had nearly equal numbers of girls from both rural and urban settings. Combination 3 seems favoured amongst the Limba ethnic group compared to the other types, whilst all combinations appear to be in similar numbers for the Mende and Temne ethnic groups.

9.2. Consistency between Self-Reported and Observed FGM Status. During interview, 81.0% ($n = 449$) of participants reported some type of FGM, and 105 reported they had not undergone FGM (19.0%, $n = 105$).

From the genital inspection, there was evidence of FGM among 81.4% ($n = 451$) of the women, and in 103 cases (18.6%), no evidence of FGM was found on inspection. This means that two women reported that they had not undergone FGM but were found to have undergone FGM on inspection.

9.3. Accuracy of DHS FGM Questions. The DHS questions on FGM were asked only of those participants who *reported* that they had undergone FGM ($n = 449$). All participants who reported that they had undergone FGM were found to have had some form of FGM on genital inspection, with slightly over 10% of the respondents stating for each question asked that they did not know what operation had been performed on the genitalia (Table 6).

Table 7 shows the results of observed anatomical description versus respondents' answers to DHS FGM questions. Most participants who said genital area had been pricked had had clitoris entirely removed (seven out of 12). Interestingly, four respondents out of the 12 who said that the genital area had been pricked had had operations on the labia majora.

Table 4: Forms and type of FGM derived from observed anatomical description of clitoris, labia minora and labia majora.

Combinations	Frequency per combination	Combination percentage (%)**	Equivalent to WHO typology	Type % of clinically determined FGM
Clitoris, labia minora, and majora all present	103		Uncut	
Clitoris partially removed with labia minora and majora present	14	3.1	Ib	31.7
Clitoris totally absent with labia minora and majora present	129	28.6	Ib	
Clitoris partially removed, labia minora partially removed, and majora present	11	2.4	IIb	64.1
Clitoris partially removed, labia minora absent and labia majora present	5	1.1	IIb	
Clitoris absent, labia minora partially removed, and labia majora present	124	27.5	IIb	
Clitoris absent, labia minora absent, and labia majora present	149	33	IIb	
Clitoris absent, labia minora, and majora partially removed	6	1.3	IIc	4.2
Clitoris absent, labia minora absent, and labia majora partially removed	13	2.9	IIc	
	554***	100		

**Taking 451 (the total number of respondents with FGM) as denominator.
***A total of 554 females completed genital inspection.

Participants reported overwhelmingly that flesh was removed from the external genitalia ($n = 391$). This answer, however, included a variety of different alterations to the genitalia, corresponding to WHO types Ib, IIb, and type IIc.

A total of five participants reported that the genital area was sewn closed. Observed genital alterations in these participants were all forms of type II, and none were of type III as the answer indicates.

10. Discussion

For the first time in Sierra Lone, and in this study, information on genital inspections is systematically recorded to determine the typology of FGM taking place. Also, by comparing self-reports of FGM status with clinically determined data on anatomical description, it is possible to make an assessment of the accuracy between self-reported and clinically observed FGM. Given that the questions on anatomical description that the participants answer are exactly those used by the DHS FGM module, this study also assesses the suitability of the FGM questions posed by DHS for determining the forms of FGM.

10.1. Limitations. One possible weakness of this study is that the respondents were the matched controls of fistula cases which had been collected for another study based on a matched case-control design. Therefore, the study's sampling procedures are not random, and we cannot state that our sample is representative to women in Sierra Leone in the sense of a random sample. We do, however, believe our sample gives a very good picture of the situation among women in reproductive age in the country.

We have approached healthy women coming for antenatal care in settings with good antenatal care coverage. Our respondents were selected based on matching women coming for fistula repair to the only two existing centres providing this form of care in the country. Women from all over the country and from all ethnic groups come to these centres. This is important, since ethnicity could have been a predictor of FGM practice in Sierra Leone [40]. The population in this study is more likely to represent girls and women in the population who are at risk to suffer from obstetric fistula. The respondents in this study are mainly from the lower wealth quintiles of Sierra Leone society, and the results do not represent girls and women in higher wealth quintiles.

In spite of the limitations, this study provides a sample that is as close to a representative sample that is practically possible to get and gives a very good description of the present situation among normal healthy women in reproductive age in Sierra Leone.

Our sample is not fully comparable with the SL DHS performed in 2008 [41]. More of our respondents come from urban areas than in the DHS (56% compared to 36%). We have more respondents from the Temne ethnic group (53% compared to 35%) and fewer from Mende (13% compared to 32%). These differences are results of the matching procedure to cases with fistula and reflect the sociodemographic characteristics of women with fistula.

10.2. FGM Prevalence and Sociodemographic Factors. The results on prevalence can provide insights of FGM practices that are taking place now. In this study, 81.4% of women had signs of FGM, indicating that FGM is still widely practised. This proportion is lower than previous studies

Table 5: Three most frequent combinations of anatomical description alterations versus sociodemographic factors.

	Combination 1 Clitoris absent, labia minora, and labia majora present Type Ib (n = 129)	Combination 2 Clitoris absent, labia minora partially removed, and labia majora present Type IIb (n = 124)	Combination 3 Clitoris absent, labia minora absent, and labia majora present Type IIb (n = 149)
Age at FGM			
2–4	2 (1.6)	1 (0.8)	0
5–9	12 (9.3)	15 (12.1)	10 (6.7)
10–15	74 (57.4)	43 (34.7)	48 (32.2)
15+	20 (15.5)	38 (30.7)	39 (26.2)
Do not know	21 (16.3)	27 (21.8)	52 (34.9)
Residency			
Rural	43 (33.3)	42 (33.9)	76 (51)
Urban	86 (66.7)	82 (66.1)	73 (49)
Ethnic group			
Fulah	10 (7.8)	9 (7.3)	6 (4.3)
Kissi	1 (0.8)	0	1 (0.7)
Kono	3 (2.3)	5 (4)	9 (6)
Koranko	5 (3.9)	7 (5.7)	5 (3.4)
Krio	0	0	2 (1.3)
Limba	6 (4.7)	19 (15.3)	30 (20.1)
Loko	1 (0.8)	2 (1.6)	1 (0.7)
Madingo	7 (5.4)	0	1 (0.7)
Mende	19 (14.7)	19 (15.3)	13 (8.7)
Susu	2 (1.6)	0	5 (3.4)
Temne	72 (55.8)	63 (50.8)	75 (50.3)
Yalonka	3 (2.3)	0	1 (0.7)
Religion			
Christian	37 (28.7)	48 (38.7)	47 (31.5)
Muslim	92 (71.3)	75 (60.6)	102 (68.5)
Neither Christian nor Muslim		1 (0.8)	0
Education			
Never been	62 (48.1)	44 (35.5)	68 (45.6)
Up to primary	23 (17.8)	24 (19.4)	30 (20.1)
Up to JSS	36 (28)	34 (27)	27 (18.1)
Up to SSS	7 (5.4)	11(8.9)	14 (9.4)
Up to tertiary	1 (0.8)	11 (8.9)	10 (6.7)

Table 6: Self-reported anatomical description (using DHS questions).

Anatomical description	Distribution—frequency (%)			
	Yes	No	Do not know	Total
Genital area pricked/nicked	12 (2.7)	373 (83.1)	64 (14.3)	449 (100)
Flesh removed	391 (87.1)	9 (2.0)	49 (10.9)	449 (100)
Genital area sewn closed	5 (1.1)	394 (87.8)	50 (11.1)	449 (100)

on FGM prevalence from Sierra Leone Demographic and Health Survey 2008 (SL DHS 2008) and Sierra Leone Multiple Indicator Cluster Survey 2010 (SL MICS 2010) of 93.1% and 88.3%, respectively [41, 42]. This may be because of selection bias caused by matching with fistula cases. This matching may have meant that the sample captured younger than older women attending clinics: 90% of the sample were 25 years old or less. Thus, the older women who are likely to have undergone FGM were no longer either attending ANC clinics [42] or not represented in this sample.

Previous studies in different settings have shown statistical significance between FGM prevalence and some sociodemographic factors such as age, religion, education, ethnicity, and place of residency [43]. In this study, in

Table 7: Observed anatomical description versus respondents' answers to DHS FGM questions describing operation performed on external genitalia: area pricked, flesh removed, or area sewn closed.

Anatomical description of clitoris, labia minora, and labia majora	Frequency (%)			
	Genital area Pricked	Flesh removed	Genital area Sewn closed	WHO type (frequency)
Clitoris, labia minora, and majora all present	—	—	—	—
Clitoris partially removed with labia minora and majora present	1 (8.3)	12 (3)	0	Ib (14)
Clitoris totally absent with labia minora and majora present	7 (58.3)	107 (27.4)	0	Ib (129)
Clitoris partially removed, labia minora partially removed, and majora present	0	10 (2.6)	2 (40)	IIb (11)
Clitoris partially removed, labia minora absent, and labia majora present	0	4 (1)	0	IIb (5)
Clitoris absent, labia minora partially removed, and labia majora present	0	111 (28.4)	0	IIb (124)
Clitoris absent, labia minora absent, and labia majora present	2 (16.7)	130 (33.3)	1 (20)	IIb (149)
Clitoris absent, labia minora, and majora partially removed	2 (16.7)	4 (1)	2 (40)	IIc (6)
Clitoris absent, labia minora absent, and labia majora partially removed	0	13 (3.3)	0	IIc (13)
Total	12 (100)	391 (100)	5 (100)	All types (554)

the univariate analysis, FGM was significantly associated with age, but this difference was not significant in the multivariate analysis. This may be because age was treated as a continuous variable in the regression model, thus causing a loss of power in the analysis.

An examination of subgroups shows a lower FGM prevalence (74.5%) in the 15–19 age range than any other age range, and this figure is close to the 2010 SL MICS prevalence of 70.1% [42] and the 2008 SL DHS prevalence of 75.5% for the same age range [41]. This proportion may be a reflection of the continued and widespread practice of FGM even in the youngest generation.

However, if the FGM prevalence for the 15–19 age range is compared with the 15–19 age range in other high FGM prevalence countries in West Africa (the Gambia [44], Guinea [45], and Mali [46]), the FGM prevalence for this age range is lowest in Sierra Leone [41]. These results may suggest an emerging abandonment of FGM, and more studies will be needed to investigate this phenomenon in Sierra Leone.

More girls undergo FGM in the 10–15 age range than any other age range, although there were more girls who were aged between 10 and 15 years during this study who had undergone FGM when they were between 5 and 9 years of age. The next largest group for age at FGM were the Do not Knows ($n = 110$). If we assume that the "*Do not Knows*" did not know when they underwent FGM because they were too young to remember, these results might be an indication that the age at which FGM is carried out now is lower than previously recorded [40].

Our results show a significantly higher prevalence of FGM among Muslims compared to Christians (OR 2.1). Even though the groups differ, one can question whether religious belief is actually contributing to or protecting against FGM. A vast majority in both groups still practice FGM, 85% among Muslims and 74% among Christians. In fact, a study in Kersa District in Ethiopia where type of genital cutting was type I (79%) or type II (59%) found a statistical significant association with the Christian religion ($P = 0.003$) [47], whilst a study in southwest Nigeria found women with FGM were found to significantly belong to one Christian religion (Pentecostalism) [48]. From other previous studies and this one, we see that both Christians and Muslims in large proportions practice FGM, even though it is known that FGM is not mentioned in any of the Holy Books. Nevertheless, it would appear that religious belief plays a very important role in the continuation of the practice [7, 30, 49], and the role of religious belief and religious leaders should be considered in interventions against the practice.

In our study, low education is associated with FGM. This association has also been found true in a study in Ibadan Nigeria among 453 women at antenatal clinics which found that illiterate women were significantly more often positive towards FGM [50]. A similar finding was made in Kersa, Ethiopia, between high FGM prevalence and no education among 858 females of reproductive age [47], and in southwest Nigeria, women with FGM were likely to have received only primary education [48]. Most likely this association has to do with general knowledge and exposure to new ideas and being less dependent on traditional social values and norms.

Interestingly, in this study FGM is associated with previous pregnancies and being married. FGM is sometimes thought of as a prerequisite for marriage [26, 27], which may be one explanation, but these factors may also be a result of coming of age [51, 52]. A cross-sectional study of 1,107 women at three hospitals in Edo State Nigeria noted similar significant associations in delivery characteristics between women who had undergone FGM and those who had not. Women with FGM were younger at first delivery (nearly three calendar years younger, with P value < 0.0001) than women without FGM [48].

In the Sierra Leonean context, further research might be warranted that examines whether FGM, a social-cultural factor, influences maternal mortality. A study examining the extent of contributions of sociocultural factors to maternal mortality in seven local government areas in Edo South Senatorial District found that whilst the most relevant sociocultural variables were early marriage/early child bearing, FGM was the third contributing factor after women's decision making power and access to traditional obstetric care services which was shown to significantly affect maternal mortality ($P = 0.001$) [53].

10.3. Forms of FGM (Extent of Cutting). One of the main contributions of this study is the measurement of the extent of cutting. Types I and II account for all forms of FGM found in this sample, with type II accounting for 68% of all FGM. We found no evidence of type III from the genital inspections, although 1.1% of the respondents reported that the genital area was sewn closed. On the other hand, this is much less than 2.6% and 14.7% in 2008 SL DHS and 2010 SL MICS, respectively [41, 42]. A possible explanation for the reported forms of type III might be that the question was not understood properly.

It would appear that there has been little or no change in the forms of FGM practised in Sierra Leone; as in our study, we observed clitoridectomy—where the clitoris is partially removed or completely absent and is type Ib according to WHO FGM classification—in almost one-third of all observed FGM. This finding is similar to a survey conducted in 1985 by Koso-Thomas amongst 300 women in the western area of Sierra Leone where 39% ($n = 105$) had this form [40]. The results are also similar to a study in Nigeria where partial or total removal of clitoris was found in 32.6% of all respondents examined [30]. Similarly in a study which observed type of FGM and possible associated gynaecological and delivery complications in Mali, type Ib was identified in 21% of FGM cases [23]. Our results are however different from observations in Burkina Faso by the same study where type Ib was found in 56% of the cases [23].

In our study, we observed type IIb, in 52% of cases, which is close to the 60% observed by Koso-Thomas [40], and similar to the results from a cross-sectional community survey in the Gambia where 56.6% of respondents examined had type IIb cutting [19]. On the other hand, in Nigeria, the prevalence of this form was only 11.5% [30].

The proportion of type IIc cutting, where the labia majora are also affected, in addition to the clitoris and labia minora, is relatively low in our sample. This type of cutting appears to be quite unusual, not only in the Sierra Leonean context but also amongst other neighbouring high FGM prevalence countries in West Africa [44–46].

"Sewn closed" according to the DHS describes when the tissue around the vagina is stitched leaving a small opening for the passage of urine and menstrual blood. It is referred to as type III according to WHO FGM classification and is the most extensive form of FGM. In our study, we do not find any evidence of type III cutting, although three cases (1%) of type III were observed from clinical examination by Koso-Thomas [40]. In the 2008 SL DHS, 2.6% of the respondents reported that the genital area was sewn closed [41] and in the 2010 SL MICS [42] 14.2%. It is hard to make sense of the 2010 SL MICS result, particularly as self-reports were not verified by inspection. Generally, however, our findings as well as those of 2008 SL DHS and Koso-Thomas seem to indicate that type III is not a traditional form of FGM practice in Sierra Leone [40, 41].

10.4. Consistency between Self-Reported and Clinically Observed FGM. Another interesting contribution of this study is the assessment of consistency between self-reported and clinically observed FGM status. The questions used to ask women about their FGM status are identical to those used in the 2008 SL DHS [41]. The level of agreement between the responses and the results of the genital inspections was high—99%. Although the study shows that the vast majority of women accurately reported their FGM status (FGM or not), the level of accuracy must be qualified by the clinical and national context in which the study took place. It is possible that women attending the clinic were more likely to accurately state their FGM status, given that they knew they were to undergo genital inspection.

On the other hand, it could be argued that in the national context of no legislation or public condemnation against the practice, women had no reason to falsely report their FGM status. Thus, this high agreement is quite likely in a country like Sierra Leone where there is public support for the practice of FGM. Although this may have resulted in over reporting of FGM status compared to a country where there was legislation (punitive) against the practice, there was no evidence of over reporting in this study.

10.5. Using FGM Questions Asked by the Demographic and Health Surveys to Determine FGM Status and FGM Form. The responses received to the question whether "*Genital Area Pricked*" does not appear to correspond to any genital alteration that was observed. The least genital alteration observed in this sample was partial removal of the clitoris with the labia minora and labia majora intact.

Participants seemed to be clear that "*Flesh was removed*" from the external genitalia ($n = 391$) as most answered this question correctly. Flesh removal appears to have been more extensive in this than any other category as more organs (clitoris and labia minora) were *totally absent* than *partially removed*.

Given the small numbers of respondents who said that the "*Genital area was sewn closed,*" it is difficult to interpret what this result might mean. However, we note that in two of the five cases in this category, the labia majora had been partially removed.

We interpret the results of anatomical descriptions from the DHS questions as insufficiently precise to determine the form or extent of FGM. The DHS questions are not useful because the answers do not provide enough information on the type of operation that has been performed on the external genitalia (e.g., flesh removed). Those DHS questions which ask about the type of operation do not specify which external genital organ is affected by the operation (e.g., genital area pricked, genital area sewn closed).

Even if participants accurately report that "flesh was removed" from the genital area, it is not possible to distinguish between types I and II using this response. From a positive response to "genital area sewn closed," it should be possible to determine if type III is present or not. The results of this study, however, indicate that question is not necessarily understood like that.

The questions appear to be leading, directing the respondents' answer from the question, and giving rise to a *Yes/No/Do not Know* response which lacks the description needed to capture the nuances of cutting that takes place in countries like Sierra Leone where various combinations of types I and II only predominate. As a result, the information obtained from the DHS responses cannot be translated into different forms of FGM.

It may be more valuable, for example, to use a diagram of the external female genitalia in these settings and ask the respondents to indicate what operation was performed and what happened to the organ instead of asking the DHS questions.

Most of the respondents said that when they underwent FGM, their genital area was not pricked, that flesh was removed from their genital area, and that their genital area was not sewn closed, which is a correct description, even though it cannot be used to understand the extent of cutting. Anyway, the women appeared to have a general idea about what had happened to their genitals even though they could not name the exact part of the genitalia which had been removed.

Anecdotal evidence suggests that respondents would assume from watching the operation being conducted on others in the Bondo Bush, that the same operation was performed on them. Traditionally, the girl is taken to the Bondo Bush for the night. Early in the morning, her face is tied with a piece of white cloth, and she is led to where the operation is carried out. Most girls have no idea of what will take place before this time, nor do they actually see what is removed (*Personal communication with Director, Inter Africa Committee, Sierra Leone, Laurel Bangura, June 2012*). It has also been suggested that "the women do not know during the process but can only say after they have had the opportunity to watch the operation being performed on someone else" (*Personal communication with Director, Amazonian Initiatives Movement, Lunsar, Sierra Leone, Rugiatu Turay, June 2012*).

11. Conclusion

Evidence from this study suggests that forms of types I and II are the most prevalent types of FGM occurring in Sierra Leone today.

Results from this study suggested a declining prevalence of FGM in younger age groups. More studies are needed to understand why these changes may be occurring. These studies should also examine the meaning of the practice to communities in order to encourage the abandonment of the cutting aspect of the tradition.

As the responses on self-reported status of FGM using DHS questions provide an accurate indication of FGM status (yes or no), and it may be possible within certain contexts in Sierra Leone to use self-reporting responses as a proxy measurement for FGM status.

From self-reported anatomical descriptions using DHS questions, however, it is not possible to determine the type of FGM in Sierra Leone. To elucidate the different forms and extent of cutting, a different type of tool is required to capture the anatomical extent of FGM, which would relate more closely to the types of morbidity and complications that might present as a consequence of FGM. To verify the anatomical extent of cutting and type of FGM, it is necessary to perform studies including genital inspection.

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Research Article

Midwives' Experiences in Providing Care and Counselling to Women with Female Genital Mutilation (FGM) Related Problems

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Aim. The aim of this study was to elucidate midwives experiences in providing care and counselling to women with FGM related problems. *Setting*. The study was conducted at a maternity clinic in Hargeisa, Somaliland. *Method*. A qualitative, inductive study were performed with eight midwives living in Somaliland. The interviews had semi-structured questions. Content analysis was used for the analysis. *Findings*. The main findings of the present study were how midwives are challenged by culture and religion when providing FGM counselling. The most prominent challenge is the perception that FGM is an important part of the culture and from this point of view the midwives work is apprehended as interfering and subverting the Somali culture. Having personal experience of FGM emerged as a benefit when counselling women. *Conclusion*. There is a contradiction between the professional actions of performing FGM despite a personal belief against FGM. Midwives as a professional group could be important agents of change and further research is needed about the midwives role in this process.

1. Introduction

Female genital mutilation (FGM) is currently practiced in 30 African countries in the sub-Saharan and northeastern regions and in some countries in Asia and in the Middle East [1].

FGM is a serious public health problem and a global concern. It is estimated that around 140 million girls and women worldwide have undergone FGM and that at least two million girls are annually at risk of undergoing some form of the procedure. FGM is interfering with one of the most intimate aspects of a woman's life and is a fundamental violation of women's human rights [1].

The age when the primary FGM is performed varies depending on ethnic groups and geographic location. In Somalia and Sudan, FGM is often performed at the age of 5–10 years. In other areas, the procedure is undertaken on baby girls (Yemen) or at puberty (Sierra Leone) [2–4]. The motives of FGM are complex and vary between different contexts and are surrounded with myths and taboos [5]. Although the origin of FGM is concealed, the practice survives today and it is a culturally embedded phenomenon. Among those who practice it, FGM is often performed due to tradition, cultural conformity, or and religious reasons. It is thought to hamper women's sexuality and preserve honor and virginity, thus enhancing their marriageability and marking ethnic boundaries [1, 6–9].

Since FGM practices differ greatly between ethnic groups and geographic regions, WHO has classified the predominant types of mutilation into four categories. *Type I, clitoridectomy*, with partial or total removal of the clitoris or only the prepuce (the fold of skin surrounding the clitoris); *Type II, excision*, with partial or total removal of the clitoris and the labia minora, with or without excision of the labia majora; *Type III, infibulation*, with narrowing of the vaginal opening through the creation of a covering seal. The seal is formed by

cutting and repositioning the inner, or outer, labia; *Type IV*, *other* comprises all other harmful procedures to the female genitalia for non-medical purposes, for example, pricking, piercing, incising, scraping and cauterizing the genital area [10].

The categories are helpful in the effort to bring uniformity to the research on FGM. Types I and II are the most common forms, accounting for approximately 80%, while infibulation (Type III) is found around 15% of the cases worldwide [10]. All types of FGM have immediate and long-term health consequences depending on the type performed, the expertise of the circumciser, the hygienic conditions under which it is performed, and the amount of resistance and general health condition of the girl/woman undergoing the procedure [9, 11–13]. The health consequences are numerous, ranging from severe pain and bleeding to risk of infection which may result in shock and death. Most complications are reported in relation to the most severe form of FGM, infibulation [14–17].

The highest prevalence of FGM has been reported in Somalia and Djibouti where 98% of all women have undergone some form of the procedure [18–21]. In Sudan, Somalia, and Eritrea, the most severe form, infibulation, has the highest prevalence [20–23]. FGM is a deeply rooted tradition in the Somali culture in Somaliland, and it is a difficult practice to monitor due to its close link to culture and tradition and because it concerns an intimate aspect of women's life. FGM is deeply embedded in society, and its elimination requires a clear understanding of the cultural perceptions and beliefs it feeds on. Old traditions as FGM are hard to discard especially when they are culturally rooted. However, recent years awareness campaigns against the practice seem to have resulted in that more Somalis are questioning the tradition of infibulation [13].

In 2009, Somalia had a maternal mortality of 1.200 per 100.000 live births. In a report from UNFPA (2011), Somalia was mentioned as one country who needs to dramatically scale up the workforce of midwives to be able to reduce the maternal mortality. Midwives are a core group of professionals who meet women in different stages and needs during their reproductive age. International studies have looked upon ethical dilemmas among health care providers working in reproductive health services. FGM has been recognized to create difficult challenges from an ethical and legal perspective [24, 25]. Placed between the requests from families for performing FGM on the little daughters and the knowledge that FGM may cause lifelong harm to their health, midwives may find themselves in difficult, ethical dilemmas [26]. The aim of this study was to elucidate midwives' experiences in providing care and counselling to women with FGM related problems.

2. Study Setting

The network against Female Genital Mutilation in Somaliland (NAFIS) is an umbrella nongovernment organization (NGO) and consists of 19 local NGOs from the different regions of Somaliland. NAFIS aims to minimize the consequences of and eventually eradicate all kinds of FGM from Somaliland. Since its establishment in 2006, NAFIS has worked with policy advocacy, sensitization workshops, training programs, research, and awareness raising campaign about the harmful effects of FGM. In 2011, a Support Center was established by NAFIS in the capital Hargeisa to meet the need for maternity clinic in the outskirts of the town and serve a poor area in an IDP (internally displaced people) camp, mainly consisting of minority Somalis. Somaliland is a self-declared republic in northern Somalia at the horn of Africa. It has its own democratically elected government and public institutions and has witnessed relative stability for the last two decades. It is not internationally recognized.

Parallel with the services provided at the Support Center, NAFIS organizes workshops and community dialogues in the catchment area of the Support Center. In meetings with local women's groups, religious leaders, village health committees, and other local institutions, NAFIS informs about the health consequences of FGM and initiates dialogues on FGM in Islam, on the rights of girls and women for physical integrity, and on the changing cultural and social context of FGM in their own communities.

2.1. Study Design. Due to the scarcity of studies on FGM in Somaliland and to the delicate and intimate nature of the problems dealt with, we chose an exploratory qualitative research design, based on interviews with midwives. The criteria for selecting midwives for the interviews were that they had training on and experience of care and counselling of women with FGM related problems. Using convenience sampling, we selected all five midwives who worked at the Support Center and were trained by NAFIS in FGM related care and counselling. Three additional midwives who had received the same training but worked in another clinic in Hargeisa were also asked to participate. The midwives were briefed on the purpose of the study and assured anonymity. They were told that they could decline or interrupt the interview at any moment. None declined and all completed the interview. The five-member research team representing nursing/midwifery and social sciences from Somaliland and Sweden together designed an interview guide which consisted of semistructured questions covering the main areas that we wanted to cover and some open questions (Appendix B). One of the research team members, a trained female Somali social scientist with long experience of qualitative interviewing and deep knowledge of FGM issues (Amina Mahmoud Warsame), conducted a pilot study including three interviews to explore issues of particular importance to the midwives. Questions concerning the "turning point," that is, why and when they had changed their mind regarding FGM, emerged as one of such issues. Another was the potential contradiction felt by the midwives when counselling women who were positive towards FGM. The interview guide was then revised to include the themes emerging from the pilot study.

The eight interviews were conducted by Amina Mahmoud Warsame in Somali. Each interview lasted around one hour. Saturation was found after interviews with six midwives; another two interviews were performed to confirm the saturation. The interviews were tape-recorded with the permission of the midwives, transcribed verbatim, and

translated into English. They were coded to ensure confidentiality [27]. Two trained Somali research assistants made the translations which were then checked by Amina Mahmoud Warsame who is fluent in English. The true meaning of some concepts and expressions were difficult to translate and are therefore presented in the text in Somali (italics) and given an approximate English translation.

2.2. Data Analysis. The findings were analyzed using qualitative content analysis [28]. The complete transcribed narratives were first read independently by all team members to obtain a sense of the whole. The material was then assigned meaningful units, coded, and discussed thoroughly within the team to reach agreement on patterns emerging in the narratives and enhance trustworthiness. A number of subthemes were identified and were brought together under three main themes, each one referring to a descriptive level of content and thus expressions of the manifest content of the text. In the presentation of findings, we follow the midwives terminology. Thus, sunna and circumcision/pharaonic are used instead of mutilation. To enhance both trustworthiness and credibility, each theme is enriched with quotations to remain close to the narratives [29].

3. Background Characteristics

See Table 1.

4. Findings

4.1. Midwives' Views on FGM and Plans for Own Daughters. Three of the midwives were married and had children; the others were unmarried. Seven of them were infibulated, while one, a 24-year-old unmarried woman, had had sunna performed. All midwives felt that infibulation was a harmful practice, describing it as awful, evil, painful, and terrible. Ambivalent feelings towards having their daughters undergo FGM emerged. Only one of the midwives said clearly that she would "do nothing" to her daughter. Most of the others considered performing sunna, "a mild sunna," only piercing, or "make it bleed" (Table 1).

Their midwifery experience ranged between around one year and up to 20 years. All midwives had been trained in giving care and counselling to women with problems related to FGM. They all felt confident in giving counselling but expressed a need to have more training.

Analyzing the midwives' narratives of their work with care and counselling of women at the clinic, three main themes emerged: (1) midwives' encounters when providing FGM counselling, (2) benefits of own FGM experiences when counselling women, and (3) midwives' views on challenges and problems in future anti-FGM works. The themes were building on subthemes which sometimes were overlapping (Table 2).

4.2. Midwives' Encounters When Providing FGM Counselling

4.2.1. Midwives Feeling Confident and Supporting. The counselling provided was given both in groups and individually, depending on the needs and condition of the women. All midwives felt confident in giving counselling related to FGM. They described however that they would like to increase their skills through further studies and training in public health to be able to deal with new knowledge and development in the field of FGM. The confidence the midwives expressed was enhanced by the perception that the society views their work as honorable and beneficiary. In particulary people who had gained knowledge on harmful health consequences associated with FGM considered the work of the midwives as positive, and the midwives felt that they were supported by this group.

> *"Many people who understand the problems of FGM see our work as a good service, as they acknowledge its problem and the pain during the circumcision, at the time of the wedding and during child birth" (Midwife 47 years)*

4.2.2. Midwives Being Challenged by Culture and Religion. The obstacles the midwives faced in their work of giving care and counselling to women experiencing FGM related health problems were closely linked to cultural beliefs, tradition, and religion. The most prominent obstacles appeared to be connected with the perception that FGM is an important part of the culture. The midwives had been told that they were interfering in family affairs and subverting the Somali culture. According to the midwives, it is women who are unaware of the health consequences of FGM who believe that midwives working with counselling are attacking their culture. Parents stated that FGM is their culture and that they want their daughters to continue the practice.

Both culture and religion were mentioned as arguments against FGM counselling. That abandoning FGM will cause Allah's anger was a belief the midwives could meet in their work with counselling, expressed as "*caado la gooyaa, cadho Allay leedahay*" (literally meaning that abandoning a tradition can cause God's anger). A major challenge that the midwives encountered was women having "superstitious beliefs" about FGM.

> *"Some women simply say that they will do the same type to their daughters without knowing the consequences. Some mothers say that they will never expose their daughters to the practice while there are others who say that if girls are spared from infibulation and set free without preventive stitches, how can they be protected?" (Midwife 47 years)*

4.2.3. Women's Delay in Seeking Health Care. It was an overall impression emerging from the midwives' narratives that most women endure and hide their health complications for a rather long time. Reasons given behind this were lack of money, lack of knowledge, and/or being shy to talk about their problems. Women were said to feel ashamed of publicly confessing their problem. The midwives described how it often requires lengthy explanations and counselling regarding FGM and its health consequences before a woman

Table 1: Background characteristics and views on the eight midwives participating in the study.

Midwife no.	Age	Type of FGM	Civil status	Education	Children	Daughters and FGM	Perception of FGM	Working years as midwife
1	25	Type III	Single	Sec. school Nursing school 3 years	No children	Will not perform FGM or sunna	"Awful, evil practice"	7 years at Magan
2	47	Type III	Married	Sec. school Nursing school 1 year	2 sons, 2 daughters	Sunna done on both daughters at 7 Father advised against	"Harmful practice" (infib)	26 years at Daami
3	24	Sunna	Single	Sec. school Nursing school and midwifery	No	"I will do sunna for her". Might leave her, or just make bleeding	"I do not like pharaonic circumcision.	3 years at Daami MCH
4	28	Type III	Single	Sec. school Nursing school and midwifery	No	No	"Awful practice" (infib)	10 months at Magan
5	39	Type III	Single	Left school at grade 5. Some midwifery training	No	"I will not do anything to them or have piercing performed of clitoris to make it bleed"	"I have bad memories of it"	Several years at Muhammed MCH
6	25	Type III	Single	Sec. school Midwifery training	No	"I will do sunna on my daughters"	"I see it as one with many painful difficulties"	1 year at Daami MCH
7	42	Type III	Married	Sec. school Nursing school	5 sons, 2 daughters	Yes, sunna on both at the age of 8	"Sunna is almost as being untouched"	20 years at Daami MCH
8	29	Type III	Married	Sec. school University 4 years Midwifery 2 years	1 son	Mild type of sunna, piercing of clitoris, or leave untouched.	"Now I know it has only problems but no benefits" (infib)	2 years at Magan Several years at a different hospital before that

Table 2: Data analysis.

Themes	Subthemes
Midwives' encounters when providing FGM counselling	Midwives feeling confident and supported Midwives being challenged by culture and religion Women's delay in seeking care
Benefits of own FGM experience when counselling women	Sharing a common experience Changing opinions regarding FGM
Midwives' views on challenges and problems in future anti-FGM work.	Female decision makers still performing FGM in spite of being against it Importance of reaching out with information about virginity and religion

can tell the truth of her problem. Some women were said not to come to the clinic because they are afraid or they do not want their problems to be known.

To be able to provide assistance for women seeking care, the midwives pointed out the importance to understand the women's perception and knowledge and by so building their confidence and gaining their trust. According to the midwives, it is the poorest women who suffer the brunt of the problems related to FGM; they mostly hide the pain as a result of no access to doctors and lack of money to pay the bill or to buy medicine. Some midwives had met women suffering from their problems between 10 to 30 years without seeking care.

> *"As a rule the women do not seek help as soon as they experience the problems" (Midwife 28 years)*

One midwife with more than 20 years of working experience said

> *"They think that the problem is unique to them" (Midwife 47 years)*

> *"Both of them were hiding it until the time that they are giving birth and they could not hide it any more" (Midwife 39 years)*

4.3. Benefits of Own FGM Experience When Counselling Women

4.3.1. Sharing a Common Experience. The midwives that had undergone infibulation had the procedure done at a young age. In their present work, they all perceived this experience as positive. They felt accepted and felt that the patients were listening to them knowing that they have had the same experience, both from procedure and often from personal experiences of FGM related problems. A strength of being circumcised yourself was that they could relate to the women and understand their problems since they have the same "cutting of the genitals."

> *"Yes, I tell the women that I am like them and I understand their problems. Since some of the women are very shy, they feel confident when I tell them that" (Midwife 42 years)*

> *"We are in the same boat. The women can also guess that I am circumcised in the same way as them and perhaps that can be positive in the sense that deep down they know I can understand what they are feeling and relate to them better" (Midwife 29 years)*

4.3.2. Changing Opinions regarding FGM. Personal experience, health education, and listening to religious leaders are reasons given by the midwives as to why they have now rejected and abandoned infibulation. Most of the midwives described that they have gone through a process when changing their minds regarding FGM. They described different reasons and experiences that had led to the moment where a change of mind had occurred. Religion and health consequences were repeatedly mentioned as reasons. Their reasons were also based on their own experience of physical and psychological suffering related to their FGM and consistent with an understanding that FGM is not based on Islam. Most of the midwives expressed opinions concerning circumcision/infibulation as being an awful, evil, and harmful practice with no benefits.

Concerning their own circumcision, it was regarded as something that has already happened and could not be undone. They concluded that focus now should be to save girls from the same fate. For example, one midwife explained how she was first happy about the upcoming event of being circumcised but how after the circumcision she had urine retention and the stitches tore open resulting in a second infibulation. She suffered from recurrent infections and painful wedding night and now perceives FGM as harmful.

A newly educated midwife said

> *"Religion does not allow anything to be cut. There is no xaaraan (unclean) flesh in the body" (Midwife 39 years)*

> *"I see circumcision as something with many painful difficulties. It is associated with pain and problems such as painful menses, cutting all the time, when a girl marries and when she is giving birth" (Midwife 25 years)*

4.4. Midwives' Views on Challenges and Problems in Future Anti-FGM Work

4.4.1. Female Decision Makers. When it comes to who decides whether to perform FGM on girls, all midwives state that it is first and foremost the mother in the family. From the midwives' interviews it emerged that their own mothers and grandmothers adhered to the practice of FGM, believing it was a cultural heritage based on religion and that circumcision was perceived as something good for the women. The mother and grandmother in a family propose the idea, and the father pays the practitioner. The fathers could have a say regarding if and what type of FGM to perform, but the mothers exert a strong influence on the decision.

> *"It is the mothers who are queens when it comes to taking the decision. Even if the father does not want the daughter to be circumcised the mothers find ways to do it" (Midwife 39 years)*

> *"My mother hid my circumcision from my father and did it secretly as she knew that he disapproves of FGM" (Midwife 28 years)*

However, if there are different opinions regarding performing FGM, it appears to be the father who takes the final decision. Other members of the family can try to influence the decision, but their impact is minor.

4.4.2. Still Performing FGM in spite of Being Against. A contradiction emerged among the midwives between professional action and personal beliefs towards FGM. The same midwife who was personally against FGM still performed mild forms of FGM on her girl relatives to satisfy her mother and grandmother. Similar stories came from several midwives performing sunna type of circumcision, while at the same time trying to convince their families not to perform infibulation, but rather sunna.

Difficulties in suddenly abandoning the practice were mentioned as one explanation of why they were still performing FGM. Another reason given was the pressure coming from young female relatives who expressed a wish to be infibulated as their friends had been. Ambivalent feelings towards having their daughters undergo FGM emerged. Among the midwives' daughters, it ranged from some who already had sunna performed to either perform sunna or piercing of the clitoris, or maybe to leave them untouched. Nevertheless, the midwives expressed a belief that each generation will be better than the preceding one and that even sunna will vanish with time.

> *"I did a very mild type for my nieces" (Midwife 25 years)*

> *"Small girls like to do what their peers are doing and FGM is not an exception" (Midwife 47 years)*

> *"I do not like to change Allah's creation" (Midwife 28 years)*

4.4.3. Importance to Reach Out with Information about Virginity and Religion. One crucial factor that emerged from the midwives' narrations regarding the abolition of FGM was the importance to reach out with the message that virginity is not synonymous with infibulation and that infibulation is not virginity. Some of the midwives stated that virginity is "God made." To achieve abolition of FGM and make it sustainable, religious leaders have to be involved in information campaign regarding FGM, declaring that it should be totally abandoned. Many people get together for Friday prayers and this was mentioned as a good opportunity to spread information.

Other important interventions described were visiting schools to inform young girls about the harmful effects of FGM. Housewives that mostly stay at home and have little social interaction can be reached by house-to-house awareness campaigns. The midwives stressed the importance to reach those who still accept FGM and are unaware of the lifelong complications that follow the procedure. It emerged from the midwives that previously it was taboo to discuss FGM but, after improved education and awareness campaigns by civil society organizations, this has changed. As a result, there are even some practitioners who now refuse to perform infibulation even though they are being offered money to do it. However, the midwives emphasized that there are still possibilities to have infibulation done by going to an old lady who never had awareness raising or information on the issue.

Almost all midwives talked about the need of interventions to achieve a sustainable change in FGM practices through providing the practitioners with alternative jobs and income. Other means mentioned were distribution of printed stickers with cultural and religious slogans to be posted on walls along main roads and other popular places. Some midwives suggested having a police unit to follow up the practitioners and advice people to report those who perform it.

> *"Intensive information must be disseminated on the issue of virginity in the sense that virginity is God made and not synonymous with the stitching of the female organ" (Midwife 42 years)*

> *"First it is women who hold the key to ending the practice" (Midwife 24 years)*

> *"Traditional birth attendants should be stationed in mother and child centers to convince people that they have abandoned the practice" (Midwife 28 years)*

> *"For FGM to stop there is also a need for alternative employment to old women who do pharaonic circumcision" (Midwife 47 years)*

5. Discussion

The aim of this study was to elucidate Somali midwives' experiences in providing care and counselling to women with FGM related problems. This study revealed that the midwives are challenged by both culture and religion in their work with FGM related counselling. The most prominent challenge is the perception that FGM is an important part of the culture, and, from this point of view, the midwives' work is apprehended as interfering with and subverting the Somali culture. A belief that abandoning FGM will cause Allah's anger also emerged as a challenge for the midwives. A clear message from the midwives was the importance to reach out with information regarding virginity and religion. Virginity is "God made" and not synonymous with infibulation; this message was seen as vital in order to reach abolition of FGM. Another important step to make abolition sustainable was that religious leaders have to be involved in the awareness campaigns. Religious leaders have a strong position in the society and can therefore have a great impact on changing traditions such as FGM.

Despite the challenges, all midwives felt confident in giving FGM counselling mainly due to the fact that they also felt appreciated by many in the society who saw their work as honorable.

However, the midwives in this study expressed a need to have a deeper knowledge to perform counselling. Strengthening the competence of the midwives has been recognized internationally to improve the reproductive health care for women. According to Miller et al. [30], training health care providers on communication skills is one way to improve the quality of care and counselling. Further training will encourage and empower midwives and give them useful tools in their work with counselling to and care of women affected by FGM. Together with awareness campaigns, this can increase the impact of improved skills and help to change the perception of the community on both health implications and myths associated with FGM.

Several different ways to conduct campaigns were mentioned, such as going to schools to inform girls about the harmful consequences, door-to-door education to reach housewives, and the use of media. Our results from this study clearly indicated that the mothers had the power to take the decision regarding FGM. The midwives described the mothers as queens in taking decision and also consequently being the key to ending the practice. Another important factor for achievement of sustainable change towards the abolition of FGM is to provide the practitioners with alternative jobs and income. This is in line with the views of Asekun-Olarinmoye and Amusan [31] claiming that practitioners will not stop performing FGM unless they receive an income equivalent to what they now earn from the practice.

Shell-Duncan et al. [32] found in their study in Senegal and Gambia a significant change in the location of circumcision, the degree of celebration, and the age when circumcision occurs, but no change in the type or degree of cutting. In our study, all midwives claimed that they reject infibulation. However, some say that they will circumcise their future daughters and some claim that they will leave them untouched. Difficulties to suddenly abandon the practice of FGM were mentioned as one reason for why some of them were still performing sunna type of circumcision. This ambivalence gives an insight into the complexity of the practice.

In this study, personal experience, health education, and information from religious leaders emerged as the main reasons behind the midwives' change of opinion regarding

FGM. They described how the process of changing opinion built on their own negative personal experiences of FGM, consistent with an understanding that FGM is not based on Islam. When evaluating or measuring behavior change in regard to FGM, statements of intention not to cut future daughters are commonly used. Whether these statements show an actual change in behavior or indicate a change in attitude depends on the validity of using public statement as an indicator of personal behavior. Motivation to change is influenced by the balance between perceived benefits and perceived risks. Whether the midwives will show an actual change in behavior towards the circumcision of their daughters, or indicate a change in attitude, remains to be seen. Nevertheless, abandoning infibulation is one step in the direction of abolishing FGM. A crucial stage in the behavioral change process to move away from FGM is the maintenance of a decision [33]. In this stage, midwives have an essential role to support women in having nontraditional perception of FGM and to encourage their endeavors to abandon this harmful tradition.

Based on these findings, more knowledge is necessary concerning how midwives can be supported to provide high physical and psychological care for girls and women suffering from complications of FGM and, not least, how they can resist requests to perform FGM.

6. Limitations of the Study

Several aspects have been taken into consideration to increase the trustworthiness of this study. It might be argued that the interview language could have been a limitation due to the need to translate it into English with possible loss of words and/or change of meaning. However, in order to avoid misunderstanding and to enhance the validity of the translation, the conductor of the interviews read all of the translations, as well as listening to the tapes, to confirm the correctness of the translations. In addition, a strength of having a native speaker conducting the interviews is that it reduces the risk to create a barrier in the contact when interviewing someone about a sensitive issue such as female genital mutilation. A possible information bias should be considered; all interviewed midwives were working with care and counselling of women affected by FGM and trained by NAFIS. Asked about their personal opinion concerning FGM, they might have felt uncomfortable to reveal positive feelings or attitude towards FGM if they had such feelings. This possibility was discussed between the interviewer (Amina Mahmoud Warsame) and the senior midwife at the center, who saw the risk for information bias as very limited.

The small study sample could be seen as a limitation as the findings are not generalizable; however, that is not the aim within qualitative research, but rather it is to explore in depth how people perceive and experience the issues concerned.

7. Conclusion and Recommendations

The conclusion of this study is that FGM is still a challenge to work against due to the strong links to culture, tradition, and religion. Strengthening the midwives' competence in communications skills will enhance their work with care and counselling.

This study reveals an important contradiction between professional actions in performing FGM despite a personal belief against it. A challenge is to support midwives to resist requests for performing FGM. Hence, more research is needed concerning midwives as a professional group, since they could be important agents of change to achieve abolishing of FGM for the abolishment of FGM.

Appendices

A. Definitions and Abbreviations

Counselling: Advice and guidance given to women suffering from physical and psychological problems following their FGM.

Deinfibulation: Splitting up the bridge of skin that covers the vulva after infibulation.

Infibulation: Stitching/narrowing of the vaginal opening.

Labia: Anatomical structures that are part of the female genitals, which surround and protect the clitoris, openings of the vagina, and urethra.

Pharaonic: Local expression for infibulation.

Sunna: Local expression for Types I and II. Arabic word for tradition; sunna refers to the saying and actions of Muhammed.

Turning point: Referring to the moment when one changes his/her mind on a subject for various reasons.

FGM: Female genital mutilation.

FIGO: International Federation of Gynaecology and Obstetrics.

GDP: Gross domestic products.

Hadiths: Collections of narratives regarding Muhammed.

ICM: International Confederation of Midwives.

MCH: Mother and child health.

NAFIS: Network against Female Genital Mutilation In Somaliland.

NGO: Nongovernmental organization.

SRH: Sexual and reproductive health.

WHO: World Health Organization.

B. Interview Guide

The aim of this study was to elucidate midwives' experiences in providing care and counselling to women with FGM related problems.

Background Demographic Information

(i) Age.

(ii) Married/unmarried.

(iii) Number of children; son/daughter; age of the child.

(iv) If having daughters, have they undergone FGM? What type, at what age, and have all daughters undergone the same form of FGM?

(v) If daughters have not undergone the same form of FGM what is the reason behind that?

(vi) If daughters are untouched what is the motive behind that?

(vii) How many years have you been working at Magan clinic?

(viii) What kind of education/midwife training (no. of years, etc.) and how many years of experience in the profession?

Specific Questions

(1) How do the midwives look upon their work with care and counselling to women having undergone FGM?

Please, probe into.

(i) What are the main obstacles in giving care and counselling?

(ii) Can it make a difference to be circumcised (or not circumcised) yourself when helping women with FGM related problems?

(iii) Can it be positive to be circumcised yourself when helping women with FGM related problems?

(iv) Do you feel that you can give adequate help to the women?

(v) How do they look upon their own circumcision?

(vi) Circumcised, if yes, what type and at what age was it done?

(vii) Uncircumcised, if yes, reasons behind that and what are their feelings behind that?

(viii) How are your work and position, working with FGM, perceived in the community?

(2) How do the midwives perceive that they could improve their work with care and counselling to women seeking care for FGM related consequences?

Please, probe into.

(i) What do you think needs to be improved or strengthened in the work to help women affected by FGM?

(ii) What needs to be improved in the ability to provide the women with help according to their experience?

(iii) Why are women seeking care, and do they come soon after starting to have problems or do they tend to wait?

(iv) Is it easy for women to seek help for FGM related problems?

(v) Do they come alone?

(vi) How do the relatives look upon them seeking help?

(3) How do they perceive the future concerning FGM?

Please, probe into.

(i) How do their own mothers and grandmothers perceive FGM?

(ii) What influence their mothers, grandmothers, and mothers in law have when it comes to take a decision on whether or not to perform FGM on a girl/daughter? And what about their husband, father, and brothers?

(iii) Who takes a decision if there is different opinion on performing FGM or not?

(iv) How do they (midwives) perceive their own daughters future concerning FGM?

(v) Motives for continuation? Motives for abandoning the tradition?

(vi) What is according to you the most important factor to be able to cease FGM?

(vii) Is there something else, apart from what is done now, that you believe can help parents to abandon the practice of FGM?

Ethical Approval

Ethical clearance was granted by the Ministry of Labour and Social Development in Hargeisa, Somaliland.

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Research Article

Outpatients' Perspectives on Problems and Needs Related to Female Genital Mutilation/Cutting: A Qualitative Study from Somaliland

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Aim. To explore female outpatients' perspectives on problems related to female genital mutilation/cutting (FGM/C) and their views on information, care, and counseling. *Setting*. An FGM/C support center at a maternity clinic in Hargeisa, Somaliland. *Methods*. A qualitative, descriptive study, using content analysis of seven semistructured interviews with female outpatients. *Results*. All participants had been ignorant of the etiology of their FGM/C-related complications and hesitant to seek care. All had undergone infibulation but did not wish the same for their daughters. In recent years they had learnt through religious leaders and media campaigns that infibulation was unapproved by Islam. A less severe FGM/C type, "Sunna," was more accepted; however, few could define what "Sunna" meant. Condemning and ridiculing attitudes against uncircumcised women prevailed in their community. *Conclusions*. New ideas and concepts related to FGM/C enter the common discourse in the Somali society while traditional norms and values still prevail. Religion was shown to have a strong impact on FGM/C practices and beliefs. Interventions aiming to raise awareness of health consequences of all types of FGM/C, as well as where to seek care for complications, are needed in Somaliland. Involvement of religious leaders in anti-FGM/C programs is essential.

1. Introduction

The term female genital mutilation/cutting (FGM/C) describes procedures of total or partial removal of external female genitalia or other intentional injury to the female genital organs for nonmedical reasons [1].

When FGM/C first came to be discussed beyond the societies in which it was traditionally performed, it was generally referred to as "female circumcision"—a term that draws a direct parallel with male circumcision, creating confusion between these two distinct practices [2]. To emphasize the gravity of the FGM/C act, the word "mutilation" was adopted in the 1990s [3]. However, this term can be problematic at a community level, and local languages often instead use the less judgmental "cutting." In 1999, the UN Special Rapporteur on Traditional Practices drew attention to the risk of "demonizing" certain cultures, religions, and communities. Hence, the term "cutting" has increasingly come to be used [2].

An estimated 100 to 140 million females of the world population have undergone FGM/C. They are most commonly living in east-, west-, and north-east Africa and in some parts of the Middle East and Asia. FGM/C is generally carried out by traditional circumcisers on girls between infancy and 15 years of age [1]. The practice is considered to be a basic violation of a number of recognized human rights. Consequently, it is increasingly addressed and discussed in the context of girls' and women's rights, rather than strictly as a medical issue [1, 3].

FGM/C is classified by WHO [4] into four major types (Table 1). Around 90% of FGM/C cases are estimated to

Table 1: Classifications of FGM/C according to WHO [4].

Type I, clitoridectomy	Total or partial removal of the clitoris and/or the prepuce.
Type II, excision	Total or partial removal of the clitoris and the labia minora, with or without excision of the labia majora.
Type III, infibulation	Narrowing of the vaginal opening through creation of a covering seal by cutting and repositioning of the inner or outer labia, with or without excision of the clitoris.
Type IV, other	Includes all other harmful procedures to the female genitalia for nonmedical purposes, such as pricking, piercing, scraping, incising, or cauterization.

include types I, II, or IV, whereas about 10% include type III [3].

FGM/C can cause severe complications [1]. The severity of the injuries is related to the anatomical extent of the cutting, which varies between the different types of FGM/C. Infibulations are associated with additional risks, since they sometimes must be reopened (defibulation) to enable both sexual intercourse and childbirth. This might be followed by reclosure (reinfibulation) and a subsequent need for repeated defibulations. Urinary and menstrual problems can result from the near-complete sealing of the vagina and urethra, causing slow and painful menstruations and urination [5].

Being a culturally required and normalized part of girls' upbringing and female adult life, women who have undergone FGM/C often lack knowledge of the normal anatomy and functioning of female genital organs. Thus, they do not associate problems that emanate from FGM/C with this procedure. This ignorance, combined with feelings of embarrassment and shame, may prevent women from seeking medical treatment when needed. This represents a major challenge to programs aimed at alleviating the consequences of FGM/C (Ugaso Lama, NAFIS, personal communication, May 2013). In this paper we describe a project in Somaliland that attempts to target women who have undergone FGM/C with information, counseling, and medical care and to mobilize communities against the practice.

1.1. FGM/C in Somali Culture. Data on FGM/C prevalence in Somalia is scarce, but WHO estimated it to be approximately 98% in 2006. About 90% had undergone infibulation [1]. Traditionally, FGM/C was performed in adolescence as an initiation into womanhood. However, the procedure is no longer considered to be a rite of passage and is today mainly performed on girls aged five to eight. Traditional circumcisers conduct most operations, but the numbers of FGM/Cs performed by professional health providers are increasing [6].

Media, religious debates, and anti-FGM/C campaigns by local nongovernmental organizations (NGOs) seem to have activated discussions on FGM/C among the Somali people. This has broken many traditional taboos, resulting in a growing questioning of the practice. People from the Somali Diaspora who return home to Somaliland with more Western views towards FGM/C constitute another important influence. In recent years, a slight shift in FGM/C practice has been observed from infibulation to types I, II, or IV [7].

Somaliland is situated on the eastern horn of Africa and declared independence from Somalia in 1991. Although not internationally recognized, Somaliland has experienced relative stability.

The judicial system in Somaliland still pays little attention to FGM/C, and there is a lack of common policies and coordination of key messages. However, in the National Gender Policy of 2009–2012 [8], FGM/C is highlighted as one of the most flagrant forms of violence against girls and women. In a recent study investigating attitudes toward female circumcision among people in Hargeisa, Somaliland, 97% of the 107 randomly selected female participants were reported to be circumcised. Of these, 81% said they were infibulated [9].

Recently, the Ministry of Labor and Social Affairs (MOLSA) started to monitor and coordinate the development of FGM/C policies. In these activities, the Network Against FGM In Somaliland (NAFIS) is a leading actor from the nongovernmental side.

NAFIS was established in 2006 by 23 NGOs in Somaliland that joined forces to improve the coordination and efficiency of anti-FGM/C efforts in the country. This is made through information, education, advocacy, lobbying, and strengthening of NAFIS member organizations. The long-term objective of NAFIS is a total eradication of FGM/C. Today NAFIS has 19 member organizations. NAFIS works closely with government bodies, media, and religious and community leaders and organizes training of health workers and community members. To meet the need of services for women suffering from the consequences of FGM/C, NAFIS started a support center in 2010 within a maternity clinic in Hargeisa, providing medical care and counseling to these women. By encouraging the patients to advocate for change of the FGM/C practice in their communities and to protect their daughters from the procedure, the center is expected to have a wide impact [10]. Local female volunteers are also recruited from the communities with the task to persuade women with FGM/C-related problems to attend the support center.

In addition to this, NAFIS is running a "community education campaign" in the catchment area of the support center. In recurrent meetings with local women's groups, village health committees, and other local institutions, NAFIS informs the attendees about the negative consequences of FGM/C and where to seek help for FGM/C-related health problems. Community dialogues on FGM/C in the context of religion, human rights, and cultural and social backgrounds are encouraged. It is hoped that NAFIS' messages—total abandonment of infibulation and gradual elimination of all other forms of FGM/C—will be accepted through these ongoing community dialogues.

2. Study Aim

In the spring of 2012, approximately one year after the opening of NAFIS support center, we made a study with the aim to explore the female outpatients' perspectives on FGM/C and related health problems. The specific aims were to explore the women's views on different forms of FGM/C and if/how these views had changed over time; the women's knowledge and own experiences of health consequences related to FGM/C; for what reasons the women had attended the center; who had supported them and what obstacles they had experienced in seeking care; and finally what intentions the women had for their own daughters in relation to FGM/C. In addition, we wanted to investigate the women's perceptions of the care and counseling provided at the support center, and receive their suggestions on how the center could best meet the needs and reach out in their community.

3. Study Setting, Material, and Methods

The study was conducted at a maternity clinic situated in an internally displaced people (IDP) camp in the outskirts of Hargeisa. The area is mainly populated by Somali minority clans subjected to discrimination, and ostracism in the Somali society. This group of clans are collectively known as *Gabooye*, and even though they are mostly skilled people, they are poorer compared to other clans. However, the *Gabooye* share culture, religion and other traditions with the general Somali population, including those related to FGM/C.

The clinic is one of few health facilities serving these poor communities. It receives outpatients daily and also has a few rooms for deliveries and other inpatients. A gynecologist attends the clinic weekly, and 6–8 nurses/midwives provide maternal care on a daily basis. Within the clinic, the NAFIS support center has one treatment room and one room where women receive counseling in groups or individually by midwives trained by the project. Services at NAFIS support center are free of charge for those who cannot pay.

Exploring experiences of women facing FGM/C-related problems is a delicate issue that requires a sensitive and empathic approach. We chose a qualitative design, using personal interviews to gather information. A semistructured interview guide was prepared (Appendix), including some sociodemographic data and information about the woman's circumcision status, followed by open-ended questions which allowed the interviewee to respond freely and expand on issues of particular interest to her. A trained female Somali social scientist (AW, second author) with experience of qualitative interviewing and a deep knowledge of FGM/C issues in Somaliland performed the interviews in the Somali language.

Study participants were selected by AW among women seeking care at NAFIS Support Center. In agreement with the midwives in charge of the clinic, AW visited the support center throughout three days in March 2012. All the women attending the center during these days, altogether nine were asked if they would be willing to participate in an interview for a research project. The purpose of the study was explained and they were informed that participation was voluntary. Appointments were set up with AW; however, two women failed to attend. They later explained that they did not find the time to talk as they were busy struggling with their daily work (both were street vendors). Thus, altogether seven interviews were conducted. First, one pilot interview was performed, after which some questions were slightly revised for better comprehension. Results from the pilot interview were included in the study. All interviews took place in privacy in the counseling room and lasted for about one hour. They were tape-recorded with the permission of the interviewees, transcribed verbatim, and translated into English by a trained Somali research assistant. The translation was overseen by AW, who is fluent in English, to assure correct comprehension of the translator. Translations of a few Somali words were difficult to find. The research group decided to keep these words in the original language, accompanied by an approximate English translation.

The collection of data was ceased after the seventh interview, partly due to limitations of time and funding. However, the amount of gathered information was deemed to be sufficient by the research group, as saturation seemed to have been reached and little new information appeared. This was further verified by an experienced midwife working at the support center in examinations of the interviews.

Content analysis was applied to analyze data from the seven interviews (including the pilot interview) [11]. First, the interviews were read and reread several times by the research team members (the five authors). Background characteristics of the interviewees were compiled (Table 2). Five main categories were identified, each one referring to a descriptive level of content and thus expressions of the manifest content of the text. Under each category, a number of subcategories were identified. Two themes emerged from the underlying meaning of the categories [12]. To ensure credibility, the results were discussed and triangulated within the research team, composed of nursing/midwifery and social science disciplines. Representative quotations (from participants identified by numbers in Table 2) from the transcribed text are presented to enhance credibility [12].

The expression "FGM/C" is used throughout this study to capture the significance of the term "mutilation" at policy level and at the same time to recognize the importance of employing, nonjudgmental terminology with practicing communities [13]. For linguistic convenience, however, words such as *circumcise* and *circumcised* are occasionally used.

4. Ethical Considerations

All study participants received comprehensive information on the study objectives and methods and were informed that participation was optional. They were promised anonymity and assured that their answers would not affect the health care given at NAFIS support center. All of those who agreed to participate gave their oral consents before participation. Ethical approval was granted by the Ministry of Labor and Social Affairs of Somaliland.

Table 2: Background characteristics of participants.

	Woman 1	Woman 2	Woman 3	Woman 4	Woman 5	Woman 6	Woman 7
Age	35	23	35	30	20	23	40
Origin	Rural area	Rural area	Hargeisa	Hargeisa	Hargeisa	Berbera	Hargeisa
Education/job	Sales woman	No education, no job	No education, no job		No education, no job	No education, but is literate. no job	Quranic school, no job
Marital status	Married	Married	Widowed and remarried	Married	Unmarried	Unmarried	Widowed
Type of FGM/C	Pharaonic	Pharaonic	Pharaonic	Pharaonic	Pharaonic	Pharaonic	Pharaonic
Number and sex of children	1 son, 2 daughters	2 sons	1 daughter	1 daughter, 2 sons	—	—	2 sons, 2 daughters
Problems from FGM/C and reasons for visiting NAFIS	*"... during the process of giving birth, the place between my anus and vagina tore open (fistula)."* Also had infections.	*"I was pregnant and the fetus died in my womb. This happened with 9 babies ... I [also] have pain in my abdomen all the time."*	*"I came to the centre in search of information on a cyst that I had 'under' here ... I became too sick and was unable to walk ..."*	*"I had an infection. When I was a girl, before marriage, I used to have very painful menses."*	*"I had a painful infection ... I had menstrual problems and pain in abdo-men."*	*"I used to have very painful menstruations. My periods did not come out normally as the opening was so narrow."*	*"I had pain in my abdomen. I used to have very painful menses ... and I used to vomit."*

Table 3: Data analysis.

Main categories	Subcategories		
Factors inhibiting and facilitating care seeking	Lack of knowledge	Poverty and shame	Ease of access, social support
Views on different types of FGM/C	Infibulation	Sunna	Plan for own daughters
Change of practice and attitudes	Religious concerns and influences	Turning points	Increased openness
Social pressure on the uncircumcised	Bullying	Reduced marriage-ability	
Knowledge about NAFIS and suggestions for future work	Misunderstandings	Positive attitude	Raising awareness, outreach

5. Findings

The participating women were born in Hargeisa (3), Berbera (1), or in rural areas (3). Two were unmarried; the others were married or widowed. Three of the respondents belonged to the *Gabooye* minority. The women had sought care for infections, abdominal pain, ruptured uterus, cysts, and/or menstrual problems (Table 2).

The main categories identified were (1) circumstances inhibiting and facilitating care seeking; (2) views on different types of FGM/C; (3) change of attitudes and practice; (4) social pressure on the uncircumcised; (5) suggestions for the future work of NAFIS (Table 3). Two themes emerging from the categories were seemingly contradictory—on the one hand an apparent change in FGM/C practice and attitudes, and on the other hand the ridiculing attitudes and negative social sanctions that, according to respondents, uncircumcised women face in the Somali society. The major theme running through the interviews was the importance of awareness and access to information. Without this, change in attitudes and behavior related to FGM/C was unachievable.

6. Factors Inhibiting or Facilitating Care Seeking

All participants had been hesitant to seek help for their FGM/C-related health concerns and had suffered for a long time before coming to NAFIS.

6.1. Ignorance, Poverty, and Shame. Lack of information and knowledge, regarding both health consequences of FGM/C and where to find treatment, was mentioned by more than half of the participants as a reason for not seeking care earlier:

> *Had I had the knowledge and support from somebody who knew what to do I would have come earlier, but I had neither (Woman 6).*

Other reasons mentioned were poverty and shame:

> *I had been hiding my problem from everybody for quite a long time. I was ashamed to tell anybody. It was my secret ... I was not married when the cyst appeared. Later, I became too sick and was unable to walk, yet still ashamed until I decided to*

> *seek help . . . If I knew this was related to FGM/C and that there were other women suffering like me and that there was help, I would have sought care (Woman 3).*

> *. . . ignorance, poor economy, and taking things easy and ignoring your problems until it becomes worse. In my case I did not have the money to seek care (Woman 1).*

Some had been hiding their problems for many years. One woman stated:

> *Out there, there are many sick women who are hiding their problem. Some even die due to their problem . . . (Woman 7).*

6.2. Ease of Access and Social Support. Some of the participating women had received information about the support center since they were living in the vicinity. A few were referred to NAFIS by other health facilities, while others had been encouraged to seek help by female friends, neighbors, or relatives who had either received help from the support center themselves, or knew someone who had.

Of the four participants living with their husbands, two were accompanied by their husbands when they visited the support center. Another wanted her husband to come with her, but since he was away at the time, she brought a female friend instead. One woman brought her mother, and another one brought a female neighbor. Two participants came by themselves.

7. Views on Different Types of FGM/C

The participants clearly differentiated between what they referred to as "Pharaonic circumcision" (infibulation/FGM/C type III) and "sunna circumcision" (FGM/C types I, II, or IV). There was a broad consensus against infibulation, whereas most respondents had a positive attitude towards sunna—although they were unable to clearly explain what sunna was.

7.1. Infibulation. All of the women participating in the study were infibulated (i.e., had undergone the most severe type of FGM/C). However, none of them could see any advantages of infibulation. They all agreed that infibulation brings about several health problems:

> *I do not see any advantage with Pharaonic circumcision. If the nature of the genitals are changed it is a problem. Think of a door of a house is completely shut. Is this not a problem? (Woman 1).*

> *I do not see any advantages with Pharaonic circumcision . . . Your genitals are sliced and stitched and the menses is blocked and very painful. All kinds of ills follow (Woman 2).*

> *It [infibulation] has no benefits but is a curse for women (Woman 3).*

7.2. Sunna. All of the participants were firmly convinced of the negative health effects of infibulation. However, a common notion was that no health problems derive from less severe forms of circumcision. Sunna was seen as a safe alternative to infibulation, preferred for both physical and religious reasons:

> *When I was circumcised in the old way, most people thought it was good and I did not see any problems myself. But today things have changed and people are doing the sunna type. Sunna is better and has no health related problems and our religion has told us to do it . . . I changed my mind on the Pharaonic type around 10 years ago . . . I realized it was a bad tradition and un-Islamic and after I heard from religious leaders the sunna is better and should be followed. There is also a general trend for people to abandon the Pharaonic type and change to sunna (Woman 4).*

One participant stated that sunna circumcision is necessary to remain healthy. Her answer to the question "do you think, healthwise, there is a problem if a girl is untouched?" was

> *Yes, as she is with the baaro (A derogatory word connoting that the clitoris is filthy or dirty) and it needs to be bled (Woman 4).*

Another woman had learnt that sunna must be practiced according to religious law, but she could not explain what sunna circumcision means:

> *I do not have an idea about it as I did not see anybody . . . but I heard that infibulations has [sic] been abandoned nowadays and girls are circumcised on sunna (Woman 2).*

One participant pointed out that there was not much difference between sunna-cut girls and "untouched" girls:

> *. . . there is not much difference between the untouched and the sunna circumcised girls since neither of them is stitched. Only a small cut at the top is the difference between those who are not touched and those who had the sunna (Woman 7).*

However, another woman had a different definition of what sunna means:

> *I would advise that girls should be spared from circumcision of any type because even in the sunna type people still use stitches (Woman 3).*

A third woman described the sunna circumcision that had been performed on both her daughters:

> *They cut a little part of the clitoris and made one stitch (Woman 7).*

7.3. Plan for Own Daughters. Only two of the participating women had decided to leave their daughters "untouched." One of them explained that she made this decision because she did not want her future daughters to undergo the same suffering as she did. She stated:

> *I do not expect I will ever circumcise my daughter. I do not care if she can find a husband or not. I do not want her to have my experience (Woman 3).*

Four out of the seven interviewees had decided to perform, or had already performed, sunna circumcision on their daughters. One woman had not made up her mind yet:

> *I plan to do a slight sunna, or I can even leave them [the daughters] as they are (Woman 1).*

Of the five participants who were married, four said that their husbands would not oppose the decision they had made regarding their daughters' circumcision.

8. Change of Attitudes and Practice

Our findings pointed at changes in FGM/C practice from Pharaonic to sunna circumcision. This shift in both attitude and practice was said to be influenced by both religious leaders and information through media.

8.1. Religious Concerns and Influences. Several of the participating women stated that they started opposing Pharaonic circumcision when they learnt that the practice was un-Islamic. However, these women had heard from religious leaders that sunna is approved by the Islamic law:

> *It has no benefits whatsoever, besides God does not allow it. When I had the menstrual pains and I was told that the problem was caused by FGM/C, my first doubts started. After I listened to the radio and saw the TV programs about FGM/C, my views also changed. I also learned that religion does not allow FGM/C . . . Religion approves of the sunna type (Woman 7).*

> *Even before the awareness raising, I heard that FGM is not religious. Later I found out on the many problems. I think the majority of the people are aware now that it is not religious . . . Sheiks say sunna must be practiced but religion prohibits the Pharaonic . . . When circumcising her daughter every mother asks the sheiks, who advise them to circumcise on sunna (Woman 2).*

Others had received contradictious messages regarding sunna, saying either that it has to be done according to Islam, that it should be antagonized, or that it is optional:

> *I heard advocacy for sunna but not for total abandonment (Woman 6).*

> *I heard over the radio some religious scholars saying that it should be stopped and others saying sunna should be applied (Woman 3).*

Seemingly, the women had received unclear messages from religious leaders regarding FGM/C. None of the participants had heard a local sheik or religious scholar promote Pharaonic circumcision, nor had anyone of them heard advocacy for total abandonment of the FGM/C practice. The third alternative, sunna, was either presented as a religious prescription, or more vaguely as something optional, left for each individual to relate to. This picture of unclear and sometimes contradictive messages described by the participating women was confirmed by the midwives working at the support center.

8.2. Turning Points in Change of Attitude and Increased Openness. Both own and others' FGM/C-related physical problems were mentioned as strong underlying motives for a shift in attitude towards FGM/C by nearly all participants. Some also referred to increased awareness through media campaigns. One woman stated that she had started opposing the practice when she came to NAFIS and learned that her dysmenorrhea derived from FGM/C:

> *When the doctor opened me, I got relieved of my menstruation problems. From that day on, I'm against FGM/C (Woman 6).*

> *[I started to oppose FGM/C] when this girl at NAFIS told me that the cause of my problems and pain with menstruation is due to my genitals being cut and closed and that this is against religion. (Woman 6).*

One participant had previously been recommended by a doctor to undergo defibulation due to her abdominal problems, but she refused to undergo the operation:

> *I used to have very painful menses when I was a girl and before I got married I used to vomit. The doctor suggested that I be opened, but I did not do it because it was shameful to be opened those days (Woman 7).*

All participants said that they nowadays often discuss FGM/C issues with female friends, relatives, and neighbors. None of them perceived any difficulties in discussing the subject, even though one woman said she was a little shy to discuss it with men. Several of the participating women expressed positive attitudes towards the increased openness in their society; one stated that she thinks all people should take part in the discussions; another one said that she wants everyone to know about the problems that FGM/C brings about. One woman emphasized that she would like to include men in the discussions:

> *. . . I hear men say, look at these women talking about their private parts in TV or radio. When they say this I say to these men, do not feel surprised about this as women are suffering from FGM/C and it is also good for you men that FGM/C is abandoned (Woman 1).*

Another woman added that she even heard that fathers discuss the FGM/C status of their daughters with their future son-in-laws:

> *I heard that nowadays when a girl is getting married, her father tells the husband to be that his*

daughter is circumcised in the sunna type lest that the husband becomes surprised when he sees her open (Woman 7).

9. Social Pressure on the Uncircumcised

The social sanctions and consequences that a woman who had not undergone FGM/C would face in her community were vividly discussed in the interviews.

9.1. Bullying. According to the interviewees, people would talk and call an uncircumcised woman names, referring to her "openness" and implying that she was not a virgin:

Though it's not like before, yet people will say bad things about a girl who is untouched. They will say things like "she is open" or that she is not a virgin (Woman 3).

She will be called bad names and people will say she is with the baaro or she is buuryo qab ("She still has the clitoris") (Woman 4).

The woman neighbors who were told [would] always laugh and wonder how their genitals would [look] like without any sort of cutting. Many see it as unnatural to be left alone (Woman 6).

The words that are used to describe an uncircumcised woman, "with the *baaro,*" are associated with something dirty and filthy. The biologically normal untouched female genital with intact clitoris is described as unnatural, strange, and ugly. By definition an untouched woman does not belong to the range of "normal" women. Moreover, she is suspected of immorality.

9.2. Reduced Marriageability. Breaking social norms, and being "unnatural" and "different" from other girlsg were reported as problems for uncircumcised women. Above all, being uncircumcised was said to have a negative impact on a girl's chances of getting married. All participants agreed that an uncircumcised woman might have problems finding a husband:

Such a girl may meet insults if she is known not to be circumcised and that will have an impact on her future marriage. Some men might not like to marry an uncircumcised girl (Woman 5).

However, others were less pessimistic:

I do think she will find somebody to marry. People are with the times and they are not like before (Woman 4).

10. Knowledge about NAFIS and Suggestions for Future Work

Asked about knowledge of NAFIS' work and policies, one participating woman responded that NAFIS thinks that all forms of FGM/C should be stopped and also gives training. Four participants said that NAFIS raises awareness and provides counseling and seminars where they strongly advice against Pharaonic circumcision. One of them stated:

NAFIS raises awareness against Pharaonic circumcision. They also hold seminars against it. When NAFIS gives us the awareness raising, we also pass it on to other women that the sunna is ok but Pharaonic circumcision is bad and should be stopped (Woman 4).

One participant had a more imprecise understanding of NAFIS' work: "I only heard that they [NAFIS] help people with problems . . ." (Woman 2).

Almost all participants stated that they were content with the care they received at NAFIS Support Center. Some added that they now felt better and that their health had improved. However, one participant had continuing problems with painful menstruations and infections. A couple of women mentioned that they were encouraged during their visit to tell other women about NAFIS and their messages.

Asked for suggestions on how NAFIS' and similar support centers' work could be improved, all participants emphasized the importance of raising awareness among women, especially in poor and rural areas. One wished for more seminars and education, while others stressed that women should be informed and encouraged to seek help immediately and not wait until their problems are deteriorated.

Media campaigns were said to be a good way for NAFIS to reach out. One woman requested more training "especially to women, as women are a key to stopping the practice" (Woman 1). Another one suggested that education and training should focus on both mothers and fathers, and also on practitioners. More information to rural communities was suggested, since "they are the ones who have the least information and they are the ones who suffer most" (Woman 5). One participant pointed out that most women who need support are poor and cannot afford to seek help, and consequently NAFIS should inform people that they give treatment for free.

11. Discussion

Strong disapproval of infibulation came out as a major finding in the interviews, although all of the women participating in the study had undergone infibulation themselves. None of them would let their daughters go through the same procedure; however, the less severe FGM/C type called "sunna" was accepted as an alternative. All participants in our study agreed that infibulation brings about severe health problems, while all but one considered sunna to be free of risks.

The trend of a shift in FGM/C practice from type III to types I, II, or IV ("sunna") has been described in several previous studies performed in other Eastern African countries, such as Sudan [9, 13, 14], and among Somali refugees in Ethiopia [15]. The view of sunna as an innocuous procedure corresponds with previous findings from Somaliland [7, 16] and Sudan [14].

In our study, the participating women claimed to be in favor of sunna but could not explain what sunna means and had never seen a sunna-circumcised woman. Similarly, previous research has shown that the term sunna is used loosely in Somaliland to describe a variety of degrees of cutting and that mothers often leave the decision on how much to cut to the practitioners [7].

The participants believed that Islamic law approves of sunna; however, they had received contradicting messages from religious authorities. In previous studies, religious concerns are frequently mentioned as an important reason for the shift in FGM/C practice. While infibulation is said to be against Islam, sunna circumcision is thought to represent a milder form of FGM/C, dictated by the Quran [13–16]. Missailidis and Gebre-Medhin [17] have shown that infibulations decreased in Eastern Ethiopia in favor of sunna after a campaign by Muslim leaders. According to Warsame and Talle [7], many religious leaders in Somaliland regard anti-FGM/C campaigns to be part of a "Western agenda," propagated by international NGOs through local women's organizations. Instead they advocate sunna, claiming that this procedure distinguishes Muslim women from Western women. Few religious leaders in Somaliland, or other parts of eastern Africa, seem to take side against all types of FGM/C. Yet, their large impact on people's behavior might be a key to abandonment of the FGM/C practice. Involvement of Islamic leaders has been reported to be an essential strategy for change of FGM/C behavior in Muslim communities [18].

Another major finding in our study was the feelings of shame and fear of being put to scorn if not undergoing any type of FGM/C. Somali Bantu women in the US have been reported to perceive FGM/C as a way to remain "clean" by Upvall et al. [19]. Other authors who have discussed cleanliness and purity as reasons for the continuation of FGM/C are Dirie and Lindmark [20], Gruenbaum [21], and Van der Kwaak [22]. Exposed to name-calling and gossiping, uncircumcised women are still considered to be "unclean," and the untouched female genitals to be "filthy" or "dirty." The clitoris is described as an unclean, shameful, and unwanted part of the female body. The statement "I believe that a girl should be bled ... The *baaro* needs to be bled" (Woman 4) indicates that for some people, total abolishment of FGM/C is still not an option—they can accept that infibulation is being abandoned, but still some kind of cutting has to be performed on girls' clitorises.

The subject of negative social sanctions affecting uncircumcised women has been addressed in a number of previous studies. Results from Senegambia have shown how uncircumcised women face harassment, insults, and ostracism from other circumcised women [23]. According to Gruenbaum [21], Sudanese parents who neglect the responsibility to protect their daughter's virginity by FGM/C are criticized by the society, subjecting the family to dishonor. However, in our study, some participants stated that getting married would not be impossible for an uncircumcised woman as long as she is still a virgin. The comment "people are with the time and they are not like before" (Woman 4) suggests that a change of discourse may be underway in the society. The statement one participant made regarding her daughter: "I do not care if she can find a husband or not. I do not want her to have my experience" (Woman 3), suggests that for this woman, being unmarried is no longer associated with the same stigma as it once was. A mother stating that she does not care about her future daughters' marriageability may indicate that parents start to see other options in life than just marriage for their daughters.

None of the participants saw any difficulties in discussing the subject of FGM/C. On the contrary, they stated that they wished for even more openness with both men and women participating in the debate. These findings correspond with what previously has been shown; media, religious debates, and campaigns seem to have broken many traditional taboos and actuated discussions on FGM/C in Somaliland, resulting in a trend of doubting its value [7].

The most significant theme emerging from the interviews was how increased knowledge of the harmful effects of infibulation had profoundly influenced the participating women's change of attitude. On the personal side, they had their own experiences of long-term pain and gynecological problems. Realizing that these problems derived from FGM/C was an eye-opener to them. The information received through media campaigns and awareness programs had resulted in a more open social climate where women could speak out about and share experiences of the consequences of infibulations. What had been regarded as "normal" for a woman in traditional culture was now being questioned. Being "open" was no longer as shameful.

Participants' suggestions about the future work of anti-FGM/C support centers like NAFIS stressed the needs to continue to raise awareness by media involvement and improved outreach. Breaking the ignorance, embarrassment, and shame that prevent women from seeking care and treatment is the major challenge for NAFIS and similar programs aiming to alleviate the consequences of FGM/C.

12. A Note on Moral Authority in Research on FGM/C

As pointed out previously by Sala and Manara [24], people from cultures practicing FGM/C might regard disapproval by other societies as misguided or as cultural imperialism. A common objection expressed by practitioners is that outsiders should not pass moral judgments on other people's rituals. Shell-Duncan and Hernlund [25] state that a central question for all scholars involved in efforts to eradicate FGM/C is *who (if anyone) has the moral authority to condemn the FGM/C practice?* Globally, there is an ongoing debate between cultural relativists and universalists. The doctrine of cultural relativism holds that no culture has the moral authority to criticize another; each act can, according to social approval or disapproval, be considered as good or bad. The universalist standpoint, on the other hand, is that certain values are the same everywhere, independently of cultural differences [24]. FGM/C violates a number of human rights, such as the rights to nondiscrimination, to integrity of the person, to the highest attainable standard of health, and to freedom for children from violence and maltreatment [26].

Balancing between the relativist and universalist standpoints with regard to FGM/C as a cultural phenomenon, we recognize that achieving sustainable change of the FGM/C practice in the Somali society, aiming at total eradication, requires great sensitivity and respectfulness towards the people whose lives have been deeply affected by the practice.

13. Study Limitations and Suggestions for Further Research

This qualitative interview study was performed with seven female outpatients visiting the support center. The women who accepted to be interviewed were all against infibulation; they saw a trend of change from infibulation to sunna, and they all stated that they felt free to discuss FGM/C-related problems. Due to limitation of time and budget we could not increase the number of interviews. On the other hand, when seven interviews had been conducted, little new information seemed to be coming forth. In addition, saturation was confirmed by one of the experienced midwives at the center after being presented to the content of the interviews. Nevertheless, the question of potential bias is important to consider. Of the nine women asked to be interviewed, two opted out claiming they were very busy. We cannot rule out that they actually did not want to talk about their problems. Furthermore, these women might have been poorer than the ones who accepted to participate and might also have been less exposed to NAFIS' information and community outreach. Thus, the women interviewed might have been more positive to NAFIS' messages than those who declined. However, according to the midwives/counselors working at the center, the seven women interviewed seemed representative of most outpatients visiting the center.

In qualitative studies there are no claims to generalize to a larger population; it is the depth of understanding and the trustworthiness of the findings that are important. Do the findings truly reflect the views and attitudes of these women in relation to the topics discussed? We firmly believe that they do. The interviewer (AW) holds deep knowledge of the socio-cultural context of FGM/C in Somaliland. She communicated daily with the midwives/counselors at the clinic and could discuss and compare her impressions of the stories told by the women with them.

The findings raise important questions for further research. One major finding of great concern is why women seem to accept "sunna" and claim it to be free of risks, while at the same time they cannot describe what it involves. It would be valuable to conduct further research in different areas and among different groups to explore the changing understanding of and meaning assigned to sunna for the various stakeholders. A few previous studies have been done, for example, in 2010 by Warsame and Talle [7] on the concept and meaning of sunna among Somalis in Hargeisa. Their results show that the term sunna often is used loosely, referring to various degrees of cutting.

A broader research area is the social patterning of knowledge, perceptions, and practices regarding the different types of FGM/C between urban/rural populations and educational and socioeconomic groups, as well as between minority groups. In-depth qualitative studies, combined with data from clinic registers on the frequency and complications of various forms of FGM/C in the areas concerned, could elucidate changing practices. They could also be used in the planning and priorities of women's health care. The situation of the nomad women is especially urgent, since these women live far away from health facilities and without access to media information.

The role of men in the decision making regarding circumcision of daughters, as well as in supporting their wives to seek care, was briefly mentioned by some of the interviewees but not probed into in depth. However, as the main decision makers in the family and society, the involvement of Somali men is obviously of great importance in supporting their wives and in turning the tide towards abandonment of FGM/C. For example, one study participant mentioned that nowadays when a girl is getting married, it is common that her father informs the future husband that his daughter is circumcised in the sunna type. Young Somali men's views on FGM/C, and whether they expect their future wives to have undergone the procedure, are important leads for further investigations.

14. Conclusions

The findings of this study concur with trends observed in previous research of an ongoing change in FGM/C practice in Somaliland. They indicate a process of modernization in the Somali society where new ideas and concepts related to FGM/C enter the common discourse, changing attitudes and practices and questioning the FGM/C custom. At the same time traditional social norms and values still prevail, and "un-touched" women are frowned upon and regarded as "abnormal." The study illustrates how the power of culture, which defines normality and forms of female identity, takes its toll when the "untouched" women are bullied and ridiculed.

Religion has a strong influence on beliefs and practices of FGM/C. This observation concurs with recent literature from Somaliland. Dialogue with and involvement of religious leaders seem to be of great importance for further FGM/C education and awareness campaigns. Particularly, their position concerning sunna is a crucial issue to clarify.

Local anti-FGM/C centers offering care and counseling to women, combined with mobilization work at community level, seem to raise awareness, increase willingness to abandon infibulation, and support women to seek help for FGM/C-related problems and issues. Further education and campaigns to raise awareness are probably needed in Somaliland to inform the citizens about the negative health consequences of all types of FGM/C and where to seek care for FGM/C-related problems. Moreover, additional research on the ongoing processes of change in knowledge, attitudes, and practices related to FGM/C in the Somali society would provide necessary further data. Additional information on these areas is essential for the development of policies aiming at abolishing FGM/C and alleviating its consequences for girls and women.

Appendix

Interview Guidelines

The overall aim is to explore from the women's perspective the quality of care and counseling given at the NAFIS Support Center.

(1) Background information

(i) Age?
(ii) Live in urban/rural area. Internal refugee?
(iii) Number of years of education? Work?
(iv) Married?
(v) Number of children, number of daughters?

(2) FGM/C-related health problems and care

(i) Why did you visit the NAFIS Support Center?
(ii) Did you seek care immediately when your problems emerged, or have you had these problems for a long time?
If the respondent waited to seek care: Why did you wait? What could have made you seek care earlier?
(iii) What type of FGM/C have you undergone (pharaonic, other)?
(iv) Have you had any other problems related to FGM/C? What kinds of problems?
(v) What kind of help have you got during your visit at NAFIS Support Center? Medical care? Counseling?
(vi) Did your husband participate in your visit at NAFIS Support Center?
If no: Would you have wanted him to come?
If yes: Who decided that he would come (you, him, both of you, other family member)?
(vii) Did any other member of your family participate in your visit? Who?
(viii) From whom did you first hear about NAFIS?
(ix) Are you content with the care given to you at the center? Why/why not?
(x) Do you have any suggestions on how the care at NAFIS Support Center could be improved?
(xi) Would you recommend other women to seek care at NAFIS?

(3) Views on advantages/disadvantages of FGM/C

(i) Do you see any advantages with FGM/C? Do you see any disadvantages? Why/why not?
If the respondent cannot see any advantages: When did you come to be against FGM/C? What made you come to this conclusion?
(ii) Is there a difference in health consequences depending on type of FGM/C (pharaonic, other)?
(iii) Do you think sunna circumcision is more acceptable from a religious point of view?
(iv) Do you think a girl who has not undergone any FGM/C would face problems?
If yes: what kinds of problems (e.g., social problems, marital problems, health problems)?

(4) The home context

(i) With whom (if anyone) do you usually discuss matters of FGM/C, FGM/C-related problems, and so forth?
(ii) Do you find it hard to talk about FGM/C? Why/why not?
(iii) Have your daughters undergone FGM/C/do you intend to circumcise your daughters? Why/why not?
If yes: what kind of FGM/C did you/do you plan to perform on your daughters?
(iv) Do you discuss this matter (FGM/C of daughters) with your husband? Do the two of you agree on the matter? Why/why not?
(v) Are there any other member(s) of your family who has an influence on the decision of circumcising or not circumcising your daughters?

(5) NAFIS

(i) What do you know about NAFIS and about the network's policy on FGM/C?
(ii) Do you have any ideas on more ways for NAFIS to reach out with their anti-FGM/C message in your family/community?

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Research Article

The Applicability of Behaviour Change in Intervention Programmes Targeted at Ending Female Genital Mutilation in the EU: Integrating Social Cognitive and Community Level Approaches

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With increased migration, female genital mutilation (FGM) also referred to as female circumcision or female genital cutting is no longer restricted to Africa, the Middle East, and Asia. The European Parliament estimates that up to half a million women living in the EU have been subjected to FGM, with a further 180,000 at risk. Aware of the limited success of campaigns addressing FGM, the World Health Organization recommended a behavioural change approach be implemented in order to end FGM. To date, however, little progress has been made in adopting a behaviour change approach in strategies aimed at ending FGM. Based on research undertaken as part of the EU's Daphne III programme, which researched FGM intervention programmes linked to African communities in the EU (REPLACE), this paper argues that behaviour change has not been implemented due to a lack of understanding relating to the application of the two broad categories of behaviour change approach: individualistic decision-theoretic and community-change game-theoretic approaches, and how they may be integrated to aid our understanding and the development of future intervention strategies. We therefore discuss how these can be integrated and implemented using community-based participatory action research methods with affected communities.

1. Introduction

Female genital mutilation (FGM), sometimes called female circumcision or female genital cutting, is a deep rooted traditional practice that adversely affects the health and well-being of millions of girls and women. It is estimated that 100–140 million females worldwide have been subjected to FGM and that 3 million are at risk each year [1]. The practice is common in 28 countries in Africa as well as parts of the Middle East and Asia [1, 2]. However, with increasing international migration, the practice of FGM is no longer restricted to the traditional practising countries. In 2010, the European Parliament estimated that up to half a million women living in Europe had been subjected to FGM, with a further 180,000 at risk [3, 4]. According to the UNCHR, nearly 20,000 women from FGM practising countries applied for asylum to the EU in 2011 with an estimated 8,809 female applicants aged 14–64 likely to be affected by FGM [5]. In addition to those coming to the EU who have already been subjected to FGM, there is anecdotal evidence supported by criminal prosecutions, particularly in France and Sweden, that suggests that FGM is conducted in the EU [6–9]. This has led to the implementation of FGM elimination campaigns in the EU.

There are a growing number of studies which demonstrate a significant association between FGM and various gynaecological and pregnancy complications. World Health Organization (WHO) reports [10, 11] conclude that FGM has negative implications for women's health, with women who have undergone FGM more likely than others to have adverse obstetric outcomes. FGM has no health benefits and harms girls and women both physically and mentally. These impacts occur at the time of the procedure as well at adulthood, particularly motherhood. All forms of FGM have psychological effects, particularly related to female

sexuality and sexual relationships. The UN regards FGM as a violation of female reproductive rights [12, 13], and thus the ending of FGM is of relevance to all health professionals. Understanding the issues associated with preventing FGM is particularly relevant to health professionals who work with FGM affected and at risk women and girls, since they are in a position to communicate directly with affected community members and may also be linked with organisations which engage in prevention as well as obstetric and gynaecological treatment of FGM complications.

The WHO, United Nations (UN), Unicef, and other anti-FGM organisations have adopted various strategies in order to raise awareness and work towards ending FGM. Such efforts have centred around four main approaches. These include bodily and sexual integrity; human rights; legislative; and the health approach. Thirty years on since the WHO called for the ending of FGM, there is conflicting evidence as to whether these approaches have led to a reduction in the practice [14, 15]. In 1999, aware of the limited success to date in eliminating FGM, the WHO recommended a behavioural change approach be implemented in order to move closer to the elimination of FGM [16]. In 2002, the Frontiers in Reproductive Health and Population Council (FRHPC) produced a review of FGM interventions and called for research to be informed by behaviour change theory (BCT) [17]. They suggested that few evaluations of interventions assess their impact on important outcomes including "knowledge, beliefs, attitudes, and behaviors" concerning FGM and that BCT is needed to establish how interventions work [17, page 1]. Despite the numerous calls for more targeted behaviour change approaches to the issue of FGM, little progress has been made in implementing and/or evaluating behaviour change approaches [2].

This paper is based on research undertaken as part of the EU's Daphne III programme, which researched FGM intervention programmes linked to African communities in the EU (REPLACE). One of the aims of this 12-month project was to work with FGM affected communities and non-governmental organisations implementing FGM elimination interventions to understand the barriers to the ending of FGM and to assess the appropriateness of NGO intervention materials and awareness raising activities. The project used a community-based participatory action research approach to try to understand why FGM intervention programmes have not delivered an end to FGM in the EU. The results of this part of the research were then applied to a grounded health behaviour change approach in line with WHO's [16, page 2] call for the reorientation of anti-FGM communication strategies "from awareness raising to behaviour-change intervention approaches". REPLACE produced a toolkit designed to introduce behaviour change approaches to those working to end FGM amongst affected communities in the EU [18]. This was achieved by integrating social cognitive and community level behaviour change intervention strategies.

In this paper we argue that because of the social aspects characteristically associated with FGM, including gender norms, power relations, and the level of social capital associated with the practice, it is fundamentally important that behaviour change approaches adopt a holistic approach, rather than focusing on the individual or group dynamics of attitude and behaviour change. We essentially argue that behaviour change approaches cannot only focus on the individual and thus neglect the wider social dynamics nor can community based approaches, such as social convention theory [19], overlook intrapersonal and interpersonal aspects located at the individual level. In order to provide context for arguing for the applicability of a more holistic behaviour change approach, we introduce the four traditional approaches to ending FGM.

2. The Four Traditional Approaches to Ending FGM

The REPLACE project used community-based participatory action research (PAR) methods to work with FGM affected communities in the Netherlands and the UK, as well as established nongovernmental organisations working to end FGM amongst these communities, in order to understand the current barriers to the ending of FGM and to assess how these related to the four traditional approaches to ending FGM. PAR was used as it empowered members of FGM affected communities, in this study from the Somali and Sudanese communities, to actively engage in gathering knowledge about individuals' experiences and the personal and community issues preventing them from abandoning the practice. The use of "cultural insiders" to conduct the research was consistent with an essential aspect of PAR; namely, that research is conducted "with" rather than "on" the community. This methodology proved to be an effective way to engage with marginalised and vulnerable groups concerning a practice which is illegal in the EU. It also enabled those involved in the research, including NGOs, to evaluate and reflect on their actions and interventions.

2.1. Bodily and Sexual Integrity Approach. The bodily and sexual integrity approach has been informed by feminist writings concerning women's sexual integrity and pleasure. Johansen [20] has commented that, because Western "second wave feminists" use the clitoris as a symbol of female sexuality, the practice of FGM is seen as the antithesis of women's sexual freedom and expression. However, contradictory views may be held by FGM affected communities regarding the role of FGM in reducing women's sexual pleasure, with some holding the belief that genital cutting makes women sexually accessible [20, 21].

Amongst the communities that REPLACE worked with it was very apparent that the control of female sexuality is a major driver in the continuation of the practice, with men and older women such as grandmothers being particularly motivated by this. Those working to end FGM in the EU need to be aware that many members of FGM affected communities are deeply concerned about the sexual liberalism prevalent in many Member States [9, 22]. This was confirmed in the REPLACE project where a large number of those involved in the study perceived the bodily and sexual integrity message as a threat to their deeply held religious and cultural beliefs.

The bodily integrity message emphasises women's individuality regarding sexual pleasure, but, if we accept that sexual enjoyment is shaped, mediated, and controlled through social institutions and understandings of sex and sexuality [18, 23], then we must accept that women's enjoyment of sex will be informed by their own experiences embedded within their specific sociocultural environs. For those women who perceive their sexual enjoyment to be "normal" and providing them a sense of intimacy, then the credibility of this approach may be questioned. Furthermore, women's sexual enjoyment may differ depending on the type of FGM experienced [6, 24]. Many women in the REPLACE study stated that sexual relations caused them physical and psychological pain, a minority reported that they still enjoyed sexual intimacy with their husbands. This is in line with findings from other research conducted in the EU [6, 25, 26] and highlights the contradictory nature of women's sexual experiences and highlights the paradoxical nature of using this approach with FGM affected communities to end the practice.

Because of the variance in women's sexual experiences and the fact that these messages stem from a "Western" perspective of female sexuality and embodied experience [27, 28], REPLACE found that it did not resonate effectively with affected communities. It has to be recognised that FGM affected communities in the EU may perceive the bodily and sexual integrity message as a threat to their deeply held religious beliefs and conservative values regarding women's sexuality.

2.2. Human Rights Approach. The human rights approach to ending FGM has been influential at an international level, with the UN, the European Parliament, and many governments in the developed world framing FGM as a fundamental violation of the human rights of girls and women. The foundation of this approach is the belief that there are certain universal rights which need to be respected. Some have questioned whether this approach is too "Western centric" in that it is a product of the "Western" liberal democratic tradition, which places emphasis on individual rights rather than "community" rights [29]. Furthermore, some have raised the question of whose "rights" are actually embodied in the UN declaration of human rights [22, 30].

For most participants in the REPLACE project the human rights approach to ending FGM was problematic. Issues such as "choice" and consent [31] were discussed at great length with many asking how FGM can be condemed as a human rights violation when male circumcision is not [32] and when the practice of labioplasty is on the increase amongst "Western" woman [33]. Many also highlighted the inconsistency of the human rights approach to ending FGM, in particular questioning the precedence of the right to the security of the person (Article 3) over issues related to religious beliefs (Article 18). Dustin and Phillips [34] point out that the freedom to practice one's religion, freedom from racial discrimination, and the protection of the rights of the child are all in conflict with each other with respect to the issue of FGM. Most communities involved in the REPLACE study questioned the relevance of the human rights approach to ending FGM due to its focus on individual human rights and lack of cultural relevance and sensitivity particularly with reference to religious freedom. It was perceived that Western liberal interpretations of human rights were being imposed on them. As a result a number of respondents suggested that continuing to perform FGM could be interpreted as a means by which communities retain a sense of their "ethnic identity" particularly if they feel they are being discriminated against by the wider society due to their religious beliefs and perceived "right" to perform FGM [20].

Despite the somewhat problematic nature of the human rights approach, most NGOs and governments have adopted this framework to address the issue. It has undoubtedly been politically powerful, with the European Union adopting a "zero tolerance" approach to FGM, meaning that any form of genital cutting is considered a violation of human rights [35]. Nevertheless, REPLACE demonstrated that the messages developed by NGOs and government bodies to tackle FGM need to account for contradictions inherent in the declaration of human rights and associated legislation [34]. Those adopting a human rights framework need to be aware of the wider social and political structures that enable or constrain individuals, particularly women, to affirm their rights and exercise choice. Indeed, it has been argued that, in order to make human rights messages more powerful, they need to address related complexities and ambiguities that confront FGM affected communities residing in the EU; in other words, they need to exemplify the lived realities of individuals and communities in order to be effective [36]. This is exactly the approach REPLACE adopts.

2.3. Legislative Approach. Most EU Member States have legislation which criminalises the practice of FGM, either as a specific criminal act or as an act of bodily harm or injury. Many countries also have an extraterritoriality clause which makes it illegal for their citizens to travel abroad to have FGM performed. A number of Member States' legislation such as the UK's Female Genital Mutilation Act (2003) only applies to those individuals with permanent residency rights. Therefore, people on temporary residency visas, such as students, as well as undocumented migrants and asylum seekers, are not bound by the legislation.

Even though legislation has been in place for a number of years, there have been few FGM related convictions in the EU. It has been argued that there is a general reticence about enforcing the legislation within the UK, with Phillips [37] arguing that the UK Female Genital Mutilation Act (2003) is simply a "symbolic piece of legislation. . .designed to point a finger of blame at particular cultural communities than to eradicate harms to women" (page 129). There are conflicting data regarding the number of criminal court cases related to FGM across Europe, with Nijboer et al. [8] reporting 42 documented criminal cases relating to FGM in France and the European Institute for Gender Equality noting that there has been 41 cases across 6 Member States relating to FGM [2]. This discrepancy notwithstanding, there is some debate as to whether legislation acts as a deterrent [8] or whether specific criminal law provisions, such as those in the UK, are more

effective in prosecuting and punishing FGM [2]. Nijboer et al. [8] argue that parents and excisors simply become more aware of the legislation and find ways to thwart it; for example, by going to another EU member state where it is believed there is less risk of prosecution, such as the UK. There is evidence to suggest that, because of the lack of prosecutions, particularly in the UK, there is a belief amongst some communities that, because the law has not been enforced, it is unlikely that individuals are going to be prosecuted [6, 38].

What became evident in the research undertaken in the REPLACE project was a lack of understanding of the law related to FGM. Many respondents were under the misapprehension that FGM legislation was only applicable to type III FGM (infibulation) which was recognised by the majority of people involved in the study as a violation of human rights and detrimental to the health of girls and women. Most condemned it as a practice. For the most part, however, the less invasive types of FGM, often referred to as "sunna", were not regarded as "mutilation", and therefore few understood that these forms of FGM are also against the law.

Although it is questionable as to whether legislation alone promotes behaviour change, it does provide an "enabling environment" for both anti-FGM campaigners and community members who have taken the decision to abandon the practice [2]. Legislation therefore provides a structural framework within which campaigners and individuals can reject arguments that promote the continuation of FGM [39]. However, there is a danger that criminalisation drives FGM further "underground", with inexperienced circumcisers conducting the practice [39] or girls and women not seeking health care for complications arising from FGM due to a fear of prosecution [14].

2.4. The Health Approach. Anti-FGM campaigners and international organisations, such as the UN, WHO, and Unicef began to emphasise the negative health consequences of FGM in the early 1980s. Boyle [40] argued that this approach arose out of an agreement between feminist activists and international organisations, that such an approach would be considered "apolitical" and not perceived by affected communities as the imposition of "Western" views and ideologies. This approach focuses on the immediate and long-term health consequences of FGM and the irreversibility of the procedure [16, 22].

Many African women's groups have adopted the health approach in "sensitization" or "sensibilisation" workshops and national campaigns aimed at ending FGM [41]. In their use of it, campaigners have been reluctant to make a clear distinction between the health consequences of less severe forms of FGM such as "clitoral pricking" (Type IV) and "sunna" (Type I/II) and more severe forms, such as infibulation (Type III) [13, 28]. To differentiate between the types of FGM on the basis that one type poses less of a health risk than another might be seen as condoning "milder" forms of the practice and thus undermines their efforts to eliminate all forms of FGM [42].

An unintended consequence of the lack of distinction between FGM types in campaigning has led to more invasive forms of genital cutting being viewed by communities as the only type responsible for negative health outcomes [22, 27, 28]. This finding was confirmed by the REPLACE project. It is not unreasonable to assume that these health messages, particularly highlighting the severity of infibulation, has led to an increase in the "medicalization" of FGM, especially less invasive forms [43]. For example, WHO reports [44] an increase in the number of parents seeking out medical practitioners to carry out the procedure. The REPLACE project found communities accepting the health messages concerning infibulation but not able to relate these messages to other types of FGM. Many queried the stated health complications of "sunna". It was evident that health messages needed to be more specific and targeted at the various types of FGM. It was also found that some individuals and communities involved in the REPLACE project believed that there are health "benefits" to FGM, in which it improves hygiene or "cleanliness" [18, 45]. These arguments are closely related to religious beliefs about "purity" and spiritual cleanliness and thus are difficult to address via a preventive health message. As Berg et al. [46] suggest, beliefs regarding the continuation of FGM exist at multiple levels, and the contradictory nature of some beliefs need to be accounted for in messages aiming to achieve change. For health messages to be effective they need to accurately represent the lived realities of women who have experienced different forms of FGM; otherwise this will lead to what Shell-Duncan et al. [39] call the "credibility gap".

It is difficult to assess the efficacy of these four traditional approaches to ending FGM as few studies have evaluated their success in terms of attitudinal or behaviour change [36]. In addition, without accurate prevalence figures relating to FGM within the EU, it is difficult to measure the success of any of the work aimed at ending FGM to date. The growing numbers of people from FGM affected communities speaking out against the practice are perhaps an indication that there has been some success, but the number of criminal court proceedings highlighted by the EU [2] and anecdotal evidence [6, 18] suggests that FGM continues in an EU context even though it is outlawed.

As part of the REPLACE project, awareness raising information and activities undertaken by anti-FGM campaigners were reviewed. REPLACE found that anti-FGM programmes could in the main be classed as traditional information, education, and communication. Most focussed on the health approach (with some links to bodily and sexual integrity) and the twinned approaches of human rights and the law. Whilst all materials had accurate and relevant information, only a minority attempted behavioural change communication. When there was a focus on behaviour change communication, it very much emphasised the role of the individual, with little if any acknowledgement of community belief systems, and thus was unlikely to change behaviour. The PAR findings showed that there were often dichotomies in the way individuals and groups of individuals received the information disseminated by anti-FGM campaigners, with many campaigners "delivering" information rather than "listening to" and responding to the specific belief systems of the communities in which they were working.

It was clear to the REPLACE team that intervention campaigners needed guidance on how to incorporate behaviour change intervention into their programmes. The findings of the REPLACE project thus indicated that campaigners and activists needed to engage with communities in order to develop context specific messages and strategies that target emotive and rational cognitive processes that inform attitudinal and behaviour change. This can only be done by adopting a community-based participatory action research methodology.

Interventionists also need to have clear measures by which they assess the success of an intervention in terms of attitudinal and behaviour change. Denison et al. [47] have suggested that Ajzen's theory of planned behaviour (TPB) [48] could be highly applicable to the issue of FGM. Undoubtedly, TPB can provide a contribution to our understanding of rational or reflective cognitive process of behaviour, but one also has to take account of the emotional impulses that arise from associative learning and/or innate disposition. Below we outline a behaviour change approach which takes into account the macro and community level structures and the interpersonal and intrapersonal factors that enable and/or constrain behaviour change concerning the issue of FGM.

3. Behaviour Change: The Call for a New Approach

A review of the application of behaviour change approaches within an African context and Europe undertaken by Leye [36] illustrated a lack of agreement as to which approach or approaches were most relevant to the issue of FGM. Arguably, this lack of agreement stems from the fact that behaviour change approaches broadly fall into two categories that we describe as (1) theories which focus on individual behaviour change and (2) those which concentrate on how change occurs at a community level. Shell-Duncan et al. [15] refer to these as (1) decision-theoretic models and (2) game-theoretic models. Decision-theoretic models tend to address the rational, reflective, and systematic cognitive processes that individuals engage in when deciding to act. Shell-Duncan et al. [15] identify that many messages used in anti-FGM campaigns to date have applied this "rational" approach when highlighting, for example, the health risks of FGM and the benefits of remaining uncut. Shell-Duncan et al. [15] criticise the "rational" decision-theoretic models as simplistic cost-benefit analyses and propose game-theoretic approaches, such as Mackie and LeJeune's [19] and social convention theory, as being preferable for understanding behaviour change in relation to FGM.

In describing decision-theoretic models as simplistic cost-benefit analyses, we argue that Shell-Duncan and colleagues [15] are misrepresenting the potential of such theories for contributing to our understanding of the continuation of FGM and for intervening more successfully to promote change. Further illustration of their oversimplification of individualistic or decision-theoretic approaches is provided in their [39] application of the stages of change or transtheoretical model (TTM) [49] to FGM. Although Shell-Duncan et al. [39] consider some wider decision-theoretic behaviour change approaches, the work focuses on the stages of change and decisional balance elements of the TTM alone. Self-efficacy and processes of change, other elements of the TTM, are not considered as potentially relevant. Within their concluding remarks, Shell-Duncan et al. [39] conceded that the issue of behaviour change, with respect to the practice of FGM, "remains poorly understood" (page 130).

We suggest one of the poorly understood aspects of individualistic decision-theoretic theories in this context is that, despite being conceived around psychological processes and their relationship with behaviour or behaviour change within individuals, they are tested on population samples and useful for population-level interventions. We argue that, in order for behavioural change approaches to be more successfully applied in attempts to end FGM, a more coherent and comprehensive understanding of how individualistic decision-theoretic and community level game-theoretic approaches might be integrated, is required. Indeed, this point is noted by Denison et al. [47] when they state that, in order to achieve successful behaviour change, efforts need to be intensified at all levels, which include the individual and group level and community level interventions. In an attempt to move towards achieving this with regards to ending FGM we firstly outline three major game-theoretic or community change models that have been or could be applied to understanding change in FGM practices and some of their strengths and limitations. We then present an example of how concepts from individual (decision-theoretic) and community (game-theoretic) behaviour changes might be synthesised to address the identified limitations.

3.1. Game-Theoretic Approaches, Community Change: Social Convention Theory. Social Convention Theory has been applied to understand harmful traditions and cultural practices, such as foot binding amongst Chinese communities and FGM [19]. Mackie and Le Jeune [19] highlight the wider inequalities in society that perpetuate such practices and how aspects such as gender, class, and the desire to improve one's access to social and economic resources may contribute to the establishment and continuation of the practice. To illustrate, in many FGM affected communities, women who have been cut are considered to have maintained their virginity which is desirable for marriage. Consequently, the convention of cutting females' genitals becomes accepted as a social norm as no family wants to suffer the stigma associated with having a daughter considered "unfit" for marriage. The practice of FGM is embedded and reenforced because decisions made about performing FGM are interdependent on decisions made by other intramarrying families in the communities around them; namely they will have their daughters cut in order to improve their likelihood of securing a good marriage partner. In order to end such a social convention it is argued [19] that a critical mass of families within a community must publically renounce the practice; as it is only when communities desist that, individual families will believe it is acceptable and not detrimental to their status not to cut their daughters. This logic underpins Tostan's community intervention

programme, which culminates in a community visibly and collectively declaring their renunciation of FGM [50].

Abandonment of FGM based on Social Convention Theory is said to be achieved through organised diffusion, involving participants sharing information, persuasion, and debate spread through existing familial and social networks [19]. It is proposed that an entire community need not be persuaded; rather what is required is a motivated critical mass of people to collectively decide that they are willing to abandon the practice. This critical mass need to persuade others to commit to the idea until there are enough (at the tipping point) to act together to make a public commitment to abandon the practice.

3.2. Diffusion of Innovation Theory. Diffusion of Innovation theory [51] arguably offers further theoretical insight into the mechanisms by which one might establish change at a community level. An innovation, in this context, can be any idea, practice, or product that is new to an individual, organization, or population [52]. Diffusion theory describes the characteristics of the people who might adopt an innovation and characteristics of the innovation itself as relevant to individual decision-making and broader adoption in a population [51]. Adopters are classified as innovators, early adopters, early majority, later majority, and laggards, depending on their relevant point of uptake of an innovation. These categories of adopters have been found to have different characteristics (e.g., innovators are venturesome while the late majority are sceptical) that determine their desire to engage with a new innovation and communicate with others about it [53]. If we view the idea of discontinuing the practice of FGM as an innovation, we might describe the people in Mackie and Le Jeune's [19] "critical mass" as innovators and early adopters who may need to engage the early majority in order to reach "the tipping point" for change. What is problematic in terms of ending FGM is determining the characteristics and motivation to ending FGM that typify innovators and early adopters and how can such families be identified and supported.

Abandoning the practice of FGM is likely to be considered as having at least some disadvantages, such as its incompatibly with current behaviour; its complexity; the potential negative impact on social relations; and the potential risks and uncertainty. Consequently, given these likely perceptions, the idea of not practicing FGM is likely to be difficult to diffuse [53]. In addition, Wejnert [54] draws attention to "environmental" factors that affect diffusion including political context, local culture, and increasing levels of globalisation in particular communications and media [54]. In line with Mackie and Le Jeune's [19] argument about the influence of patriarchal society, religion, and culture on the practice of FGM, no one factor is likely to be the direct reason for continuation or discontinuation of the practice (or the spread of innovation), but they are all influential and an important consideration in planning and organising change.

3.3. Community Readiness Model. A third model, the Community Readiness Model, developed by Edwards et al. [55] is also relevant for understanding how those interested in working to end harmful practices such as FGM might aim to bring change at a community level and design targeted and effective interventions. This theory, developed through extensive empirical work on programmes to address drug addiction and domestic violence, proposes nine stages of community readiness shown in Table 1.

In order to apply these stages to identified community problems, Edwards et al. [55] have devised methods for assisting in classification of a community. These include the use of key informants who are nonspecialist community members knowledgeable about the issue under investigation in their community. They also describe methods for applying the approach; these include teaching the theory to community members and letting them devise their own strategies and policies designed to move the community through the stages of readiness. Such influential members of the community may well have the characteristics and motivation to become "innovators" or "early adopters" as they would be known under Diffusion of Innovation Theory. Over the course of the community readiness development, general strategies have been devised for moving communities from each stage to the next, and these strategies have been shared as suggestions with communities who have then developed and adapted these to meet their own needs as appropriate within their community context [55].

3.4. Contribution and Limitations of Community Level (Game-Theoretic) Approaches. Community change approaches such as those outlined above place important emphasis on promoting and facilitating change from within the community. Furthermore, they highlight the importance of challenging the structural constraints that prevent change, for example, promoting positive and supportive environments in which sensitive topics like FGM and sexuality can be discussed [36]. Challenging the material and social constraints preventing abandonment of FGM is embodied in the Tostan programme, which is grounded in Social Convention Theory [50].

Undoubtedly, the Tostan project has made a positive contribution, although Obiora [50] warns us not to perceive a public renouncement of FGM as signalling the elimination of the practice or as the cause of a collective shift. Obiora [50] suggests that the power of cultural and social norms over the individual should not be underestimated, as adherence to these can take precedence over personal intuitions and recognition that continuing the procedure has potential health implications. Indeed, Diop and Askew [56] in their evaluation of NGO intervention strategies in Senegal, Burkina Faso, and Mali report that several traditional practitioners, who underwent "sensitization" programmes and made a statement pledging to abandon FGM, continued the practice. One of the reasons they gave for continuing the practice was that "they were not convinced that what they were doing was wrong" [56, page 134]; this finding supports Obiora's [50] scepticism of public statements renouncing FGM as signifying success. But, more importantly, it highlights the need to construct effective messages that will address the deeply held beliefs of a particular community. If programme developers do

Table 1: Stages of community readiness model (adapted from Edwards et al. [55]).

Stage	Description
No awareness	(i) Community members not conscious of the problem. (ii) Accepting of the issue as part of the way things are.
Denial	(i) Some awareness amongst some community members. (ii) No motivation to act or belief that anything can be done.
Vague awareness	(i) Some community members communicate in general terms about problem. (ii) Poor understanding and no motivation change things.
Preplanning	(i) Clear recognition of the problem. (ii) Community leaders are motivated to take action. (iii) No clear understanding about what action to take.
Preparation	(i) Planning begins to take on focus and detail. (ii) Data may be formally collected to use in planning. (iii) Decisions are made about what needs to be done. (iv) Resources are gathered and put to use. (v) Some community support.
Initiation	(i) Activity or action may have started but is perceived as novel. (ii) Leaders enthusiastic. (iii) Community support.
Stabilisation	(i) General support remains. (ii) Some prevalence tracking going on, supported by an organised and experienced administration. (iii) Ongoing evaluation of efforts likely and low motivation for change or progression.
Confirmation/expansion	(i) Support has grown, and authorities and policy-makers are likely to be on board. (ii) Some evaluation is likely to have happened. (iii) New efforts initiated with plans to reach new and difficult to access groups.
Professionalization	(i) Knowledge and understanding of problem is sophisticated. (ii) Administration is highly skilled. (iii) Community involvement is high, and ongoing evaluation and adaptation are typical.

not consider how the content of programmes, activities, campaigns, and messages are understood and responded to by individuals (and groups of individuals), then the content and nature may be ineffective or less effective than it could otherwise be.

Mackie and Le Jeune [19] acknowledge that beliefs and norms are held and understood at the individual level as well as across groups of people and are equally important to the change process. Similarly, those applying diffusion of innovation to health-relevant issues have noted that "potential adopters' perceptions of what the innovation is like", also need to be taken into consideration [53, page 110]. Thus, beliefs held at the individual level and group level can act as a barrier or can facilitate change. No matter how much communication innovators have with potential early adopters or early adopters have with the "critical mass", if beliefs about an innovation remain negative and unchanged, adoption may not occur.

Social Convention Theory provides insight into why FGM may have become embedded into communities and also presents a general approach for understanding how communities might organise themselves to change. Additionally, research has found empirical support for the applicability of this theory for understanding FGM [15, 39]. Similarly, Diffusion of Innovation Theory identifies factors associated with individuals, the innovation, and the environmental and cultural context that are important to the change process. Likewise, the Community Readiness Theory provides a detailed and evidence-based account and practical approach to organisation of change from within the community. Arguably however, although communication between people and reference to individuals is intrinsic to these community-level change theories, they do not offer an explicit consideration of how best to understand individuals or engage with groups of individuals in the context of a particular belief system.

We argue that integrating community level theories with individualistic theories will provide a framework for understanding how to influence behaviour at an individual and group level in order to facilitate change at a community level. Of the three game-theoretic approaches described above, we would argue that the Community Readiness Model [55] offers the most detailed and practical framework for organising community change, and so we consider this to illustrate integrating community and individualistic approaches.

3.5. How Individualistic (Decision-Theoretic) Models of Behaviour Change Add to Our Understanding. Individualistic models of behaviour change have tended to be used to explain behaviour as performed by a single person (e.g., smoking cessation or reduction of dietary fat intake). The process involved in ending FGM within a community, however, is clearly more complex because it involves cooperation between individuals and families and involves multiple actions and communications by and between multiple actors [47]. In addition, change does not simply occur in a "top-down" manner, but rather change occurs from the "bottom-up" via individuals making particular "choices". It is also important that individuals who are perceived as "belonging" to FGM affected communities

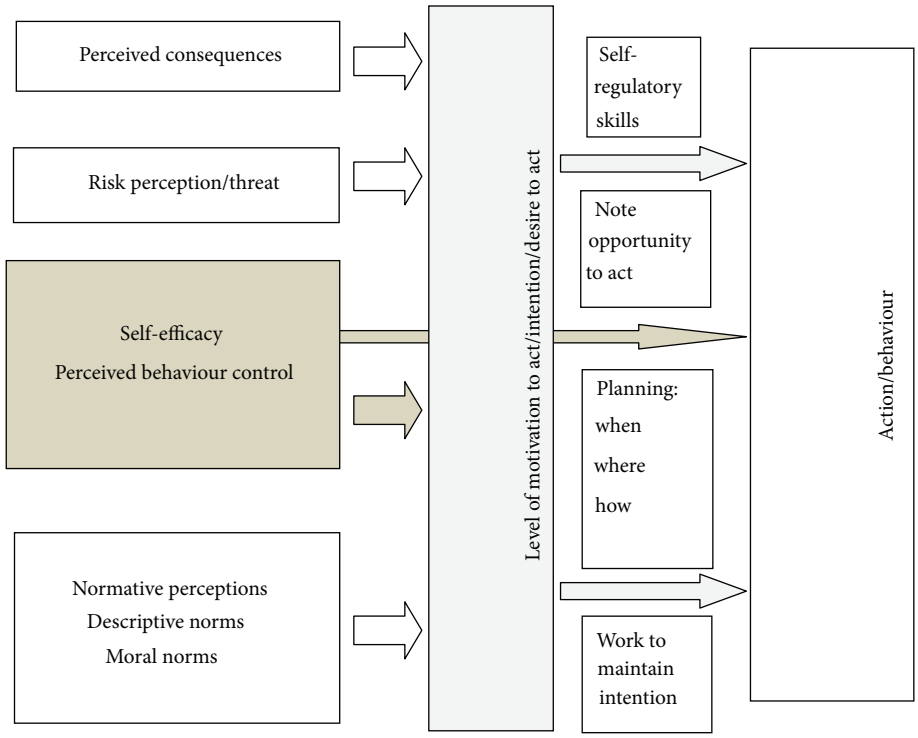

Figure 1: Social Cognitive concepts appearing in many individualistic behaviour change theories.

initiate change from the "bottom-up", as this will improve the level of "buy in" into the proposed change and reduce the possibility of resistance because change will be perceived as occurring from within as opposed to being imposed from the "outside". Individual level models allow us to gain a better understanding of the range of circumstances that enable or prevent a particular behaviour from occurring. From an individual behaviour change perspective, the elimination of FGM is a goal at the end of a complex chain of behaviour. Therefore, we first need to understand the various behaviours and attitude changes that need to occur at the various links of the chain. Concepts from individualistic social cognitive models and individualistic change models (e.g., self-efficacy, decisional balance, moral norms, risk perceptions, and habitual or emotive behaviour), which often broadly overlap [57, 58], and a developing understanding of how these concepts might translate into effective behaviour change techniques [59] offering mechanisms for understanding how to build messages and activities that are likely to support change within the context of a framework such as the Community Readiness Model.

Figure 1 provides an illustration of the major concepts associated with individualistic behaviour change theories and shows how they are often theorised to relate to action or behaviour. Table 2 provides a more detailed description of each concept. Please note that, in this context, the action or behaviour we might conceptualise is not necessarily performing or not performing FGM but should include other behaviours that are part of the community change process. For example, in the community readiness approach, general suggestions are offered for activities to support community movement from each stage to the next, and these activities and behaviours can be placed into the behaviour concept depicted in the far right box in Figure 1.

To illustrate further, let us take some of the behavioural suggestions offered by Edwards et al. [55] in Community Readiness Theory to support movement from the *no awareness* stage to the *denial* stage. These include behaviours such as one-on-one visits with community leaders and members and visiting existing and established small groups to inform them of the issue [55]. These sound like common-sense approaches, but the suggestions provide no information about what the content of the communication should or could be. Instead, the onus is on community members to generate common-sense approaches based on their own knowledge and understanding. If we apply Figure 1 in this context, we might use it to achieve two things. First, if we use it to consider beliefs relevant to performing or not performing FGM within the community, it provides us with a framework to gather information about those beliefs and understand something about how to design messages aimed at challenging those beliefs (in a culturally sensitive way and from within the community) that might influence behaviour. Second, if in the process of communicating we are successful in engaging people on the issue of ending FGM, we might use it to consider their beliefs and help them overcome barriers to engaging in one-on-one visits or making one-on-one phone calls.

To further explicate, let us consider a community that is currently at the *no awareness* stage in terms of ending

Table 2: Explanation of the major concepts from individualistic behaviour change theories (BCTs) adapted from Conner and Norman [57].

Perceived consequences	An individual might hold any number of relevant and salient beliefs or perceptions about the consequences or outcomes of performing (or not performing) a given behaviour (e.g., "having my daughter cut will protect her virginity" or "not having my daughter cut will lead to her being ostracised by our community"). They will also hold evaluations about how desirable such an outcome is (e.g., "protecting my daughter's virginity is extremely important and desirable").
Risk perception/ perceived threat	This is often assessed as measures of perceived susceptibility/vulnerability and perceived severity of the threat. Some have argued that this element of BCTs could be subsumed by *perceived consequences*, in that one might perceive the susceptibility of a threat as an outcome belief (e.g., "going ahead with my daughter's circumcision may cause her to have pain and infections"), and an evaluation of that outcome is akin to perceived severity (e.g., "my daughter experiencing pain and infection is a very bad thing").
Self-efficacy and perceived behavioural control (PBC)	Self-efficacy is often described as confidence in one's ability to perform a particular behaviour, and PBC as perceptions about how in control of performing a behaviour one is. This concept can be thought of as perceptions about barriers or facilitators to action, and these can be both perceived or real; for example, a person may perceive that there is a barrier preventing them from carrying out an action, but in some cases there might actually be real, tangible barriers, such as not having the power or resources to carry out a certain behaviour. Barriers and facilitators can also relate to an individuals' internal (skill-based) and external factors. Believing that one is able to perform a behaviour is critical to the likelihood of performance (e.g., "I know the right people and have enough money to arrange for my daughter to be circumcised" or "I have the strength of character and the conviction to defend my decision not to circumcise my daughter").
Link between self-efficacy/PBC and behaviour	Two theories, the theory of planed behaviour (TPB) and social cognitive theory (SCT), propose a direct relationship between self-efficacy or perceived control behaviour (PBC) and behaviour, as well as a relationship with intention or motivation to act. This is illustrated along with other concepts in Figure 1. Essentially, what this demonstrates is that where perceptions about ability to perform a behaviour reflect actual abilities, there will be a direct impact on behaviour regardless of how motivated an individual is. Ajzen, [48]; e.g., a mother may want to prevent her daughter from being cut but may lack control over this and fail to prevent the cutting.
Normative influences	These are included in various ways in BCTs, and discussion of their involvement in behavioural change has been prevalent. Normative influences refer to perceptions one has about what important individuals others think you should do with regards to a given behaviour (normative beliefs), perceptions about what other people do themselves (descriptive norm), and beliefs about what is right (moral norms). It seems likely that normative influences are very strongly related to decision-making related to FGM.
Intention	This is also known as motivation or desire to carry out a particular action. Intention mediates the relationship between social cognitive processes outlined thus far and behaviour. The only exception is self-efficacy/perceived behaviour control, which, as already outlined, can also have a direct impact on behaviour. The first three stages of change (from the TTM), outlined and adapted in Shell-Duncan and colleagues work on FGM [39], can be said to represent a measure, or continuum, of increasing intention or motivation.
Self-regulatory skills	Once a decision or intention to act has been made, there is consensus by theorists and researchers about the processes involved in translating intention into action. It is widely held that, in order to maintain and remember intentions and respond to opportunities when they arise, various self-regulatory skills are required. Intentions need to be strengthened and protected once formed, and careful plans about how, when, and where are required.
Behaviour or action	This might refer to any behaviour or action relevant to performing or not performing FGM and might include communication about FGM with other community members or any behaviour or activity suggested within Community Readiness Theory.

FGM. Perhaps a handful of community members have begun to identify a need for change (i.e., their beliefs have changed such that they no longer favour practising FGM and want their community to change to end the practice.) The community members may already be aware of the types of beliefs their community holds which lead the community to perceive FGM as a favoured practice, but they might want to use the framework depicted in Figure 1 when talking to other community members to further understand and conceptualise the practice. They may also be able to use it to ascertain what changed for themselves to lead them to want to end the practice and conceptualise their own psychological, motivational, and behavioural changes using Figure 1 to help them understand what might work with others. For example, it may be that reevaluating the belief "FGM is required by our religion" was particularly influential for the community members who have already decided they want to bring about change. This belief can be categorised in the *perceived consequences* concept of Figure 1, since an individual who holds this belief is likely to perceive there will be negative spiritual or religious consequences in not performing FGM. Supporting reevaluation of this belief

could also be influential therefore amongst others. Where a wide range of beliefs related to the practice of FGM and its continuation are identified, samples of people from the community could become involved in making assessments about the relative importance of some beliefs over others and which beliefs might be most appropriate to target. Thus, they use the framework to design the most appropriate messages to use in the suggested strategies proposed by Community Readiness Theory.

In addition, for those whose beliefs may have changed to favour the idea of ending FGM, Figure 1 may be applied to the behaviours and activities suggested by Community Readiness Theory to progress community change. For example, although an individual or group may be in favour of ending FGM, they may hold beliefs that inhibit their ability to engage in communication with other community members through one-on-one visits or other means. It might be that a female community member lacks the *self-efficacy* (see Figure 1 and Table 2) to talk to a male community leader about the issue, and, whilst it is possible that this may have something to do with that persons intrapersonal capacity to engage in this activity, such as low-self esteem, this inability could just as likely be attributed to, whilst it is possible that this may have something to do with that persons intrapersonal capacity to engage in this activity, such as low-self esteem, this inability could be intrinsically connected to wider social structures relating to gender. Nevertheless, Figure 1 can still be employed to identify this as a constraint, and thus consideration can be given to how individuals acting independently or as part of a group can overcome this barrier in relation to their particular social context. In short we propose that a consideration of psychological or social cognitive factors such as those outlined in Figure 1 could provide a framework for constructing the content of messages and activities required to move people through the stages proposed in Community Readiness theory.

4. Conclusion

In this paper we have argued that there may be utility in integrating community level and individualistic behaviour change theories to ending FGM. However, it is important to note that any intervention programme occurs within a particular context; therefore a "one-size fits all" approach is unlikely to succeed. This is particularly pertinent to the issue of FGM affected communities within the EU, where differing diffusion contexts, such as the length of time individuals and communities, have lived in the EU [46]. The REPLACE project explored the wider sociocultural context of FGM amongst Somali and Sudanese communities living in the Netherlands and the UK. The findings of this community based participatory action research clearly demonstrated that, whilst awareness raising and knowledge are important, particularly with respect to the four traditional approaches to tackling FGM, different communities interpreted and responded to them differently and sometimes in unexpected ways. Many of the campaigners' messages were aimed at the individual and did not take into account the community beliefs which supported the continuation of FGM. This combined with the fact that many campaigns lack a BCT basis has resulted in slow progress in ending FGM in the EU.

REPLACE demonstrated that all intervention efforts should begin with a process of community based participatory action research and/or exploration of the current belief systems relevant to any given community before conducting any behaviour change. This is supported by Glanz [60] who posits that participatory action research methods are an integral approach to intervention and evaluation in communities. Furthermore, these methods are consistent with group decision making and allowing the community to take ownership of the change strategies. What we suggest is that, where community-based action is taken in collaboration with those interested in application of behavioural change approaches, an approach that combines community and individualistic approaches is fostered. Clearly, taking such an approach is likely to be time and resource intensive, but we would argue that because the practice is complex, and the time and intensity of fully understanding the nature of continuation are required in order to begin to understand what might work best to end the practice in a given community.

The proposed integration of behavioural change theoretical ideas that we have outlined in this paper is intended to extend the debate and contribute to understandings of how behavioural change approaches might be applied to the issue of ending FGM. We do not assert that this is the only way to consider behaviour change approaches in relation to this issue, and we recommend that more empirical and evaluative work is undertaken to assess the validity and utility of such an approach. Indeed, the work produced by Michie et al. [58] provides a potentially valuable insight by placing behaviour within particular contexts and seeing behaviour and interventions as part of a "system", in which an intervention may have a consequence for other parts of the "system", which might work against sustainable change or in favour of it. This is particularly important in relation to FGM, with particular messages, such as those associated with health operating at different levels and being interconnected with religious beliefs [46]. Furthermore, Michie et al.'s [58] approach acknowledges the complexity associated with agency, that individuals are not a disembodied reason, but act in the way they do because of habit or emotional and social reward. Indeed, we would argue that interventions need to seriously address the emotive and social aspects associated with motivation in relation to FGM and not simply appeal to individuals' reason. Finally, interventions need to be multidimensional and focus on individual, community, and societal level change. This not only demands a multiagency response in terms of third sector and public sector services, but it requires a multidisciplinary participatory approach in order to construct a sound theoretical basis and evaluation of behaviour change approaches to FGM.

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Research Article

Female Genital Mutilation/Cutting: The Secret World of Women as Seen by Men

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Efforts aimed at the abandonment of Female Genital Mutilation/Cutting (FGM/C) in the communities where it is deeply rooted have extensively considered and addressed women's perceptions on the issue, leaving those of men barely acknowledged. Although the practice is generally confined to the secret world of women, it does not mean that men cannot be influential. Indeed, men can play an important role in prevention. In order to address this gap, and having as background an extensive ethnographic field work, a transversal descriptive study was designed to explore Gambian men's knowledge and attitudes towards FGM/C, as well as related practices in their family/household. Results show ethnic identity, more than religion, as the decisive shaping factor on how men conceive and value FGM/C. The greater support towards the practice is found among traditionally practicing groups. A substantial proportion of men intend to have it performed on their daughters, although reporting a low involvement in the decision making process, with very few taking alone the final decision. Only a minority is aware of FGM/C health consequences, but those who understand its negative impact on the health and well-being of girls and women are quite willing to play a role in its prevention.

1. Introduction

Female Genital Mutilation/Cutting (FGM/C) is defined by the World Health Organization (WHO) [1] as all procedures involving partial or total removal of the external female genitalia, or injury to the female genital organs, for non-therapeutic reasons. The WHO classifies the practice into four types: type I (clitoridectomy), type II (excision), and type III (infibulation) are ordered according to a growing level of severity, while type IV comprises all other harmful procedures performed on the female genitalia for nonmedical purposes (e.g., pricking, piercing, incising, scraping, and cauterization).

According to the WHO latest data, 140 million women and girls in the whole world are thought to have been subjected to the practice, and 3 million girls are at risk of having it performed every year. FGM/C constitutes an extreme form of discrimination and violation of the human rights of girls and women, with health consequences now acknowledged and documented. In the short term, the practice can result in shock, haemorrhage, infections, and psychological consequences, while in the long term it can lead to chronic pain, infections, keloids, fibrosis, primary infertility, increase in delivery complications, and psychological sequela/trauma [2–7].

FGM/C has been practiced for centuries, having acquired a deep cultural meaning. Under a shared vision of the world where life is understood in cycles, FGM/C had been linked with the moment in which a girl becomes a woman in many societies. During the rite of passage to adulthood, within

Table 1: FGM/C prevalence rates per region/LGA.

Region	Local government area	Prevalence
Great Banjul Area	Banjul	56.3%
	Kanifing	69.5%
West Coast Region	Brikama	84.5%
Lower River Region	Mansakonko	90.6%
North Bank Region	Kerewan	49.2%
Central River Region	Kuntaur	63.4%
	Janjanbureh	75.9%
Upper River Region	Basse	99.0%

Source: MICS2010, UNICEF The Gambia—GBOs.

Table 2: FGM/C prevalence rates per ethnic group.

Ethnic group	Prevalence
Mandinka/Jahanka	96.7%
Wolof	12.4%
Djola/Karoninka	87.0%
Fula/Tukulor/Lorobo	87.3%
Serer	43.0%
Serahule	97.8%

Source: MICS2010, UNICEF The Gambia—GBOs.

a ceremony secretly kept from outsiders, especially men, initiates were taught about the cultural and social wealth of their community, as well as their roles and responsibilities as women, mothers and wives, establishing gender power relationships [8]. The physical cutting would be the proof that a girl was granted with all necessary teachings that make her worthy to belong to her community. FGM/C had become a synonym of cleanliness, femininity, beauty, and purity, a way to protect virginity, guarantee "family's honour," and ensure marriageability [9, 10].

In The Gambia, the overall prevalence is estimated at 76.3% [11], meaning that it affects approximately 3 out of 4 women. However, this global figure obviates important discrepancies within regions and ethnic groups, as shown in Tables 1 and 2.

Its impact for health has been assessed in two clinical studies conducted in-country by the first author of the present paper, which revealed that 1 out of 3 girls and women presented injuries as a consequence of the practice [12] and the risk of complications during delivery and for the newborn increased 4.5 times for women with FGM/C [13]. Whilst these girls and women will need specific medical care for decades to come, prevention is an urgent step. However, strategies need to be carefully designed in order to respect the deep cultural value of the practice within the communities where it is performed.

Although traditionally the practice was part of the rite of passage to womanhood among certain ethnic groups, as extensively described in an ethnographic research conducted by the first author of this paper [8], over the past generation several changes have been occurring. In a recent study, Shell-Duncan et al. [14] found that the physical cutting is increasingly becoming divorced from the traditional ritual. FGM/C is not a condition to ensure marriageability, but mainly a way to facilitate entry into a social network and have access to social support and resources, with peer pressure playing a major role in its perpetuation.

In order to gather evidence to inform prevention strategies, many studies have focused in women's perception regarding the practice, but much is still unknown about the role played by men on its perpetuation. However, their perception of the "secret world of women" might bring important elements to understand the context in which the practice occurs, as well as enlighten effective ways to involve them in prevention. What lies under their support towards the practice? Do they establish a parallelism with male circumcision, the cutting-off of the penis' foreskin prepuce? Indeed, in all the societies where FGM/C is found, male circumcision is also performed [15], sometimes linked to the rite of passage to adulthood as a keystone component of the socialization process. It has a similar hygienic and aesthetic meaning and an analogous power to preserve ethnic and gender identities [2, 3, 8, 16]. A deep situation analysis on FGM/C conducted in The Gambia in 1999 [17] revealed that some respondents established a parallelism between the two practices. Since Islam endorses male circumcision as an acceptable practice and makes no distinction between genders, some would argue that female circumcision is also prescribed.

Acknowledging this gap, a new line of research is now emerging, interested in exploring how men position themselves on the matter, with the objective of assessing their potential inclusion in preventive actions and programmes. The results obtained so far have showed different—and sometimes contradictory—levels of involvement and support towards FGM/C that seem to be influenced by sociodemographic variables, such as ethnicity and religion [18–20]. Others have highlighted that both men and women blame each other for the continuation of the practice and position themselves as victims [21]. In a recent study conducted in The Gambia with health care professionals [22], it was discovered that FGM/C found higher support among men. While women would give more strength to the deep cultural roots of the tradition, men seemed to privilege a moral perspective, prioritizing the fact that the practice is mandatory by religion and attenuates women's sexual feelings, contributing to family honour.

This study intends to contribute towards this field of research, by exploring the knowledge and attitudes of Gambian men towards FGM/C, as well as practices in their family and household. It expects to help to increase the understanding of the social environment embedding the practice, in order to inform prevention strategies that might successfully accelerate its abandonment.

2. Materials and Methods

2.1. Design of the Study. A transversal descriptive study was designed with the main objective of assessing the knowledge and attitudes of Gambian men on FGM/C, as well as related

practices in their family/household, exploring eventual associations with sociodemographic characteristics.

A secondary objective was to empower and promote knowledge's ownership of the native population, through a strategy designed to build capacities on FGM/C and social research skills. For this reason, the study was integrated in the Practicum of Community Medicine of the School for Enrolled Community Health Nurses and Midwives (ECHN/M) at Mansakonko, Lower River Region. Students were given the responsibility for data collection, under the supervision of their tutors and trainers from Wassu Gambia Kafo (WGK), the non-governmental organization that supported the study.

To ensure the accuracy of this process, students received specific training on social research skills, by a team consisting of a medical anthropologist and ECHN/M tutors. Furthermore, prior to their involvement on this study, students had already been trained on FGM/C identification, management and prevention, as their school is one of the health schools that integrated FGM/C in its Academic Curriculum—an initiative of WGK.

The survey was implemented through questionnaires administered face to face. Taking into consideration the sensitivity of the topic, it was considered that the best strategy to avoid resistance was to administer the questionnaires in the communities where these students were doing their practicum, and in their home villages. In this way, it was ensured that (1) they were known and respected; (2) shared the same cultural background of the interviewees; and (3) were able to speak their local language, what contributed to create an environment of trust conducive to conduct the interviews. The selection of the communities where the practicum was conducted was a responsibility of ECHN/M tutors.

As a consequence of this strategy, the survey was implemented in three regions of the country: Lower River Region, North Bank Region, and West Coast Region. According to Census 2003, the population in the first two regions is predominantly rural (80% approximately), while in West Coast Region is mainly urban (60%) [23]. As stated in Table 1, FGM/C prevalence rates in these regions are 90.6%, 49.2%, and 84.5%, respectively [11].

2.2. Research Population. The overall sample is composed of 993 men. The study intended to capture men with heterogeneous profiles in terms of occupation, age, ethnicity, religion, and marital status, both from rural and urban areas. Due to the fact that this study was integrated on a strategy to build students and tutors capacities on social research, it was considered that a quota sampling method was the most feasible method to apply. Each student was requested to administrate the questionnaire to 30 men.

2.3. KAP Questionnaire. The data collection tool was a questionnaire with nineteen close-ended questions, designed to gather information on men's knowledge and attitudes with regard to FGM/C, related practices in their families/households, and sociodemographic data.

The questionnaire was developed by a researcher and medical anthropologist, having as background former ethnographic studies conducted in the country since 1989 [8].

Although the questionnaire was drawn up in English, the official language of The Gambia, students were carefully instructed to know how to administer it in local languages whenever needed, in order to ensure an accurate understanding of the questions and of what was meant by "FGM/C." In The Gambia, the practice is generally conceived as the equivalent to types I and II as established by WHO, which are the most prevalent in the country (66.2% and 26.3%, resp., [12]). Each ethnic group has specific words to distinguish the "cutting" and the "sealing" formed during the healing process after cutting and repositioning the labia.

2.4. Variables. The five socio-demographic variables comprised occupation (agriculture, livestock, and fishery sector; services sector; health professionals; education professionals; students), age, ethnic group (Mandinka, Wolof, Fula, Djola, Serahule, and Serer), religion (Muslim, Christian), and marital status (married, single). The variables analyzed, chosen from the questionnaire, are presented below. Among them, Q1, Q5, Q8, Q13, and Q15 were selected as active variables for the Cluster Analysis.

(i) *Q1*. Is FGM/C practiced in your family/household? (Yes/No)

(ii) *Q3*. At what age is FGM/C done on girls in your family/household? (0–3/Above 4)

(iii) *Q5*. Do you take part in the decision making process on FGM/C? (Yes/No)

(iv) *Q6*. Who takes the final decision to practice FGM/C on your daughter? (Men/Women/Both men and women/Other relatives, community members)

(v) *Q8*. Do you know of any health consequences related to FGM/C? (Yes/No)

(vi) *Q9*. Is FGM/C a mandatory practice by religion? (Yes/No)

(vii) *Q10*. Is FGM/C equivalent to male circumcision? (Yes/No)

(viii) *Q13*. Do you think men have a role to play in preventing FGM/C? (Yes/No)

(ix) *Q15*. If you have a daughter in the future, do you intend to circumcise her? (Yes/No)

(x) *Q16*. Do you think that the practice of FGM/C should continue? (Yes/No).

2.5. Ethical Aspects. The study was submitted and approved by The Gambia Government/Medical Research Council Laboratories Joint Ethics Committee (Ref: R08002). The purpose of the research was carefully explained and clarified by the students to the interviewees. The administration of the questionnaires only took place after respondents' signature or thumb print on an informed consent that was kept under the custody of WGK. The identity of the participants was maintained through rigorous confidentiality.

2.6. Statistical Analysis. A descriptive analysis was carried out of the main variables, and prevalence proportions (%) and 95% confidence intervals (95% CI) were calculated for the overall sample and, in order to detect differences, for each of the socio-demographic variables (occupation, age, ethnic group, religion, and marital status). Prevalence proportions were compared with Chi-squared test or Fisher's exact test when appropriate. Unspecified data ("other religion" and "other ethnic group") were not taken into account in the analysis.

Statistically significant differences were considered at $P < 0.05$.

A multiple correspondence analysis (MCA) and a cluster analysis were conducted to detect underlying groups of individuals according to their knowledge and attitudes regarding FGM/C, as well as related practices in their families/households, as defined by the active variables. The five socio-demographic variables were included as supplementary information, allowing the identification of opposite profiles of men towards the practice.

The information was computerized via EpiData. Descriptive univariate and bivariate analyses were conducted through SPSS Version 19, while MCA and cluster analysis through SPAD version 5.6.

2.7. Methodological Issues. The main methodological issue regarding this study has to do with the sensitivity of the topic itself, as it is common to find resistance to talk openly about FGM/C, especially to an outsider. This was addressed by giving Gambian students the responsibility for interviewing people in communities where they were known and respected. Another methodological issue is related to the fact that Serahule's sample size was quite small (only 12 individuals).

3. Results

The socio-demographic characteristics of the respondents are shown in Table 5. The sample was composed predominantly of young men, their mean age being 36.5 years old, with Muslim affiliation (96.2%). The majority were married (74.4%) and worked in agriculture, livestock, and fishery (51.3%) or in services sector (20.6%). However, the sample also included education and health care professionals (7.8% and 7.0%, resp.) and a few students (7.6%). With regard to ethnicity, 41.2% were Mandinka, 19.9% Wolof, 17.6% Fula, 9.7% Djola, and 1.2% Serahule.

The prevalence proportions and 95% CI of knowledge, attitudes, and practices, according to socio-demographic variables, are presented in Table 3. FGM/C appears in this study as a widespread practice, with a prevalence rate (70.0%) not far from the most recent official data (76.3%). A total of 61.8% men embrace its continuation and 60.7% intend to have it performed on their daughters in the future. Although FGM/C is mainly performed by families affiliated with Islam (72.5% versus 27.3% Christians, $P < 0.05$), prevalence proportions disagree amongst Muslims with different ethnic backgrounds. With statistically significant differences, traditionally practicing groups (Mandinka, Djola, Fula, and Serahule) are the ones reporting the highest prevalence rates in their families/households, expressing the highest support towards the continuation of the practice and the strongest willingness to have it performed on their daughters.

Also with statistically significant differences, almost 60% of Mandinka consider FGM/C as equivalent to men's circumcision, a parallelism that is established by 47.3% Djola, 43.8% Fula and 33.3% Serahule. Whilst 75% Serahule and 72.8% Mandinka believe that the practice is mandatory by Islam, only 56.0% Fula, and 36.4% Djola do so. Serer and Wolof, which are also Muslims but traditionally nonpracticing groups, do not establish a connection between the practice and Islam neither acknowledge a parallelism between FGM/C and male circumcision—indeed, around 95% of Wolof and 90% of Serer deny it ($P < 0.05$). Interesting but not statis-tically significant, men over 60 years old establish the relation between FGM/C and Islam and its equivalence with male circumcision in a higher percentage than other age groups.

In the overall sample, almost 72.0% of men do not know that FGM/C has a negative impact on the health and well-being of girls and women. The highest awareness is found among Wolof men (47.9%, $P < 0.05$), health and education professionals (48.0% and 46.3%, $P < 0.05$). Although not being a statistically significant trend, it is found that awareness of FGM/C health consequences decreases with age, with the lower levels being found among men over 60 years old (15.4%). Also interesting but not statistically significant is to find that the group of men between 31 and 45, who have the highest awareness of FGM/C health consequences, are also the less supportive of the practice, with a lower intention to have it performed on their daughters and the highest willingness of seeing men intervening in its prevention. The negative impact that the practice has on the health and welfare of girls and women is, indeed, the major reason given by 72.9% of those who, on the overall sample, are against its perpetuation.

This study also reveals that over 39.8% of girls are subjected to FGM/C before completing their fourth anniversary. This is mainly reported by men between 31 and 45, whilst men above 60 report the practice to occur when the girl child has already completed 4 years old (67.4%, $P < 0.05$).

A minority of men take part in this decision-making process, especially if they are not married (married 39.3%, single 21.1%, $P < 0.05$). Only 8.0% take the final decision towards subjecting their daughters to the practice, and 6.2% join the wives in this decision (Table 4). FGM/C appears mainly as a women's choice (75.8%) or a decision of other relatives and community members (10.0%). Since there is no statistically significant association with the socio-demographic variables, this information is not shown in Table 4.

Cluster Analysis. The cluster analysis revealed statistically significant differences for ethnicity and religious affiliation, allowing the identification of two profiles of respondents

Table 3: Knowledge, attitudes, and practices according to socio-demographic variables.

(a)

	Q1. Is FGM/C practiced in your family/household?[a]			Q3. At what age is FGM/C done on girls in your family/household?[b,c]			Q5. Do you take part in the decision making process on FGM/C in your family?[a,c]		
	n	%	(95% CI)	*n*	%	(95% CI)	*n*	%	(95% CI)
Total	694	70.0		251	39.8		241	34.8	
Occupation									
Agriculture, livestock, and fishery sector	316	64.1	(59.8; 68.4)	109	37.8	(32.2; 43.5)	109	34.6	(29.2; 40.0)
Services sector	151	75.9	(69.7; 82.1)	54	41.2	(32.7; 49.7)	60	39.7	(31.6; 47.9)
Health professionals	55	82.1	(72.2; 92.0)	20	40.0	(26.3; 53.7)	21	38.9	(24.7; 52.8)
Education professionals	50	66.7	(55.3; 78.0)	19	38.8	(25.0; 52.6)	15	30.0	(16.3; 43.7)
Students	56	76.7	(66.3; 87.1)	17	34.7	(21.2; 48.1)	11	19.6	(8.3; 30.9)
		$P = 0.001$			$P = 0.973$			$P = 0.099$	
Age									
16–30 years	294	72.4	(67.9; 76.9)	94	34.8	(29.1; 40.5)	67	22.9	(17.9; 27.8)
31–45 years	255	65.7	(60.9; 70.6)	110	48.7	(42.1; 55.2)	117	46.1	(39.7; 52.4)
46–60 years	94	68.6	(60.5; 76.7)	32	36.4	(26.2; 46.5)	45	47.4	(36.8; 57.9)
+60 years	51	85.0	(75.1; 94.9)	15	32.6	(18.9; 46.3)	12	24.0	(11.2; 36.8)
		$P = 0.011$			$P = 0.009$			$P < 0.0001$	
Ethnic group									
Mandinka	394	97.8	(96.2; 99.3)	159	44.8	(39.6; 50.0)	144	36.6	(61.8; 41.5)
Wolof	10	5.1	(1.8; 8.5)	3	33.3	(0.6; 66.1)	3	33.3	(7.5; 70.1)
Fula	153	89.0	(84.0; 93.9)	48	34.0	(26.2; 41.9)	49	32.0	(24.3; 39.7)
Serahule	10	83.3	(51.6; 97.9)	4	40.0	(7.9; 72.1)	4	40.0	(12.2; 73.8)
Djola	95	100	(96.2; 100.0)	26	29.9	(20.2; 39.6)	31	32.6	(22.7; 42.6)
Serer	10	17.2	(6.7; 27.8)	4	44.4	(9.9; 78.9)	3	30.0	(6.7; 35.2)
		$P < 0.0001$			$P = 0.093$			$P = 0.910$	
Religion									
Muslim	651	72.5	(69.5; 75.5)	242	40.8	(36.8; 44.8)	231	35.6	(31.8; 39.4)
Christian	9	27.3	(10.6; 44.0)	2	22.2	—	1	9.0	—
		$P < 0.0001$			$P = 0.324$			$P = 0.127$	
Marital status									
Married	483	69.1	(65.6; 72.6)	188	42.9	(38.3; 47.6)	189	39.3	(34.8; 73.8)
Single	175	72.9	(67.1; 78.7)	51	32.5	(25.1; 38.2)	37	21.1	(14.8; 27.5)
		$P = 0.265$			$P = 0.022$			$P < 0.0001$	

[a]To allow a better understanding of the results, the table only presents the percentage of men who answered "yes" to the question.
[b]To allow a better understanding of the results, the table only presents the percentage of men who answered "0–3 years old" to the question.
[c]Only answered if replied "yes" in Q1.

(b)

	Q8. Do you know of any health consequences related to FGM/C?[a]			Q9. Is FGM/C a mandatory practice by religion?[a]			Q10. Is FGM/C equivalent to male circumcision?[a]		
	n	%	(95% CI)	*n*	%	(95% CI)	*n*	%	(95% CI)
Total	280	28.3		443	46.2		388	39.8	
Occupation									
Agriculture, livestock, and fishery sector	122	24.7	(20.7; 28.6)	196	41.4	(36.8; 45.9)	175	36.2	(31.8; 40.5)
Services sector	48	24.2	(18.0; 30.5)	108	56.0	(48.7; 63.2)	92	46.9	(39.7; 54.2)

(b) Continued.

	Q8. Do you know of any health consequences related to FGM/C?[a]			Q9. Is FGM/C a mandatory practice by religion?[a]			Q10. Is FGM/C equivalent to male circumcision?[a]		
	n	%	(95% CI)	*n*	%	(95% CI)	*n*	%	(95% CI)
Health professionals	31	46.3	(33.6; 59.0)	30	47.6	(34.5; 60.7)	26	39.4	(26.8; 51.9)
Education professionals	36	48.0	(36.0; 60.0)	33	44.6	(32.6; 56.6)	28	38.4	(26.5; 50.2)
Students	19	26.0	(15.3; 36.8)	30	41.7	(29.6; 53.7)	27	50.0	(35.7; 64.3)
		$P < 0.001$			$P = 0.011$			$P = 0.081$	
Age									
16–30 years	117	28.7	(24.2; 33.3)	178	45.3	(40.2; 50.3)	163	40.6	(35.7; 45.6)
31–45 years	122	31.5	(26.8; 36.3)	170	45.1	(39.9; 50.2)	142	37.4	(32.4; 42.4)
46–60 years	33	24.1	(16.6; 31.6)	64	49.2	(40.3; 58.2)	54	40.0	(31.4; 48.6)
+60 years	8	15.4	(4.6; 26.2)	31	53.4	(39.7; 67.1)	29	49.2	(35.5; 62.8)
		$P = 0.20$			$P = 0.568$			$P = 0.360$	
Ethnic group									
Mandinka	97	24.0	(19.7; 28.3)	283	72.8	(68.2; 77.3)	234	59.4	(54.4; 64.4)
Wolof	93	47.9	(40.7; 55.2)	9	4.7	(1.5; 8.0)	10	5.2	(1.8; 8.5)
Fula	33	19.2	(13.0; 25.4)	93	56.0	(48.2; 63.9)	74	43.8	(36.0; 51.6)
Serahule	4	33.3	(9.9; 65.1)	9	75	(42.8; 94.5)	4	33.3	(9.9; 65.1)
Djola	16	16.8	(8.8; 24.9)	32	36.4	(25.7; 47.0)	44	47.3	(36.6; 58.0)
Serer	12	20.7	(9.4; 32.0)	6	10.3	(1.6; 19.0)	5	8.6	(2.9; 19.0)
		$P < 0.0001$			$P < 0.0001$			$P < 0.0001$	
Religion									
Muslim	253	28.2	(25.2; 31.2)	423	48.7	(45.3; 52.1)	364	41.1	(37.8; 44.4)
Christian	11	33.3	(15.7; 50.9)	3	9.1	(1.9; 24.3)	6	18.8	(7.2; 36.4)
		$P = 0.518$			$P < 0.0001$			$P = 0.011$	
Marital status									
Married	199	28.5	(25.1; 31.9)	312	46.6	(42.8; 50.5)	271	39.4	(35.7; 43.2)
Single	66	27.4	(21.5; 33.2)	108	45.6	(39.0; 52.1)	95	39.7	(33.3; 46.2)
		$P = 0.378$			$P = 0.777$			$P = 0.934$	

[a]To allow a better understanding of the results, the table only presents the percentage of men who answered "yes" to the question.

(c)

	Q13. Do you think men have a role to play in preventing FGM/C?[a]			Q15. If you have a daughter in the future, do you intend to circumcise her?[a]			Q16. Do you think that the practice of FGM/C should continue?[a]		
	n	%	(95% CI)	*n*	%	(95% CI)	*n*	%	(95% CI)
Total	510	51.6		583	60.9		605	61.8	
Occupation									
Agriculture, livestock, and fishery sector	252	51.2	(46.7; 55.7)	275	56.7	(52.2; 61.2)	284	58.4	(54.0; 62.9)
Services sector	95	47.7	(40.5; 54.9)	130	68.8	(61.9; 75.7)	137	69.2	(62.5; 75.9)
Health professionals	38	57.6	(44.9; 70.3)	38	63.3	(50.3; 76.4)	38	59.4	(46.6; 72.2)
Education professionals	48	65.3	(53.9; 76.8)	44	59.5	(47.6; 71.3)	45	60.8	(49.0; 72.6)
Students	30	41.1	(29.1; 53.1)	40	55.6	(43.4; 67.7)	43	58.9	(46.9; 70.9)
		$P = 0.05$			$P = 0.019$			$P = 0.055$	
Age									
16–30 years	192	47.3	(42.3; 52.3)	253	63.4	(58.6; 68.3)	262	65.0	(60.2; 69.8)
31–45 years	218	56.3	(51.3; 61.4)	214	57.1	(51.9; 62.2)	215	56.3	(51.2; 61.4)

(c) Continued.

	Q13. Do you think men have a role to play in preventing FGM/C?[a]			Q15. If you have a daughter in the future, do you intend to circumcise her?[a]			Q16. Do you think that the practice of FGM/C should continue?[a]		
	n	%	(95% CI)	n	%	(95% CI)	n	%	(95% CI)
46–60 years	70	51.1	(42.4; 59.8)	78	62.4	(53.5; 71.3)	89	66.4	(58.0; 74.8)
+60 years	30	50.8	(37.2; 64.5)	38	64.4	(51.3; 77.5)	39	66.1	(53.2; 79.0)
	$P = 0.089$			$P = 0.286$			$P = 0.039$		
Ethnic group									
Mandinka	151	37.5	(32.6; 42.3)	342	88.4	(85.0; 91.7)	345	87.1	(83.7; 90.6)
Wolof	163	83.6	(78.1; 89.0)	10	5.2	(1.8; 8.6)	18	9.2	(4.9; 13.6)
Fula	73	42.7	(35.0; 50.4)	121	72.0	(64.9; 79.1)	129	76.3	(69.6; 83.0)
Serahule	5	41.7	(15.2; 72.3)	8	66.7	(34.9; 90.1)	7	63.6	(30.8; 89.1)
Djola	34	35.8	(25.6; 46.0)	76	84.4	(76.4; 92.5)	78	83.0	(74.8; 91.1)
Serer	46	80.7	(69.6; 91.8)	9	16.4	(5.7; 27.1)	12	21.1	(9.6; 32.5)
	$P < 0.0001$			$P < 0.0001$			$P < 0.0001$		
Religion									
Muslim	445	49.7	(46.3; 53.0)	554	63.7	(60.4; 66.9)	574	64.6	(61.4; 67.8)
Christian	25	75.6	(59.6; 91.9)	5	15.6	(5.3; 32.8)	6	18.2	(7.0; 35.5)
	$P = 0.003$			$P < 0.0001$			$P < 0.0001$		
Marital status									
Married	360	51.7	(47.9; 55.4)	408	60.8	(57.0; 64.6)	419	61.0	(57.3; 64.7)
Single	124	51.7	(45.1; 58.2)	143	60.3	(53.9; 66.8)	152	63.3	(57.0; 69.6)
	$P = 0.996$			$P = 0.899$			$P = 0.520$		

[a]To allow a better understanding of the results, the table only presents the percentage of men who answered "yes" to the question.

Table 4: Knowledge, attitudes, and practices.

Q6. Who takes the final decision to practice FGM/C on your daughter?[a]	n	%
Men	53	8.0
Women	502	75.8
Both men and women	41	6.2
Other relatives/community members	66	10.0
Total	662	100.0

[a]Only answered if replied "yes" in Q1.

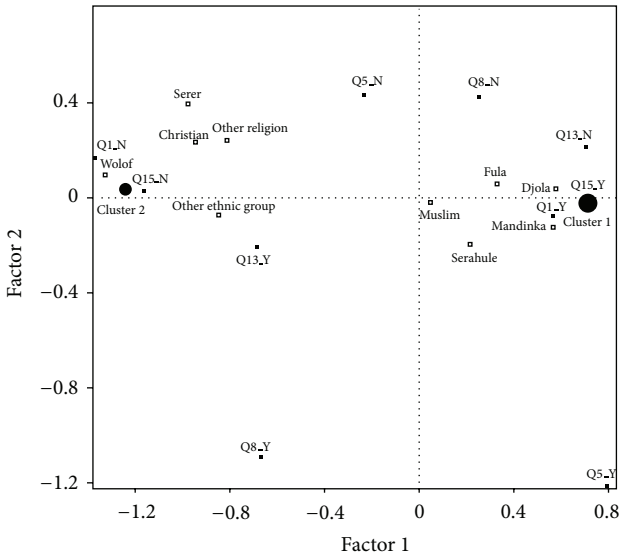

Figure 1: Multiple correspondence analysis.

which are identified in Clusters 1 and 2 (Tables 5 and 6, and Figure 1).

Cluster 1 is composed of those men who declare, on a rate statistically significant and higher than the overall sample, that FGM/C is practiced in their families/households (99.7% versus 67.4%); that they are involved in the decision making process (37.0% versus 25.6%); intend to have it performed on their own daughters (92.5% versus 60.9%); are not aware of the practice having health consequences (82.9% versus 71.7%); and do not think that men have a role to play in its prevention (68.8% versus 48.4%). This cluster comprises almost two-thirds of the overall sample (65.1%) and is overrepresented by men from Mandinka, Fula, Serahule, and Djola ethnic origins, with Muslim affiliation.

Cluster 2 comprises the remaining one-third of the total sample and is composed of those men whose knowledge,

Table 5: Socio-demographic description of sample and clusters.

	Cluster 1 (n = 646; 65.1%)		Cluster 2 (n = 347; 34.9%)		Total sample (n = 993)	
	N	%	N	%	N	%
Age						
16–30 years	272	42.1	135	38.9	407	41.0
31–45 years	240	37.2	148	42.7	388	39.1
46–60 years	92	14.2	46	13.3	138	13.9
+60 years	42	6.5	18	5.2	60	6.0
Total	**646**	**100.0**	**347**	**100.0**	**993**	**100.0**
Occupation						
Agriculture, livestock, and fishery sector	295	47.0	200	59.3	495	51.3
Services sector	146	23.3	53	15.7	199	20.6
Health professionals	49	7.8	18	5.3	67	7.0
Education professionals	45	7.2	30	8.9	75	7.8
Students	48	7.7	25	7.4	73	7.6
Other	44	7.0	11	3.3	55	5.7
Total	**627**	**100.0**	**337**	**100.0**	**964**	**100.0**
Ethnic group						
Mandinka	382	59.8*	22	6.4	404	41.2
Wolof	9	1.4	186	54.4*	195	19.9
Fula	133	20.8*	40	11.7	173	17.6
Serahule	10	1.6	2	0.6	12	1.2
Djola	84	13.1*	11	3.2	95	9.7
Serer	9	1.4	49	14.3*	58	5.9
Other	12	1.9	32	9.4	44	4.5
Total	**639**	**100.0**	**342**	**100.0**	**981**	**100.0**
Religion						
Muslim	608	98.5*	292	91.5	900	96.2
Christian	9	1.5	24	7.5*	33	3.5
Other	0	0.0	3	0.9	3	0.3
Total	**617**	**100.0**	**319**	**100.0**	**936**	**100.0**
Marital status						
Married	450	73.8	250	75.5	700	74.4
Single	160	26.2	81	24.5	241	25.6
Total	**610**	**100.0**	**331**	**100.0**	**941**	**100.0**

*Occurrence is significantly overrepresented in the given cluster than in the whole sample ($P < 0.001$).

attitudes, and practices are opposite to the ones expressed by men in Cluster 1. This group gathers those who report, on a rate statistically significant and lower than the overall sample, that FGM/C is not practiced in their family/households (80.7% versus 30.0%); that they are not involved in the decision making process (87.2% versus 74.4%); do not intent to have it performed on their daughters (96.0% versus 39.1%); are aware that the practice has health consequences (47.0% versus 28.3%); and believe that men have a role to play in its prevention (86.1% versus 51.6%). In this group, Wolof and Serer ethnic origins are overrepresented, together with the Christian religion (7.5% versus 3.5%).

4. Discussion

Seen through men's eyes, the secret world of women remains embedded in cloudy concepts shaped by culture in ethnic tradition, also influenced by religion. All ethnicities included in this study follow Islam, but each one of them establishes a different relation between FGM/C and religion. While those from traditionally practicing groups tend to consider the practice as a religious injunction or as "Sunna," finding justification for its continuation, almost all those from traditionally nonpracticing groups deny that the practice is an obligation in Islam. FGM/C is, in fact, a pre-Islamic practice.

Table 6: Description of the clusters (active variables).

Variable label	Characteristic categories	Percent of category in cluster	Percent of category in sample
Cluster 1			
Q1. Is FGM/C practiced in your family/household?	Yes	99.7	70.0
Q5. Do you take part in the decision making process on FGM/C?	Yes	37.0	25.7
Q8. Do you know of any health consequences related to FGM/C?	No	82.9	71.4
Q13. Do you think men have a role to play in preventing FGM/C?	No	68.8	48.4
Q15. If you have a daughter in the future, do you intend to circumcise her?	Yes	92.5	60.7
Cluster 2			
Q1. Is FGM/C practiced in your family/household?	No	80.7	30.0
Q5. Do you take part in the decision making process on FGM/C?	No	87.2	74.3
Q8. Do you know of any health consequences related to FGM/C?	Yes	47.0	28.6
Q13. Do you think men have a role to play in preventing FGM/C?	Yes	86.1	51.6
Q15. If you have a daughter in the future, do you intend to circumcise her?	No	96.0	39.3

Even within traditionally practicing groups, perceptions diverge substantially. Mandinka found FGM/C on its mandatory character by Islam and are eager to consider it as equivalent to male circumcision. Serahule share the same religious conviction but do not establish the equivalence with the male practice, in opposition to Djola, for whom religion does not seem to be significant but the parallelism with male circumcision is more evident. Although sharing the same nationality and religion, ethnic identities are built up on different cultural values and social norms, which are the decisive shaping factors of men's concept of the practice. Ethnicity's power to influence the knowledge, attitudes, and practices with regard to FGM/C had already been shown in a previous study conducted with Gambian health care professionals, by the same authors of this paper [22].

Amongst older men, FGM/C is seen as a mandatory practice by religion, equivalent to male circumcision, with no health consequences. But a window of opportunity for change is found among younger generations. Men between 31 and 45 are the less supportive towards the practice, have the lowest intention to have it performed on their daughters and the highest willingness to play a role in its prevention, and are also the group more aware of FGM/C health consequences. Can this increased knowledge and less supportive attitudes be linked, and on this foundation built on a strategy for prevention? This and other findings from this study suggest that it can. Indeed, among the group of men who are against the continuation of the practice, health consequences are presented as the major reason to stop its continuation. Health and education professionals, who are the ones more aware of FGM/C health consequences, show more willingness to participate in prevention.

The fact that the majority of men are not active in the decision making process concerning the practice does not mean that they do not have the power to influence it. The finding that 60.7% of men intend to have FGM/C performed on their daughters in the future, but only 34.8% actually participate in the decision-making process and a few 14.2% take the final decision, alone (8.0%) or with their wives (6.2%), suggests that decision-making is not a simple one-way process. Indeed, field work evidence reveals that women who decide that their daughters will not undergo the practice face, not only peer pressure, but also feelings of helplessness when not actively supported by their husbands, as well as other influential male leaders from their communities. In a patriarchal society, although men might not be actively participating in FGM/C decision making process, they are still decision-makers.

The finding that decisions concerning FGM/C can be made by multiple actors including women, men, relatives, and community members corroborates the results achieved by Shell-Duncan et al. in a study recently conducted in The Gambia and Senegal [14]. These authors explain that the multiplicity of decision makers and peer pressure among women makes individuals less able to act upon intentions to carry on with the practice or not. In the secret world of women, avoiding discrimination is a powerful motif to perpetuate FGM/C, and this social force must be acknowledged. However, men's power to influence it should also not be disregarded.

Over the past generation, FGM/C practices have changed in many ways in Gambian societies. The group ritual in the "bush" is giving place to individual ceremonies behind doors [14]. Field experience reveals that the traditional knife, used to perform FGM/C on a number of girls without being sterilized, is being replaced with individual razor blades, as a result of HIV/AIDS awareness campaigns. Similarly, traditional herbs and charms, used to manage bleeding, relief pain and accelerate the healing process, are being complemented with modern drugs. Nowadays some babies and girls are taken to health facilities when health complications cannot be managed at community level, in opposition to the secrecy that characterized the seclusion period in the past. Sometimes, FGM/C is even performed by health professionals themselves: medicalization is already a reality in the country [22]. Finally, the age at which the practice

is performed is declining—our study reveals that over 40% of Gambian girls are subjected to FGM/C before celebrating their fourth anniversary. This reduction may be explained by the belief that wounds heal faster and pain is lower for babies than for grown-up girls.

This paper suggests that new actors can be called on stage to play an important role in FGM/C prevention. May knowledge be shared and synergies be built up, in order to promote positive changes that lead to the abandonment of the practice.

5. Conclusions

Although sharing the same religious beliefs, men from traditionally and nontraditionally practicing groups see the relation between the practice and Islam in different ways and have diverse perceptions of its parallelism with male circumcision. Differences are also significant within traditionally practicing groups, showing how ethnic identities are the decisive shaping factors on how men conceive and value FGM/C.

The decision to subject or not a girl to the practice appears as the result of a complex process involving multiple actors. Although few men are active participants in this process, their intention to have FGM/C performed on their daughters is likely to influence it. The support towards the practice is highly dependent on ethnic identity, being much higher among men from traditionally practicing groups. However, awareness on FGM/C health complications is prone to positively influence men's willingness to play a role in its prevention. In this line of thought, a strategy of acknowledging men's ethnic background and focusing on increasing their understanding of FGM/C negative impact on health might well be an effective way to influence and promote a positive change to the secret world of women.

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Review Article

The Obstetric Consequences of Female Genital Mutilation/Cutting: A Systematic Review and Meta-Analysis

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Various forms of female genital mutilation/cutting (FGM/C) have been performed for millennia and continue to be prevalent in parts of Africa. Although the health consequences following FGM/C have been broadly investigated, divergent study results have called into question whether FGM/C is associated with obstetric consequences. To clarify the present state of empirical research, we conducted a systematic review of the scientific literature and quantitative meta-analyses of the obstetric consequences of FGM/C. We included 44 primary studies, of which 28 were comparative, involving almost 3 million participants. The methodological study quality was generally low, but several studies reported the same outcome and were sufficiently similar to warrant pooling of effect sizes in meta-analyses. The meta-analyses results showed that prolonged labor, obstetric lacerations, instrumental delivery, obstetric hemorrhage, and difficult delivery are markedly associated with FGM/C, indicating that FGM/C is a factor in their occurrence and significantly increases the risk of delivery complications. There was no significant difference in risk with respect to cesarean section and episiotomy. These results can make up the background documentation for health promotion and health care decisions that inform work to reduce the prevalence of FGM/C and improve the quality of services related to the consequences of FGM/C.

1. Introduction

Various forms of female genital mutilation/cutting (FGM/C) have been performed for millennia [1] and continue to be prevalent in many parts of the world, especially in Africa [2]. The procedure, variously termed across disciplines and perspectives, is classified by the World Health Organization into four types depending on the extent of tissue removed, where type III, infibulation, is the most extensive [3]. The procedure of infibulation derives its name from the Roman word *fibula* (clasp), which was fastened through the prepuce of men and labia of women to enforce chastity. While a range of socioreligious issues foster the practice, to this day a conviction that FGM/C is necessary to control women's sexuality exists in many practicing communities [2, 4]. Studies have also revealed that many members of practicing communities believe that the procedure ensures safe labour [5, 6].

Survey data document that across the world, between 100 and 140 million girls/women are presently living with FGM/C [3] and its health consequences. The medical and related health consequences following FGM/C on a short- and long-term basis have been broadly investigated. Obermeyer's two reviews of the consequences of FGM/C for health and sexuality are informative, highlighting that there exist statistically higher risks for some but not all investigated types of health conditions [7, 8]. A more recent systematic review of the sexual consequences from FGM/C included meta-analysis results, showing that women with FGM/C were more likely than women without FGM/C to experience pain during intercourse, reduced sexual satisfaction, and reduced sexual desire [9]. The medical profession has been particularly concerned about the risk of adverse obstetric events for women who have undergone FGM/C. The WHO literature report of the health complications from FGM/C which highlighted sequela in childbirth [10] provides the most comprehensive summary of such complications. The review was not systematic, according to today's internationally recognized standards [11–13], since there were no explicit eligibility criteria, quality appraisal, or data synthesis. However, in the WHO report, it is concluded

that "the serious obstetric consequences of FGM, when it is performed prior to the index pregnancy, are mainly due to the scarring resulting from FGM" [10, page 12]. In fact, a range of studies suggests that the most plausible pathway of effect between FGM/C and obstetric harm is inelastic scar tissue [14–20]. However, divergent results among such studies and statements by scholars, physicians, and policy experts claiming that "reproductive health and medical complications associated with female genital surgeries in Africa are infrequent events" [21, page 22] have called into question whether FGM/C is associated with obstetric consequences for women.

To address systematic review omissions in the literature, clarify the present state of empirical research, and enable the quantification of the obstetric health impacts of FGM/C at the population level using burden of harm and comparative risk assessment methodology, we conducted a systematic review of the scientific literature and quantitative meta-analyses. To the best of our knowledge, this is the first meta-analysis to summarize the evidence for associations between FGM/C and outcomes related to maternal obstetric health. This systematic review is an abridged and revised communication of a technical report conducted at the Norwegian Knowledge Centre for the Health Services [22].

2. Materials and Methods

We followed an open process for this systematic review with input from stakeholders and a protocol, published in PROSPERO, that followed standards for systematic reviews [11, 12, 23]. A full technical report with detailed search strategies, methods, and evidence tables is available elsewhere [22].

2.1. The Literature Search. We conducted comprehensive and systematic searches in MEDLINE (Appendix A), African Index Medicus, British Nursing Index and Archive, CINAHL, the Cochrane Library (Cochrane Central Register of Controlled Trials, Cochrane Database of Systematic Reviews, Database of Abstracts of Reviews of Effects, and Health Technology Assessment Database), EMBASE, PILOTS, POPLINE, PsycINFO, Social Services Abstracts, Sociological Abstracts, and WHOLIS for studies published in January 2012. To maximize the sensitivity of database searches, we neither applied methodology search filters nor restricted the searches to any specific languages or publication dates. We supplemented the electronic database searches with searching in sources for the grey literature (OpenGrey, OpenSigle, OAIster), browsing websites of international organizations that are engaged in projects regarding FGM/C, searching reference lists of relevant reviews and all included studies, and communicating with experts in the field.

2.2. Study Selection. The processes of study selection, methodological quality appraisal, and data extraction were conducted by two investigators, first independently and then jointly. Discrepancies were resolved through discussion and further inspection of the texts. If consensus had not been reached, we would have consulted a third person, but this was not necessary.

Two investigators first screened titles and abstracts. We retrieved the full text of potentially relevant studies, reviewing each article using a standardized form with a priori eligibility criteria. We included studies providing quantitative data on physical consequences if they were of any study design, except qualitative studies. Study design features (as defined in the Cochrane glossary [11]), not study design labels, were used to designate the studies. Methodological study quality was not a basis for inclusion/exclusion. Eligible population was women who had been subjected to any type of FGM/C, and the exposure or event of interest was FGM/C, classified as type I to type IV according to the WHO modified typology [3]. We excluded consequences of a woman's FGM/C on other individuals, such as effects on babies during birth. Both studies with and without a comparison group were considered. Concerning outcomes, the range of physical outcomes were included. Given the volume of data deemed eligible (185 studies), in this communication, we report on obstetric consequences in women with FGM/C compared to women with no FGM/C, including the obstetric outcomes most frequently reported. Other outcomes and results will be detailed in forthcoming technical reports available from the Norwegian Knowledge Centre for the Health Services.

2.3. Methodological Quality Assessment and Data Extraction. Two investigators rated the methodological quality of included studies using design specific checklists and extracted data using a standardized form. We extracted information on study characteristics, sample, exposure to FGM/C, outcomes, and results. Outcomes were general and specific measures of consequences following FGM/C (e.g., episiotomy, lacerations). When outcome data were missing in the publication, we contacted the corresponding author(s) via e-mail and requested that they send us the data. We grouped the data according to outcomes across types of studies, prioritizing in this communication to detail results from studies with highest internal validity (studies which compared groups of women with FGM/C to women without FGM/C).

2.4. Data Analysis and Rating the Body of Evidence. We conducted meta-analyses in RevMan v5.2.4 [24] when studies were sufficiently similar in terms of design, population, exposure, and outcomes. We combined risk ratios for dichotomous outcomes using the Mantel-Haenszel random-effects model, which weighted studies by the inverse of their variances, giving more weight to precise studies. Continuous outcomes were combined using inverse-variance random effects meta-analysis, calculating mean differences with 95% CIs. We quantified statistical heterogeneity using the χ^2 and I^2 statistics where a high value shows that most of the variability across studies is due to heterogeneity rather than to chance. We conducted sensitivity analyses for study type and outcome (definition and measurement) when possible. For clarity of presentation, when such tests showed no significant differences we present the final meta-analysis result.

We calculated absolute risk differences for the adverse events to enhance interpretation of results. It shows the additional absolute risk of obstetric harm when FGM/C had been carried out.

Lastly, two investigators independently evaluated strength of evidence using the Grading of Recommendations Assessment, Development and Evaluation approach (GRADE), with GRADE-Profiler v3.6 [25], to assess the extent to which we could have confidence in the effect estimates [26]. For each outcome eligible for meta-analysis, we examined five domains: methodological quality of study, consistency, directness, precision, and publication bias. If admissible, we would have examined also strength of evidence of association, evidence of a dose-response gradient, and all plausible confounders. In the GRADE system, randomized trials always begin with a "high" strength of evidence that can be downgraded, and observational studies begin with a "low" strength of evidence that can be further downgraded but can also be upgraded (see [27] and http://gradeworkinggroup.org/). In this systematic review, all included studies were necessarily observational; thus, the evaluation of evidence started from a position of low quality. We used the standard definitions in grading the quality of the evidence, assigning an overall grade of "high," "moderate," "low," or "very low" strength of evidence [27].

3. Result and Discussion

A total of 5,109 unique study reports were identified (Figure 1). After sorting eligible studies according to outcomes, we included 44 primary publications reporting on obstetric outcomes: 21 comparative studies [14–20, 28–47], 7 single group cross-sectional studies [48–54], 5 case series [6, 55–58], and 4 case reports [59–62].

3.1. Description of the Included Literature. In line with the prioritization to present results from the studies with highest internal validity, the 16 noncomparative studies are relegated to Appendix B. The 28 comparative studies were published between 1985 and 2011, with the majority (68%) published after 2000 (Table 1). Most studies were published in peer-reviewed journals (86%), three were reports [34, 40, 41], and there was one conference abstract included [38]. Three quarters of the studies were judged to be of low methodological study quality, 14% of moderate quality, and 11% of high methodological quality. It was a strength that in all studies, except 5 registry studies [18, 36–38, 45], the authors explained that the nonexposed group (non-FGM/C) was selected from the same population as the exposed group (FGM/C). When groups being compared are selected from different populations it offers less confidence in the effect estimates. Unfortunately, most of the studies failed to show that the groups were comparable with respect to important background factors and whether the person who assessed the outcome was blind to whether participants were exposed (had FGM/C) or not. Three of the comparative studies were Demographic and Health Surveys (DHS), which are nationally-representative household surveys [40, 41, 46], 1 study was based on a representative survey of households in Egypt [47], while the majority (68%) was nonrandom, clinical, or hospital-based studies. The representative surveys showed a self-reported prevalence of problems during delivery of 3%–40% across types of FGM/C [40, 41].

Overall, the 28 included comparative studies involved almost 3 million women (2,974 569; range 114–2,18 million). Most of the studies (71%) were conducted in a country in Africa, but 8 studies were carried out in a country in Europe or North America, and 1 study was from Saudi Arabia. Across the studies, the women's mean age was 26. With respect to FGM/C characteristics, 5 registry studies [18, 36–38, 45] appeared to include only women with FGM/C type III. In each of the remaining 16 studies that explained which type of FGM/C the women had been subjected to, there was a mix of genital alterations, but the most common type of FGM/C was type III (ca 41% of the women). About 31% of the women were described as having FGM/C type II and 22% as type I. In the majority of the studies (64%), the women were examined gynaecologically, generally both to confirm whether or not they had been subjected to FGM/C and to which type of FGM/C they had been subjected. Data regarding age of cutting and who performed the procedure were scarce, but when such data were available, typically, the women self-reported the FGM/C procedure to early childhood (mean age ca 7) and to a traditional circumciser. The most frequently reported outcomes were cesarean section, episiotomy, and obstetric tears. The majority of the studies (57%) had clinically measured obstetric outcomes, but 33% relied on women's self-report, and 2 studies did not explain how the outcomes were ascertained [30, 38].

3.2. Synthesis of Data. Several studies reported the same outcome and were sufficiently similar to warrant pooling of effect sizes in meta-analyses. Altogether we could conduct meta-analyses for the outcomes prolonged labor, obstetric tears/lacerations, caesarean section, episiotomy, instrumental delivery, obstetric/postpartum hemorrhage, and difficult labor/dystocia. The outcome data from each study are shown with the meta-analyses or in tables. Unless otherwise noted, all data are published data, and as shown in the figures, the meta-analyses evidenced large, unexplained heterogeneity across studies.

As a reiteration of the preceding section and a preface to the results and discussion in the latter part of the article, we stress that when it comes to establishing a causal relationship between exposure to a procedure such as FGM/C and an outcome, evidence based on observational studies will be appreciably weaker (usually) than evidence from experimental studies (to prove cause and effect, association is not enough: all plausible alternative explanations must be ruled out. This is best achieved through controlled research designs, but also through strength of evidence of association and evidence of a dose-response gradient [63]). In this systematic review, all included studies were necessarily observational and the majority of the studies had methodological shortcomings. Using GRADE, we judged the quality of the evidence for all outcomes as "very low," which is defined "we have very little

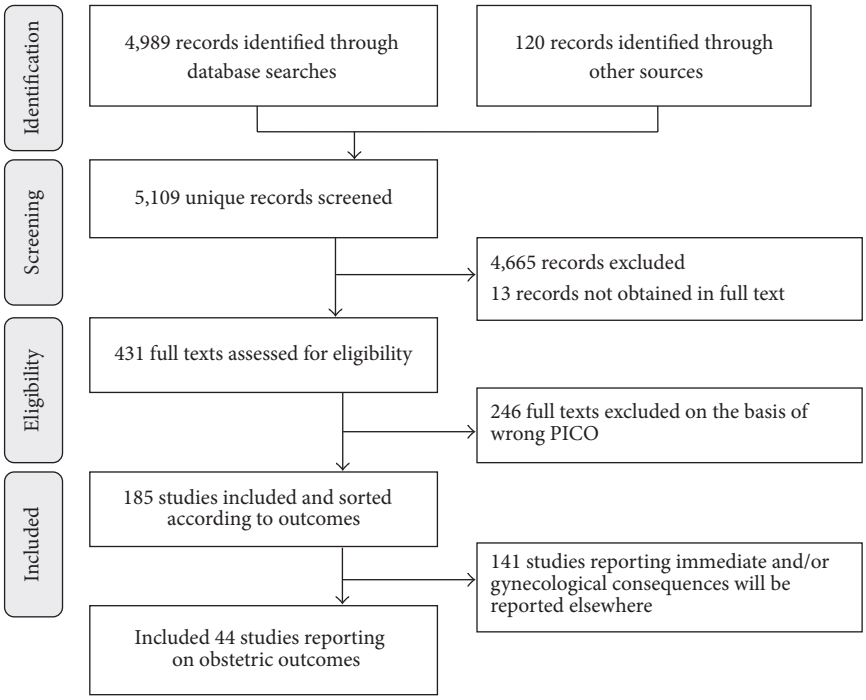

Figure 1: PRISMA flow diagram of the literature reviewing process.

confidence in the effect estimate: the true effect is likely to be substantially different from the estimate of effect" [27].

3.2.1. Prolonged Labor. Nine studies measured differences between women with FGM/C and women without FGM/C with respect to prolonged labor. We conducted meta-analysis for this outcome, pooling available data from five studies reporting a dichotomous measure of prolonged labor. Altogether, 715,079 women were included, of whom 6324 had FGM/C type I–IV. The outcome data are shown with the meta-analysis (Figure 2). Evident from the forest plot, there was a statistically significant difference between the two groups of women, favoring the non-FGM/C group (RR = 1.69, 95% CI = 1.03, 2.77). The absolute risk difference was 3 more cases of prolonged labor among women with FGM/C (95% CI = 0–8 more per 100 women).

Four studies presented prolonged labor as a continuous outcome, but essential data were missing to calculate mean difference, and/or the outcomes were not sufficiently similar to warrant meta-analyses. As shown in Table 2, the duration of labor for women with FGM/C versus non-FGM/C women varied across the studies with no observable pattern.

3.2.2. Obstetric Tears/Lacerations. Regarding the outcome obstetric lacerations, we found a significant effect (15 studies, RR = 1.38, 95% CI = 1.07, 1.79; Figure 3). The absolute risk difference was 1,5 more cases of lacerations among women with FGM/C (95% CI = 0–3 more per 100 women). In total, 738,672 women were included, and 17,961 had been subjected to FGM/C of type I–IV.

3.2.3. Caesarean Section. A total of 15 studies reported the prevalence of cesarean section for women with FGM/C compared to women without. There were 2.7 million women included in the meta-analysis, of whom 41,306 had FGM/C type I–IV. As evident from the forest plot (Figure 4), no statistically significant difference for cesarean section was found (RR = 1.19, 95% CI = 0.94, 1.51). The absolute risk difference was 8 more cases of caesarean section among women with FGM/C (95% CI = 0–18 more per 100 women).

3.2.4. Episiotomy. We also conducted meta-analysis of the outcome episiotomy (Figure 5). In total, 35,467 women were included, and 23,869 (67%) had FGM/C type I–IV. No significant effect for this outcome was found (11 studies, RR = 1.26, 95% CI = 0.97, 1.64). The absolute risk difference was 6 more cases of episiotomy among women with FGM/C (95% CI = 1 fewer to 14 more per 100 women).

3.2.5. Instrumental Delivery. Eight studies, including 3 registry studies, reported on instrumental delivery (2.3 million women, of whom 12,557 had FGM/C type I–IV). In the studies, instrumental delivery was described as ventouse, forceps, operative, or instrumental delivery. These studies' results are presented in Figure 6 with the results of the meta-analysis. Sensitivity analyses were conducted for study type and showed a significant difference between the cross-sectional studies and the registry studies. The pooled result from the cross-sectional studies where the study participants were selected from the same population shows that women with FGM/C are more likely than women with no FGM/C to require instrumental delivery (RR = 1.65, 95% CI = 1.29, 2.12).

Table 1: Included comparative studies reporting on obstetric events ($n = 28$).

Author, year	Method study quality	Population total N (cut)	Country/origin	Age	FGM/C characteristics	Outcomes (self-report or clinical verification)
Adinma 1997 [28]	Low	$N = 256$ (124)	Nigeria	16–40	Type: 22% TI, 78% TII (gyn exam) Age cut/by: 97% in childhood/not stated	Episiotomy (self-report)
Berardi et al. 1985 [29]	Low	$N = 852$ (71)	France	Not stated	Type: 100% TII (gyn exam) Age cut/by: not stated	Tears; cesarean section; episiotomy (clinical)
Bohoussou et al. 1986 [30]	Low	$N = 4935$ (1099)	Ivory Coast	Not stated	Type: 29% TI, 73% TII (gyn exam) Age cut/by: not stated	Prolonged labor; tears; cesarean section; episiotomy; instrumental delivery (not stated)
Browning et al. 2010 [31]	High	$N = 492$ (255)	Ethiopia	Mean 28.5	Type: 100% TI and TII (gyn exam) Age cut/by: not stated	Prolonged labor (clinical)
Chibber et al. 2011 [32]	Low	$N = 4800$ (1842)	Not stated	Not stated	Type: "type I to III most common" (gyn exam) Age cut/by: not stated	Prolonged labor; cesarean section; hemorrhage (clinical)
De Silva 1989 [33]	Low	$N = 2157$ (167)	Saudi Arabia	Not stated	Type: 9% TI, 34% TII, 32% TIII (gyn exam) Age cut/by: not stated	Prolonged labor; tears; cesarean section; episiotomy; instrumental delivery; hemorrhage (clinical)
Diop et al. 1998 [34]	Low	$N = 5390$ (4359)	Mali	Mean 27.0	Type: 21% TI, 73% TII, 6% TIII (gyn exam) Age cut/by: not stated	Tears; episiotomy; hemorrhage (clinical)
Elnashar and Abdelhady 2007 [35]	Low	$N = 264$ (200)	Egypt	Not stated	Type: "circumcised" (self-report) Age cut/by: not stated	Tears; cesarean section; episiotomy (self-report)
Essén et al. 2005 [36]	Moderate	$N = 2554$ (68)	Sweden	Not stated	Type: most TIII (gyn exam) Age cut/by: not stated	Prolonged labor (clinical)
Hakim 2001 [14]	Low	$N = 1481$ (1225)	Ethiopia	Mean 25.9	Type: 12% TI, 85% TII, 3% TIII (not stated) Age cut/by: not stated	Prolonged labor; tears; episiotomy; hemorrhage (clinical)
Johnson 2005 [37]	Low	$N = 5416$ (579)	USA	Most 20–34	Type: most likely type III (assumed, unverified). Age cut/by: not stated	Tears; cesarean section; instrumental delivery; hemorrhage (clinical)
Jones et al. 1999 [15][b]	Low	$N = 1920$ (1787)	Burkina Faso	Mean 26.6	Type: 56% TI, 39% TII, 5% TIII (gyn exam) Age cut/by median 9.5 yrs/not stated	Difficult labor (self-report)
Jones et al. 1999 [15][b]	Moderate	$N = 5337$ (5017)	Mali	Mean 25.0	Type: 21% TI, 74% TII, 5% TIII (gyn exam) Age cut/by: not stated	Difficult labor (clinical)
Larsen and Okonofua 2002 [16]	Low	$N = 1836$ (1009)	Nigeria	15–49	Type: 71% TI, 25% TII, 3% TIII, 1% TIV (gyn exam). Age cut/by: not stated	Prolonged labor; tears; cesarean section; episiotomy (self-report)
Lupo and Marcotte 1999 [38]	Low	$N = 114$ (38)	USA	Not stated	Type: "female circumcision" (not stated) Age cut/by: not stated	Tears (not stated)
Millogo-Traore et al. 2007 [39]	Low	$N = 454$ (227)	Burkina Faso	Median 25	Type: 28% TI, 69% TII, 3% TIII (gyn exam) Age cut/by: not stated	Prolonged labor; tears; episiotomy; instrumental delivery (clinical)
National Statistics Office 1995 [40]	Low	$N = 4775$[a]	Eritrea	15–49	Type: 62% TI, 4% TII, 34% TIII (self-report) Age cut/by: 60% ≤5 yrs/91% tc	Problems during delivery (self-report)

Table 1: Continued.

Author, year	Method study quality	Population total N (cut)	Country/origin	Age	FGM/C characteristics	Outcomes (self-report or clinical verification)
NSEO 2003 [41]	Low	N = 7765[a]	Eritrea	15–49	Type: 4% TI-II, 39% TIII, 46% TIV (self-report) Age cut/by: 62% ≤1 yr/84% tc	Problems during delivery (self-report)
Ndlaye et al. 2010 [42]	Low	N = 354 (210)	Burkina Faso	Mean 24.0	Type: 47% TI, 47% TII, 6% TIII (gyn exam) Age cut/by: not stated	Tears; cesarean section; episiotomy; hemorrhage (clinical)
Oduro et al. 2006 [43]	High	N = 5071 (1466)	Ghana	Mean 25.8	Type: "type II is the commonest form" (gyn exam). Age cut/by: not stated	Cesarean section (clinical)
Orji and Babalola 2006 [17]	Low	N = 500 (423)	Nigeria	Mean 27.5	Type: 87% TI, 13% TII (gyn exam) Age cut/by: 95% cut in childhood/80% tc, 14% hcp	Cesarean section; episiotomy (self-report)
Slanger et al. 2002 [44]	Moderate	N = 1107 (621)	Nigeria	Mean 33.7	Type: 72% TI, 24% TII, 4% TIII + IV (gyn exam), Age cut/by: 95% cut in childhood/80% tc, 14% hcp	Tears; cesarean section; episiotomy; instrumental delivery; hemorrhage; fever (self-report)
Small et al. 2008 [45]	Low	N = 2179322 (10431)	Multiple[c]	Most 20–34	Type: most likely type III (assumed, unverified). Age cut/by: not stated	Cesarean section; instrumental delivery (clinical)
Vangen et al. 2002 [18]	Low	N = 703925 (1733)	Norway	Not stated	Type: most likely type III (assumed, unverified). Age cut/by: not stated	Prolonged labor; tears; cesarean section; hemorrhage (clinical)
WHO study group 2006 [19]	High	N = 28393 (21222)	Multiple[d]	Mean 26.3	Type: 32% TI, 37% TII, 31% TIII (gyn exam) Age cut/by: not stated	Tears; cesarean section; episiotomy; hemorrhage (clinical)
Wuest et al. 2009 [20]	Low	N = 232 (122)	Switzerland	Mean 28.0	Type: 17% TI, 24% TII, 48% TIII, 11% TIV (gyn exam). Age cut/by: not stated	Prolonged labor; tears; cesarean section; episiotomy; instrumental delivery; hemorrhage (clinical)
Yount and Abraham 2007 [46]	Moderate	N = 3167 (1071)	Kenya	15–49	Type: "had undergone FGC" (self-report) Age cut/by: not stated	Cesarean section (self-report)
Yount and Carrera 2006 [47]	Low	N = 1700[a]	Egypt	17–55	Type: 4% TI, 73% TII, 23% TIV (self-report) Age cut/by: mode 9-10 yrs/93% tc, 4% hcp	Pregnancy loss (self-report): 39% TI, 42% TII, 43% TIV

Legend: Method: Methodological; TI: FGM/C type I; TII: FGM/C type II; TIII: FGM/C type III; TIV: FGM/C type IV; gyn exam: FGM/C status verified through gynecological examination; self-report: FGM/C status based on self-report; hcp: health care provider; tc: traditional circumciser; [a]different types of FGM/C were compared; [b]Jones et al. 1999 [15] consists of two studies, reported in same publication; [c]Australia, Belgium, Canada, Finland, Norway, and Sweden; [d]Burkina Faso, Ghana, Kenya, Nigeria, Sudan, and Senegal.

Table 2: Continuous study outcomes and effect estimates.

Author, year	Outcome	FGM/C group	Non-FGM/C group	Results Mean diff (95% CI)
Browning et al. 2010 [31]	Days in labor	3.1 (1.7) days	2.8 (1.5) days	0.30 (0.02, 0.58)*
Essén et al. 2005 [36]	Duration of labor stage 2	35 min[a]	53 min	—
Hakim 2001 [14]	Duration of labor stage 1	11.8 (4.7) hrs (708 min)	11.6 (2.2) hrs (696 min)	0.20 (−0.54, 0.94)
	Duration of labor stage 2	41.5 (13.3) min	40.1 (3.2) min	1.40 (−0.08, 2.88)
	Duration of labor stage 3	11.0 (4.0) min	11.1 (4.5) min	−0.10 (−1.40, 1.20)
Wuest et al. 2009 [20]	Duration of labor stage 1	220 min[a]	300 min	—
	Duration of labor stage 2	39 min	45 min	—
	Maternal blood loss	400 mL (range 200–1000)	350 mL (range 100–3500)	−50 (P = 0.81)

Legend: Mean diff: mean difference; [a]Essén et al. 2005 [36] and Wuest et al. 2009 [20] reported duration of labor as median minutes (not mean); *statistically significant.

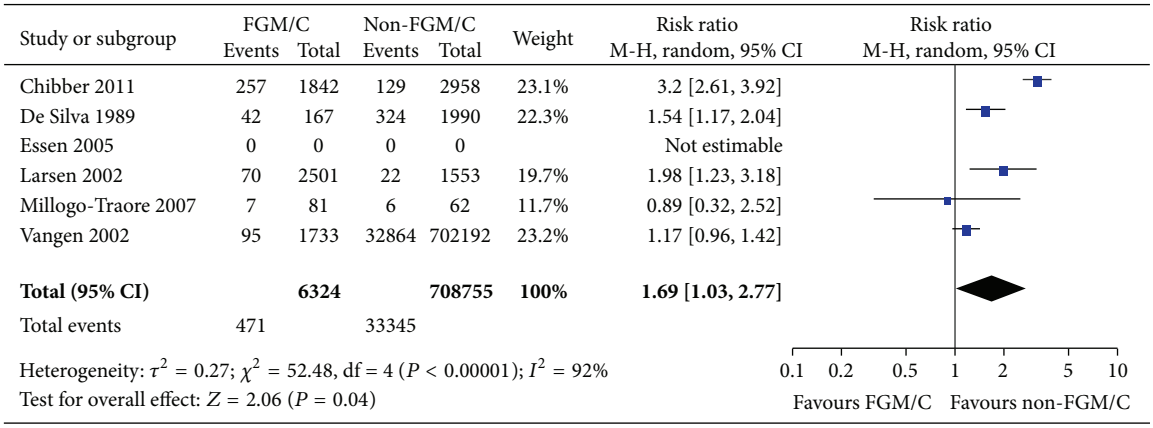

Figure 2: Forest plot, prolonged labor. Note: Sensitivity analyses for outcome (prolonged labor stage) and study type were not statistically significant. Data were missing in Essén et al. [36], and we did not succeed in obtaining data from the authors; thus, results from this study are not estimable.

The absolute risk difference was 2 more cases of instrumental delivery among women with FGM/C (95% CI = 1–4 more per 100 women). Conversely, registry studies, comparing Somali-born women (likely FGM/C type III) and Western-born women without FGM/C showed no statistically significant difference between the two groups of women with respect to instrumental delivery (RR = 0.96, 95% CI = 0.59, 1.54). There was large, unexplained heterogeneity across the registry studies, but not the cross-sectional studies.

3.2.6. Obstetric/Postpartum Hemorrhage. Ten included studies measured differences between women with FGM/C and without FGM/C with respect to obstetric hemorrhage. Nine of the studies measured this as a dichotomous outcome and were sufficiently similar to warrant pooling in meta-analysis. There were 746,667 women included, and women with FGM/C type I–IV made up 3.7%. As shown in Figure 7, there was a significant effect (RR = 2.04, 95% CI = 1.36, 3.05). The absolute risk difference was 5 more cases of obstetric hemorrhage among women with FGM/C (95% CI = 2–9 more per 100 women).

One study [20] used a continuous measure for maternal blood loss during labor, measured as mL blood loss, which ranged from 100 to 3500 mL among the patients (Table 2). Women who had gone through FGM/C experienced a median of 50 mL blood loss more than non-FGM/C women during labor.

3.2.7. Difficult Labor/Dystocia. Regarding the outcome difficult labor, seven studies examined this outcome among women with FGM/C and women without FGM/C. In total, there were 11,659 women, of whom 3252 had FGM/C type I–IV. The sensitivity analysis demonstrated a significant difference between cross-sectional, Africa-based studies and the registry study. The pooled result from cross-sectional studies where the participants were selected from the same population shows that women with FGM/C are more likely than women with no FGM/C to experience difficult labor (Figure 8, RR = 3.35, 95% CI = 1.71, 6.55). The absolute risk difference was 5 more cases of difficult labor among women with FGM/C (95% CI = 1–12 more per 100 women). Conversely, the registry study, comparing Somali-born women (likely FGM/C type III) and US-born women showed no statistically significant difference between the two groups of women regarding difficult labor (Figure 8, RR = 1.29, 95% CI = 0.95, 1.74).

Study or subgroup	FGM/C Events	FGM/C Total	Non-FGM/C Events	Non-FGM/C Total	Weight	Risk ratio M-H, random, 95% CI
Berardi 1985	13	62	22	698	6.6%	6.65 [3.53, 12.55]
Bohoussou 1986	63	1097	138	3836	9.6%	1.6 [1.19, 2.13]
De Silva 1989	11	167	27	1894	6.2%	4.62 [2.33, 9.15]
Diop 1998	0	0	0	0		Not estimable
Elnashar 2007	15	169	2	47	2.5%	2.09 [0.49, 8.8]
Hakim 2001	171	489	20	50	9%	0.87 [0.61, 1.25]
Johnson 2005	251	579	1537	4837	10.7%	1.36 [1.23, 1.51]
Larsen 2002	55	2501	25	1553	8%	1.37 [0.86, 2.18]
Lupo 1999	4	17	7	34	3.8%	1.14 [0.39, 3.37]
Millogo-Traore 2007	23	227	13	227	6.4%	1.77 [0.92, 3.41]
Ndiaye 2010	14	187	1	143	1.4%	10.71 [1.42, 80.47]
Slanger 2002	25	621	17	486	6.8%	1.15 [0.63, 2.11]
Vangen 2002	56	1733	22299	702192	9.8%	1.02 [0.79, 1.32]
WHO study group 2006	1067	9990	544	4604	10.7%	0.9 [0.82, 1]
Wuest 2009	21	122	51	110	8.3%	0.37 [0.24, 0.58]
Total (95% CI)		**17961**		**720711**	**100%**	**1.38 [1.07, 1.79]**
Total events	1789		24703			

Heterogeneity: $\tau^2 = 0.16$; $\chi^2 = 121.77$, df = 13 ($P < 0.00001$); $I^2 = 89\%$

Test for overall effect: $Z = 2.44$ ($P = 0.01$)

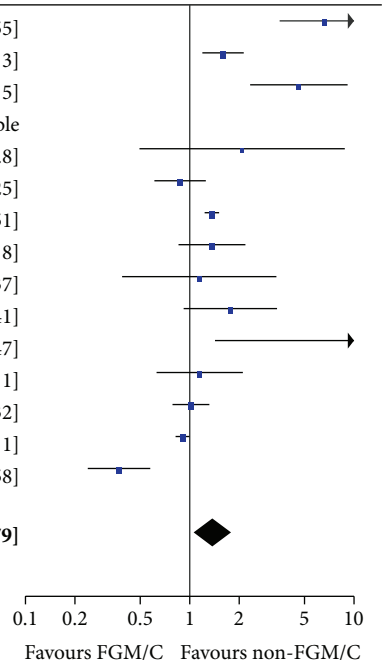

Figure 3: Forest plot, obstetric tears/lacerations. Note: Sensitivity analyses for outcome (degree of tears) and study type were not statistically significant. Data were missing in Diop et al. [34], and we did not succeed in obtaining data from the authors; thus, results from this study are not estimable. WHO study group [19]: unpublished data.

Study or subgroup	FGM/C Events	FGM/C Total	Non-FGM/C Events	Non-FGM/C Total	Weight	Risk ratio M-H, random, 95% CI
Berardi 1985	9	71	86	781	5.5%	1.15 [0.61, 2.19]
Bohoussou 1986	376	1097	1212	3836	9.1%	1.08 [0.99, 1.19]
Chibber 2011	884	1842	532	2958	9.1%	2.67 [2.44, 2.92]
De Silva 1989	7	167	96	1990	4.8%	0.87 [0.41, 1.84]
Elnashar 2007	10	169	3	47	2.6%	0.93 [0.27, 3.23]
Johnson 2005	138	579	1019	4837	8.9%	1.13 [0.97, 1.32]
Larsen 2002	21	508	28	393	6.2%	0.58 [0.33, 1.01]
Ndiaye 2010	23	210	1	144	1.2%	15.77 [2.15, 115.48]
Oduro 2006	120	1466	241	3605	8.6%	1.22 [0.99, 1.51]
Slanger 2002	32	621	42	486	7%	0.6 [0.38, 0.93]
Small 2008	1873	10428	348425	1970353	9.2%	1.02 [0.97, 1.06]
Vangen 2002	330	1733	87210	702192	9.1%	1.53 [1.39, 1.69]
WHO study group 2006	1250	21222	510	7171	9.1%	0.83 [0.75, 0.91]
Wuest 2009	18	122	3	110	2.8%	5.41 [1.64, 17.87]
Yount 2007	32	1071	48	2096	7%	1.3 [0.84, 2.03]
Total (95% CI)		**41306**		**2700999**	**100%**	**1.19 [0.94, 1.51]**
Total events	5123		439456			

Heterogeneity: $\tau^2 = 0.16$; $\chi^2 = 473.25$, df = 14 ($P < 0.00001$); $I^2 = 97\%$

Test for overall effect: $Z = 1.46$ ($P = 0.14$)

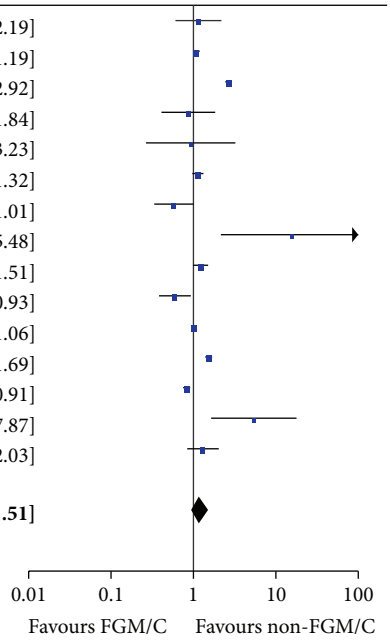

Figure 4: Forest plot, cesarean section. Note: Sensitivity analyses for study type were not statistically significant.

Study or subgroup	FGM/C Events	FGM/C Total	Non-FGM/C Events	Non-FGM/C Total	Weight	Risk ratio M-H, random, 95% CI
Adinma 1997	47	124	46	132	9%	1.09 [0.79, 1.5]
Berardi 1985	16	62	178	698	8.1%	1.01 [0.65, 1.57]
De Silva 1989	92	167	882	1894	10.1%	1.18 [1.02, 1.37]
Diop 1998	0	0	0	0		Not estimable
Elnashar 2007	150	169	33	47	9.9%	1.26 [1.04, 1.53]
Hakim 2001	527	1225	63	256	9.7%	1.75 [1.4, 2.19]
Larsen 2002	189	2501	216	1553	9.9%	0.54 [0.45, 0.65]
Millogo-Traore 2007	95	227	56	227	9.4%	1.7 [1.29, 2.23]
Ndiaye 2010	68	187	10	143	6.5%	5.2 [2.78, 9.74]
Slanger 2002	162	621	180	486	10%	0.7 [0.59, 0.84]
WHO study group 2006	9541	18464	1992	6052	10.4%	1.57 [1.51, 1.63]
Wuest 2009	24	122	16	110	6.9%	1.35 [0.76, 2.41]
Total (95% CI)		**23869**		**11598**	**100%**	**1.26 [0.97, 1.64]**
Total events	10911		3672			

Heterogeneity: $\tau^2 = 0.17$; $\chi^2 = 224.31$, df = 10 ($P < 0.00001$); $I^2 = 96\%$
Test for overall effect: $Z = 1.75$ ($P = 0.08$)

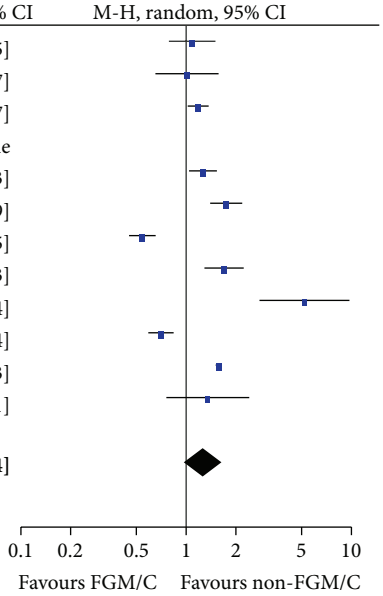

Figure 5: Forest plot, episiotomy. Note: Sensitivity analyses for parity were not statistically significant. Data were missing in Diop et al. [34], and we did not succeed in obtaining data from the authors; thus, results from this study are not estimable. WHO study group [19]: unpublished data.

Study or subgroup	FGM/C Events	FGM/C Total	Non-FGM/C Events	Non-FGM/C Total	Weight	Risk ratio M-H, random, 95% CI
1.5.1 Cross-sectional studies						
Bohoussou 1986	61	1097	119	3836	16.9%	1.79 [1.33, 2.42]
De Silva 1989	12	167	109	1990	13.3%	1.31 [0.74, 2.33]
Millogo-Traore 2007	4	227	1	227	2.7%	4 [0.45, 35.51]
Slanger 2002	3	621	1	486	2.5%	2.35 [0.24, 22.5]
Wuest 2009	14	122	10	110	10.8%	1.26 [0.58, 2.72]
Subtotal (95% CI)		**2234**		**6649**	**46.1%**	**1.65 [1.29, 2.12]**
Total events	94		240			
Heterogeneity: $\tau^2 = 0$; $\chi^2 = 2.09$, df = 4 ($P = 72$); $I^2 = 0\%$						
Test for overall effect: $Z = 3.95$ ($P < 0.0001$)						
1.5.2 Registry studies						
Johnson 2005	46	579	331	4837	16.9%	1.16 [0.86, 1.56]
Small 2008	446	8011	139430	1616971	18.6%	0.65 [0.59, 0.71]
Vangen 2002	154	1733	52315	702192	18.3%	1.19 [1.03, 1.39]
Subtotal (95% CI)		**10323**		**2324000**	**53.9%**	**0.96 [0.59, 1.54]**
Total events	646		192076			
Heterogeneity: $\tau^2 = 0.17$; $\chi^2 = 55.22$, df = 2 ($P < 0.00001$); $I^2 = 96\%$						
Test for overall effect: $Z = 0.19$ ($P = 0.85$)						
Total (95% CI)		**12557**		**2330649**	**100%**	**1.21 [0.83, 1.78]**
Total events	740		192316			
Heterogeneity: $\tau^2 = 0.21$; $\chi^2 = 89.94$, df = 7 ($P < 0.00001$); $I^2 = 92\%$						
Test for overall effect: $Z = 0.99$ ($P = 0.32$)						
Test for subgroup differences: $\chi^2 = 3.96$, df = 1 ($P = 0.05$), $I^2 = 74.7\%$						

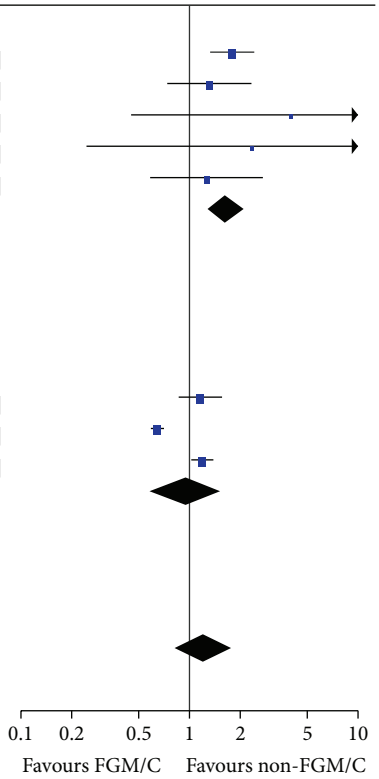

Figure 6: Forest plot, instrumental delivery.

Study or subgroup	FGM/C Events	FGM/C Total	Non-FGM/C Events	Non-FGM/C Total	Weight	Risk ratio M-H, random, 95% CI
Chibber 2011	254	1842	142	2958	16.1%	2.87 [2.36, 3.5]
De Silva 1989	9	167	31	1990	10.8%	3.46 [1.68, 7.14]
Diop 1998	0	0	0	0		Not estimable
Hakim 2001	54	489	5	50	9.4%	1.1 [0.46, 2.63]
Johnson 2005	30	579	147	4837	14.5%	1.7 [1.16, 2.5]
Ndiaye 2010	57	187	4	143	8.3%	10.9 [4.05, 29.33]
Slanger 2002	18	621	5	486	8.4%	2.82 [1.05, 7.53]
Vangen 2002	76	1733	30668	702192	15.9%	1 [0.81, 1.25]
WHO study group 2006	1545	21222	425	7171	16.5%	1.23 [1.11, 1.36]
Total (95% CI)		**26840**		**719827**	**100%**	**2.04 [1.36, 3.05]**
Total events	2043		31427			

Heterogeneity: $\tau^2 = 0.25$; $\chi^2 = 91.09$, df = 7 ($P < 0.00001$); $I^2 = 92\%$

Test for overall effect: $Z = 3.46$ ($P = 0.0005$)

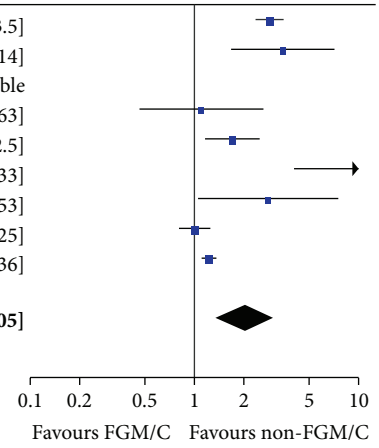

Figure 7: Forest plot, obstetric/post-partum hemorrhage. Note: Sensitivity analyses for outcome (definition) and study type were not statistically significant. Data were missing in Diop et al. [34], and we did not succeed in obtaining data from the authors; thus, results from this study are not estimable.

Study or subgroup	FGM/C Events	FGM/C Total	Non-FGM/C Events	Non-FGM/C Total	Weight	Risk ratio M-H, random, 95% CI
1.7.1 Cross-sectional studies						
Chibber 2011	110	1842	56	2958	27.4%	3.15 [2.3, 4.33]
Ndiaye 2010	91	210	9	144	23.2%	6.93 [3.62, 13.3]
Slanger 2002	21	621	10	486	21.9%	1.64 [0.78, 3.46]
Subtotal (95% CI)		**2673**		**3588**	**72.5%**	**3.35 [1.71, 6.55]**
Total events	222		75			

Heterogeneity: $\tau^2 = 0.27$; $\chi^2 = 8.64$, df = 2 ($P = 0.01$); $I^2 = 77\%$

Test for overall effect: $Z = 3.52$ ($P = 0.0004$)

1.7.2 Registry studies						
Johnson 2005	45	579	291	4819	27.5%	1.29 [0.95, 1.74]
Subtotal (95% CI)		**579**		**4819**	**27.5%**	**1.29 [0.95, 1.74]**
Total events	45		291			

Heterogeneity: not applicable

Test for overall effect: $Z = 1.64$ ($P = 0.1$)

Total (95% CI)		**3252**		**8407**	**100%**	**2.57 [1.27, 5.2]**
Total events	267		366			

Heterogeneity: $\tau^2 = 0.45$; $\chi^2 = 30.6$, df = 3 ($P < 0.00001$); $I^2 = 90\%$

Test for overall effect: $Z = 2.62$ ($P = 0.009$)

Test for subgroup differences: $\chi^2 = 6.46$, df = 1 ($P = 0.01$), $I^2 = 84.5\%$

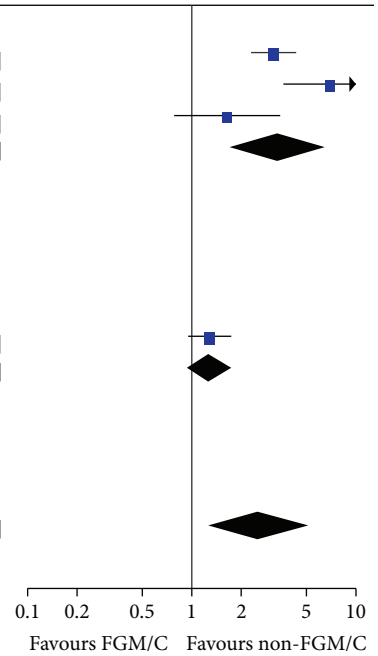

Figure 8: Forest plot, difficult delivery.

4. Discussion

This systematic review aimed to answer a question on the minds of many women, health care providers, researchers, activists, and policy makers: what additional risks does a woman who has undergone FGM/C assume related to delivery, compared to a woman without FGM/C? The low quality of the of body of evidence does not allow for obstetric complications to be causally attributed to FGM/C, but our results from seven meta-analyses support the claim that FGM/C exerts a negative impact on a range of obstetric events. The estimates for prolonged labor, obstetric lacerations, instrumental delivery, obstetric hemorrhage, and difficult delivery demonstrate disparities in obstetric outcomes for women with FGM/C relative to women who have not been subjected to FGM/C.

4.1. Discussion of Main Results. The results showed that women with FGM/C were 3.3 times more likely to experience difficult labor and twice as likely to experience obstetric hemorrhage compared to women without FGM/C. In absolute terms, the risk difference was on average 5 additional cases of difficult labor and 5 additional cases of obstetric hemorrhage among women with FGM/C per 100 women. Since the studies in the meta-analyses included women with various types of FGM/C, genital alteration of any type seems to be associated with obstetric complications, although the mechanism by which FGM/C may cause problems during delivery remains unresolved. However, FGM/C is a physiologically plausible explanation for the increased risk of obstetric lacerations and hemorrhage in particular, because of the inelasticity of scar tissue from FGM/C. Further, inelastic scar tissue may contribute to obstructions, which may prolong labor. Browning et al. [31] explain that increased scarring around the introitus from more invasive FGM/C can cause a delay in the second stage of labor. In turn, a longer second stage of labor could underlie the increased risk of perineal lacerations and hemorrhage among women with FGM/C identified in our study. Moreover, results of the meta-analysis for episiotomy showed no statistically significant difference between women with and without FGM/C. It is possible that lack of episiotomy contributes to the occurrence of obstetric lacerations, as suggested by experts [64]. It follows that episiotomy may be justifiable among women with FGM/C, particularly those with type II and III, in order to limit the degree of perineal laceration and bleeding that may occur in these women.

In Africa, where FGM/C typically is practiced, maternal morbidity and mortality rates are much higher than in more developed regions [65, 66], with haemorrhage as the leading cause of maternal mortality [67]. FGM/C seems to be an underlying factor that increases the risk of such complications, and it may lead to additional cases of adverse maternal outcomes. Moreover, we did not assess outcomes related to the child, but several studies have documented an increased risk of fetal distress in women with FGM/C [14, 32]. For example, the WHO study group [19] results indicated that FGM/C could lead to 1-2 additional perinatal deaths per 100 deliveries. The societies where FGM/C is widely practiced are generally pronatalist and value large families. Larsen and Okonofua [16] explain that in these areas, motherhood is a principal source of support, status, and security. In this context, the now sounder understanding of anticipated obstetric improvements with the halting of FGM/C can be used as a strategy for campaigning against the practice, for example, by centering the message on safe delivery. The obstetric consequences from FGM/C can no longer be ignored, and the results of this systematic review provide another strong argument for the provision of culturally grounded knowledge that can contribute to public awareness about FGM/C. It is possible that once greater awareness exists of the increased risk of adverse labor outcomes following FGM/C, the practice may be less firmly supported. The results should also be included in the education and training of not just those involved in interventions against the practice but also health care providers and in clinical guidelines for managing women who have undergone FGM/C.

In a multistage modeling analysis, which was based on the 2006 WHO study in which about 28,000 women and their newborns were monitored for adverse health outcomes at obstetric centers in six countries, the costs associated with obstetric complications related to FGM/C were estimated. The researchers calculated that compared to a 15-year-old who does not undergo FGM/C, the average 15-year-old who undergoes any type of FGM/C loses 0.07 of a year of life and generates $1.71 (international dollars) of associated medical costs over her lifetime. The costs for a woman with FGM/C type III were considerably greater [68]. While the health and financial loss on an individual level may seem small, overall, the estimated national costs ranged from 0.1% to 1% of government health spending on care for FGM/C related problems [68]. Presumably, obstetric complications, such as the ones we examined in this systematic review, account for only a small portion of the overall health impact of FGM/C on the affected woman and in a population. By extension, the financial costs of obstetric complications are merely one among many possible costs associated with the practice.

Experiencing a birth-related complication inflicts distress not just on the individual woman, but potentially also her baby, partner, family, and there are economic burdens imposed on the health system from providing care for these women. Writers such as Mawad and Hassanein [69] state that with careful planning, good antenatal, intrapartum, and postpartum care, most obstetric problems associated with FGM/C can be avoided. The claim itself is questionable from medical and research standpoints, and unfortunately, in some high FGM/C prevalence areas health care resources are often unavailable and public health services malfunctioning, which means that a considerable number of women who deliver within health services are not attended by qualified health personnel [70]. In fact, many women give birth at home [70, 71] and in eastern and southern Africa, half of all births occur without the support of a skilled birth attendant [72]. Moreover, our systematic review results based on registry studies taking place in western countries—where women are likely to receive good antenatal, intrapartum, and postpartum care—showed that for all outcomes, except instrumental delivery, women with FGM/C fared worse than women without FGM/C. This strengthens the argument for a true association between FGM/C and obstetric complications.

With regards to instrumental delivery, the meta-analyses results for registry studies comparing Somali-born women and western-born women showed a lower, nonsignificant risk among Somali-born women, who likely had FGM/C type III. This could be related to Somali women holding culturally anchored beliefs about natural childbirth that lead to reluctance to accept obstetric interventions. According to qualitative studies, Somali women in diaspora express anxiety about childbirth interventions, a general dislike of interference in the birth process, and difficulties in communication with caregivers [73–75]. Related to the result of instrumental delivery, we found no statistically significant excess of experiencing cesarean section and episiotomy among women with FGM/C. However, the direction of effect across studies,

particularly for episiotomy, certainly seemed to favor women not having FGM/C.

4.2. Strengths and Limitations. Some caution is warranted in interpreting these meta-analytic results. While the results rest on a methodology that meets the PRISMA criteria for systematic reviews [12], our search was completed in January 2012, and newer studies may exist. Despite a comprehensive search strategy, publication bias may be present with the likeliest scenario being that the results are biased to the positive. We failed to obtain 13 relevant records in full text as well as primary data from 3 studies which potentially could have been included in meta-analyses [15, 34, 36]. On the other hand, we received and included unpublished data from the WHO study group on female genital mutilation and obstetric outcome [19]. Using GRADE, we assessed the quality of the evidence for all outcomes as being too low to warrant conclusions about a causal relationship between FGM/C and obstetric complications. This was largely due to not only the weaknesses of the observational design of all included studies—which illustrates the practical barriers to health outcomes research related to FGM/C—but also inconsistencies in results and estimate imprecision. Despite the large sample sizes for all of the pooled analyses (range 11,659–2.7 million) the confidence intervals for many of the effect estimates remained wide. The inclusion of missed studies and future outcome research could narrow the confidence intervals, but for most outcomes only very large studies would alter the direction of effect.

Measurement of "exposure" to FGM/C can be a methodological challenge. However, we applied the WHO classification system for FGM/C type I through IV [3], and a similar classification system was applied in most of the included studies. Further, 69% of the comparative studies based classification and exposure on gynaecological examination. It was also a strength that measurement of the majority of the obstetric outcomes was clinically based. On the other hand, there was a lack of a unified approach and standardized definitions to measure common outcomes such as prolonged labor. When definitions were missing we relied on the terminology and categories used in the publications, but we could not always be sure that similarly labeled outcomes were identically defined and measured in each study. In a broader perspective, this may not be a serious limitation as the crucial question is whether the risk of obstetric complications, in the general case, not only specific to certain outcomes, is greater among women with FGM/C than women not subjected to the procedure.

5. Conclusions

The need for synthesized scientific research to specify the health sequelae of FGM/C, obstetric events in particular, motivated this systematic review. While the low quality of the body of evidence means that it is unclear whether the documented association of FGM/C with obstetric complications reflects true causality, the evidence base shows that deliveries to women who have undergone FGM/C are more likely to be complicated compared to deliveries to women who have not been subjected to the practice.

Consonant with other review findings [7, 8, 10], our systematic review results show no indication of there being obstetric benefits to FGM/C. Rather, today's best available evidence documents a significantly greater risk for prolonged labor, obstetric lacerations, instrumental delivery, obstetric hemorrhage, and difficult delivery among women with FGM/C relative to women with no FGM/C and no significant difference in risk with respect to cesarean section and episiotomy. The exact size of the greater obstetric risk from FGM/C is unclear, but the increased risk of harm is unmistakable, such that the data clarify the obstetric improvements that may be anticipated with discontinuing FGM/C. Given the volume of data and practical difficulties with health outcomes research of more valid study designs related to FGM/C, it is questionable whether intensified research efforts would change the present findings. From a women's health standpoint, irrespective of the exact size of the greater risk from FGM/C, the increase in obstetric suffering and morbidity is too high to justify continuing the practice. If further research on the association between FGM/C and obstetric outcomes is considered ethically and financially justified, such studies should be based on the best possible and practically feasible methodological study design, which for FGM/C obstetrics outcome research is case-control studies. Additional cross-sectional studies would possibly narrow the confidence intervals, but it is unlikely that the direction of the estimates of obstetric outcomes would change. Lastly, any future research should be based on a methodology that ensures representativeness and equivalency between exposed and unexposed groups of women, and that applies standardized definitions and clinical measures for exposure as well as outcomes.

Appendices

A. MEDLINE Search

Database. Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) 1946 to Present (1946 to January 19, 2012).

Search

(1) Circumcision, Female/

(2) ((female$ or wom#n or girl$1) adj3 (mutilation$ or circumcis$ or cutting$)).tw.

(3) "fgm/c".tw.

(4) ((removal$ or alteration$ or excision$) adj6 female genital$).tw.

(5) pharaonic circumcision$.tw.

(6) sunna.tw.

(7) (clitoridectom$ or clitorectom$).tw.

(8) (infibulat$ or reinfibulat$ or deinfibulat$).tw.

(9) or/1–8.

Table 3

Author, year	Study design	Method study quality	Population, country	Outcomes (self-report or clinical verification)
Abor 2006 [48]	Cross-sectional	Low	$N = 34$, Ghana	Cesarean section (17%); episiotomy (29%); instrumental delivery (8%) (self-report)
Akotionga et al. 2001 [55]	Case series	High	$N = 49$, Burkina Faso	Difficult delivery (13%) (clinical)
Al-Hussaini 2003 [49]	Cross-sectional	Moderate	$N = 254$, Egypt	Tears (2%); cesarean section (17%); episiotomy (95%) (clinical)
Awuah 2008 [56]	Case series	Low	$N = 70$, Ghana	Prolonged labor stage 1 (37%); prolonged labor stage 2 (9%); massive tears (23%; damage to rectal wall (13%); episiotomy (14%); hemorrhage (24%) (self-report)
Bayoudh et al. 1995 [50]	Cross-sectional	Low	$N = 300$, Somalia	Episiotomy (3%) (self-report)
Bonessio et al. 2001 [57]	Case series	Low	$N = 9$, Italy	Prolonged labor (25%); cesarean section (25%) (clinical)
Chalmers and Hashi 2000 [51]	Cross-sectional	Low	$N = 432$, Canada	Cesarean section (51%); vacuum extraction (7%); forceps (3%) (self-report)
Dörflinger et al. 2000 [58]	Case series	Low	$N = 39$, Sudan	Prolonged labor stage 1 (7%); prolonged labor stage 2 (24%); tears (7%); hemorrhage (14%) (clinical)
Litorp et al. 2008 [52]	Cross-sectional	Low	$N = 40$, Sweden	Obstetric difficulties (self-report)
Mccaffrey 1995 [53]	Cross-sectional	Low	$N = 50$, England	Tears (100%); cesarean section (26%); Instrumental delivery (13%) (clinical)
McSwiney and Saunders 1992 [59]	Case report	NA	$N = 1$, England	Tears led to rapid hemorrhage (clinical)
Ndamobissi et al. 1995 [54]	Cross-sectional	High	$N = 2555$, Central African Republic	Obstetric complications (self-report)
Osifo and Evbuomwan 2009 [6]	Case series	High	$N = 51$, Nigeria	Tears (4%) led to uncontrolled bleeding (clinical)
Philp 1927 [60]	Case report	NA	$N = 1$, Kenya	Death in childbirth (clinical)
Preston 1937 [61]	Case report	NA	$N = 1$, Kenya	Birth per rectum (clinical)
Pritchard 1969 [62]	Case report	NA	$N = 3$, England	Dystocia (clinical)

Legend: Method.: methodological; NA: not applicable, we did not assess methodological study quality of case reports.

B. Noncomparative Studies

See Table 3.

Disclosure

WHO and NORAD commissioned the systematic review but did not participate in the literature search, data screening and assessment, data analysis, or interpretation of the results.

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Research Article

Internalizing Knowledge and Changing Attitudes to Female Genital Cutting/Mutilation

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The process of paradigmatic attitudinal change has been analyzed by the use of multimethods and multileveled internalization theories. Forty-six informants (a network of activists and a group of Gambian women) have described their change of attitude to female genital cutting. This study shows that internalizing a packet of information as adults, that contradicts an old schema of knowledge internalized as children, can be experienced as epistemologically very painful. Activists in Norway who have changed their attitude to FGC have got information from different educational institutions, from seminars and conferences, from work as interpreters in hospitals, and from discussions among families and friends. Information can be received, listened to and subsequently discarded. In order to design FGC-abandonment campaigns, the importance of the internalization process in order for the individual to make an attitudinal change must be understood.

1. Changing Attitudes to FGC

Female genital cutting (FGC), also called female genital mutilation (FGM) and circumcision, takes many forms, from milder to more serious procedures. The World Health Organisation (WHO) has divided these into four types [1]. (1) *Clitoridectomy* involves partial or total removal of the clitoris and/or the prepuce. (2) *Excision* involves partial or total removal of the labia minora and/or the labia majora. (3) *Infibulation* involves narrowing the vaginal opening through the creation of a covering seal with or without removal of the clitoris. (4) *Others* involve all other harmful procedures to the female genitalia for nonmedical purposes. The procedure are mostly done on girls from infancy to 15 years of age. In many countries girls are being cut at earlier ages than before [2]. Internationally FGC is recognized as a violation of human rights as it can have serious short- and long-term effects on the heatlh and well-being of girls and women.

In spite of many abandonment campaigns through years, it has proved difficult to abolish the practice [3]. There has been "greater success in raising awareness about the issue," Shell-Duncan and Hernlund [4] say, "than in changing behavior." Medicalizing the procedure by having it done in a hospital by health professionals was intended to alleviate some of the pain related to FGC, but it may have encouraged the practice instead of abolishing it [5]. A systematic review of the effectiveness of FGC prevention interventions [6] evaluated interventions [7–11] that ranged in length from two hours to two years. The review concluded that the evidence within such studies was too weak in order to base a solid conclusion to what worked and what did not. Information spread in campaigns consisted of everything from role playing, health talks, theatre groups, community meetings, and videos to educational sessions in human rights and hygiene. After a two-hour course at a university in Egypt [10], for example, the students had learned about FGC and changed their attitudes to it, whereas the attitudes of health personnel in Mali [12] did not appear to have changed after two months of education. Why? Such differences have been difficult to explain. Although there has been a change in prevalence in some countries, due to these campaigns, in too many countries, there has been very little change in the frequency of FGC [1].

Migration has made many European governments concerned as it is suggested that more than half a million women and girls have undergone the procedure or are at risk within

the European Union [13]. Laws have been passed; abandonment campaigns and action plans are implemented [14, 15]. According to Johnsdotter [16], the enabling environment in countries where FGC is condemned is central to the rejection of the tradition. This was true of Somali immigrants in Sweden. In a study of 33 Ethiopian and Eritrean men and women in Sweden, Johnsdotter et al. [17] found that they rejected all forms of FGC. Gele et al. [18] studied 38 Somali men and women in Norway and the majority of their informants said they would not cut their daughters. Living in an environment where the tradition is illegal and associated with low social status can change people's attitudes, the authors argue, a finding that Talle [19] confirmed in her work among Somalis in Norway. The above mentioned studies, however, say nothing about the way information is received and processed by individuals and groups. This study interviewed activists to obtain an idea of their reactions to information provided at seminars and conferences. The idea was to find out what triggered a strong commitment to abandon the practice so that it had an effect on both attitudes and behavior. Some of the informants of this study had been living in Norway for years before getting the information that caused them to change attitudes and behavior. So what triggered for change? And how did the informants internalize the information? We need to understand both the social and individual processes that work when people are exposed to reeducation campaigns. Without this information it will be difficult to design programs with the ability to change values that people feel are meaningful [20] as well as their behavior.

This paper seeks to describe and analyze the way in which persons who were socialized in a cultural context where FGC is highly valued receive and process information that contradicts and devalues the meaningful norms and traditions they internalized as children. As has been described by Schultz and Lien [20], norms and values related to the practice are deeply internalized by children through metaphors in a meaning making process that deals with morals, knowledge, and esthetics. As Schweder [21] has argued, unmodified genitals are seen as ugly, unrefined, uncivilized, and not even human. To change from this perspective to seeing unmodified genitals as natural and human, one has to take a completely different view that we in this paper will describe as making a paradigmatic change of attitude. Kuhn [22] sees a paradigmatic change as abrupt, based on an epistemological crisis within a conventional mind set. An example of a paradigmatic shift in science is from a geocentric model, where the earth is the center of the universe to the Copernican worldview where the sun is the center. A paradigmatic shift like this, Kuhn argues, is so fundamental, that knowledge from the first paradigm cannot be transferred to the next. He calls this *the incommensurable thesis*. When a new paradigm is formed, it will have new followers, and an intellectual "battle" will take place within the person, but also between the followers of the new paradigm and the holdouts of the old. Reasons for practicing FGC, what we can call "the old paradigm," vary across different social contexts, but often include magic (touching the clitoris can lead to death of the children and spouse), esthetics (after FGC, the female body is clean, hygienic, and beautiful), morality (the woman remains virgin, chaste, and virtuous), and social esteem (the woman retains her honor and will more easily find a husband) [23–25]. In order to understand a paradigmatic shift of attitude from an "old" to a "new" packet of knowledge and meaning, we need to understand the internalization processes that take place within individuals and the processes taking place between individuals and groups.

2. Internalization Processes and Change

In his analysis of innovation, Rogers [26] identified five main steps in processes of attitudinal change: (1) knowledge, (2) persuasion, (3) decision, (4) implementation, and (5) confirmation. He distinguishes between different types of adopters: early adopters, late adopters, and those who are very late; he altogether operates with five types of adopters. According to Rogers, it is easier to adopt an innovation that is consistent with existing values than one that is not compatible and requires, according to him, a new value system in order to be adopted. The model of diffusion of innovation deals with actors, systems, structures, networks, time, and space and has relevance both for developing programs and analyzing attitudinal change with respect to FGC.

Mackie [27, 28] is concerned with the change of conventions and has tried to identify the tipping point necessary for a conventional shift of behavior and attitudes to FGC on an aggregate level. The theory has injected much needed energy into the abandonment campaign. The use of public declarations, recommended by the theory, seems to have worked effectively in changing behavior in several African communities [29]. However, the depth of a conviction and the thickness and complexity of a convention are not adequately dealt with. As it is a macrolevel theory, it does not pretend to deal with how people internalize information on FGC that can contradict entrenched and cherished norms and values.

In analyzing social change in respect of FGC, Shell-Duncan and Hernlund [4, 30] focused on the decision-making process itself, not at the aggregate or individual level, but the mediate group level. The decision to cut a girl often lies within an extended family or group, they argue, thereby reducing the insights that an individually based theory of change can provide. In their view, attitudinal and behavioral change does not necessarily proceed in a linear fashion, but is fluid and more shifting. There are five decision making dimensions of readiness to change: (1) supporters of the continuation of FGC; (2) those who contemplate abandoning FGC; (3) reluctant practitioners of FGC; (4) willing abandoners; and (5) those who have reluctantly abandoned FGC. Thinking, saying, and doing represent different levels of decision making and are integrated in the theory. So their main focus is the decision-making process itself, not the process of internalization or diffusion.

Interests into internalization theories have increased, something that several researchers have welcomed [31–33]. Spiro [34] was among the first anthropologists to examine internalization theoretically; he views individuals as active participants in the process. For a cultural proposition to become a culturally constituted belief, it must be acquired at one of four levels of conviction [34]. The first level is when

a cultural novice becomes acquainted with the proposition, without assenting to it. At the second level, the novice acknowledges the proposition, but does not internalize it. It is received as a cliché. So according to this theory, a person can be informed about the health risks of FGC, consider this information carefully, but ultimately reject it because s/he finds it implausible or inconceivable. It may come across as Western propaganda, and while it awakens a curiosity it is also met with disbelief. It is only by the third level when the cultural proposition has been accepted by the person, that it is internalized. And at the fourth level, it becomes a genuine belief held to be true, proper, and right. We may argue that it is only when a package of knowledge reaches the last two levels and becomes motivationally saturated that a paradigmatic change of attitude will be made.

Lawrence and Valsiner [35] propose a model of internalization, in which they draw on anthropological and psychological theories like the previous one. There are three layers of internalization, they argue; information at the last level becomes integrated into existing knowledge and emotional structures. The mechanism by which information is internalized is self-talk, and the message is taken in and processed selectively and met with barriers and buffers. Information can be discarded through an inner dialogue. When information has reached the final level, it is transformed and communicated into the social world by externalization: "...human beings are social not because they conform mechanically to external social expectations, but because they transform these expectations into their own personal-cultural, intrapsychological inventions that are functional for their further encountering of the world" [35]. Change, then, comes from processing and dealing with the novelty created in encounters between people, and between people and the social system. The human mind is both social and personal inasmuch as it is active in internalizing information with the aid of external social institutions and persons. By means of these internalizing and externalizing processes, meaning, as well as innovation, change, and predictability in social contexts, are created and spread.

Internalization models are useful for analyzing and understanding the appropriation of cultural meaning through socialization of children. But it is equally important in order to understand social change when new information is internalized by adults. FGC abandonment campaigns offer excellent cases for study because change takes place both at the personal and collective level as women move from one context to another, where information is provided that may contradict knowledge acquired earlier. As we have seen from these theories, information may be met with resistance and not internalized so that it will motivate action, but received as a cliché and stopped at the first or second level. In a study of FGC among Somali women in Norway, Johansen [36] found that some of the 45 women she interviewed had begun to question the tradition, and some were preferring milder forms (sunna), which they did not classify as "genital cutting." This allowed them to retain the customary system of justification. The changes were modifications within the existing paradigm, indicating that some information within the new context have been received and internalized without this resulting in a *total* paradigmatic shift of attitude.

But what happens when women get information at a deeper level that makes them adopt a new model of thought?

3. Methods

Our study is based on a multimethod approach in order to provide us with knowledge from observations in seminars, individual interviews, and focus group interviews. The intention has been to get both individual and contextual data. Anthropological field work was the method we started out with. Over a three-year period, we have been visiting Gambian and Somali families in Norway and taking part in social events in order to understand the context and meaning of FGC in their everyday life. We took part in conferences and seminars in Norway that were arranged on FGC by the Norwegian government and seminars that were arranged by nongovernmental organizations. The reasons for attending seminars were to observe women's reactions to information given and to get complementary knowledge on what seemed to work and what did not. We also followed a group of Gambian women that used to meet each other once a month. In 2008, a Gambian couple, was arrested for having sent three daughters to Gambia in order to have them cut which upset this particular group. We arranged two focus group meetings with these women, where more women than planned turned up (twenty persons present). We also interviewed the activists individually about their shift of attitude to FGC. In a context where FGC is criminalized, it can be difficult for a person who supports FGC to talk honestly and openly about the attitude. Working actively against FGC is an indication of a high level of commitment against the procedure, indicating that the person has internalized new information and made a paradigmatic change of attitude that has had behavioral consequences. We applied the theory of internalization methodically by identifying indicators of internalization. By listening to individuals' and groups' own description of how they received information, we could identify to what degree they reflected on information, processed it through talk, believed in it, or became committed. Emotional reactions, holding information credible, and becoming motivated are the criteria by which we judged their level of internalization.

The 26 anti-FGC activists (aged from 20 to 58) belonged to a network of women who used to meet at seminars and conferences. They were from Eritrea, Ethiopia, Gambia, Ghana, Kenya, and Somalia. The selection criteria were involvement in anti-FGC campaigns; participation as speakers at seminars and conferences arranged by the government; published articles and/or books against FGC; interviews with newspapers; membership of working groups; acting as adviser to the Norwegian government. The activists were interviewed twice. The interviews were focused on the process of changing attitudes to FGC, key events triggering attitudinal change, and response to new information. The interviews followed an open explorative design, where we started with questions about their attitudes before (the old paradigm) and now (the new paradigm). We asked them to describe, step by step, their process of change, and how they felt about

it. Did it happen suddenly? What triggered the change? And what happened after the change? The researchers performed the interviews in Norwegian or English, sometimes alone, but mostly together. In some cases, we used a microphone, but mostly we performed the interviews without it. As we were making parallel notes, we could compare them and discuss any differences, a procedure which served to validate the data. If anything was unclear, we would could call back the person in question for another interview. Some respondents were therefore interviewed three times.

The cases presented in this paper can be called "apt illustrations" [37], inasmuch as they capture elements and insights which might be overlooked in a survey.

4. Descriptions from Two Seminars on FGC with Gambians

We will start our presentation of the data by presenting material from two seminars that a group of Gambian women arranged. The government had not targeted the Gambian community FGC-related information. Some members of this group told us that they decided to arrange the first meeting on FGC after the arrest of the couple, to "calm down the government."

An invited guest from an English organization, an African Muslim, talked to a hundred Gambian women and men in Oslo about FGC for an hour, described the four different types, and explained health consequences both short term and long term. There were several reactions to the lecture that we will present here: "she called it FGM and told us horrible things." Another: "it is incredible that a grown up women can stand there and lie to us all." A key informant that later became an activist said the following about the first seminar:

> *"We thought it was a joke and laughed. We were all very happy that we had healed after circumcision, and did not suffer like the Somalis. We were in a state of denial. It was later, when I started to read the government's pamphlets that I understood that there were many things I did not know."*

Later, during the two focus group interviews, the researchers were told that most of the women did not believe in the information that was given during the first seminar. This can indicate that information was received at levels one and two, where it was put to a halt and met with resistance as it was not believed to be credible. It was heard and memorized, but it was not processed and internalized further down to levels three and four so that it made an impact and became motivationally salient. As researchers present at the seminar, we could see how the women acted: looking around, fiddling with their hand bags, whispering to the next person and trying not to pay much attention to the information given.

Three months after the first seminar, a second seminar was held, arranged by Gambians with an invited activist from the Gambia giving a lecture about consequences of FGC. There were more than a hundred Gambians present in a lecture hall. A Gambian woman with a university degree, having lived in Europe for more than 20 years, told us that she would have cut her daughter if she had not attended this particular meeting. She said the following:

> *"The Gambian woman, a doctor, asked whether she could show us some pictures of girls' genitalia. We protested, and this made her angry, but in the end, she managed to convince us to watch the slides of small Gambian girls suffering from conditions due to FGC. They had scars and cysts. Others had fistulas. We could see that the children were in pain. We were shocked. The Gambian doctor sang the secret songs from the circumcision ritual. That shocked us even more. The tension in the room was electric. There were tears in the eyes of every Gambian woman present. I got gooseflesh, all the hair on my body stood out. We realized that she herself had been there, that she herself had been circumcised. It was an emotionally strong discovery and experience. I understood, there and then, that this tradition is definitely wrong."*

As we can see, verbal and visual information on the adverse consequences to health, seeing pictures of small children in pain, and hearing songs which reminded the women of their own cutting had a very deep impact. It took them further down the steps towards internalizing information that they may have begun three months earlier. The events during the second seminar sparked individual reactions. For some persons, the information went to the last levels and became motivational. For others who were present, information was not deemed as credible and reached the first two internalization levels. As one person said "a log can stay in the water as long as it will, but it will never become a crocodile."

To a greater extent, the women could identify with the invited lecturer in the second seminar. She had authority, she was a doctor, and she was from the Gambia and circumcised herself. Verbal information was supported by pictures, slides, a video film, and a song. Present in the lecture hall, we as researchers could observe that several of the women had tears in their eyes when the doctor was singing the secret song from the ritual. Through these varieties of means, the whole person was targeted, both intellectually and emotionally. This enabled information to sink in, so that, in the end, there was a group of women leaving the seminar who had changed their attitude to the issue.

Twenty of the Gambian women who had taken part in both seminars were interviewed in a focus group about their reaction to what they had heard and seen during the two seminars and otherwise. Among them, 18 had been very much in favor of FGC until the last seminar, which changed their opinion. Two had been against FGC from the day they were circumcised. The reasons given for change were the slides of girls with severe FGC-induced health problems and the song, which moved them and brought memories back of their own cutting. Information on health risks and human rights was also mentioned. An Imam had also said that FGC is not a religious injunction, which was also mentioned to be important.

The women were to describe their emotional response to the information provided at the last seminar. Here are some of their remarks. "I cried inside," "I was sad," "I had a feeling of the same powerlessness that I felt when I was circumcised," "I felt paralyzed," "all energy disappeared," "I felt guilty," "I got angry," "I lost pride," "I thought I shall not circumcise my daughter if I get one," "I was sweating," "my heart was beating," "I got gooseflesh," and "I was numb." As one woman said "when I got information at the second seminar it was as if all the energy in my body disappeared. As if I was fainting. It was terrible."

5. The Activists

It was after these seminars and focus group with the Gambian women that we decided to interview 26 activists about their personal change of attitude to FGC. We found that they expressed more or less the same emotional response to some key events that got them to change their mind about FGC. They had changed their view especially when hearing about health consequences and seeing slides. When describing the inner feelings, they used words like shocked, angry, sad, depressed, shameful, they wept, were scared, provoked, unhappy, paralyzed, and pained. The frequent use of these words to describe their emotions indicates how psychologically painful it can be for many women to allow information about consequences of FGC to make an impact at a deep psychological level so that it changes their attitudes. Here is a Somali activist's description of her process of change:

> *"I turned against FGM when I was attending anatomy classes in physiology when training to become a nurse in Somalia. Our teacher was from Beirut and one day she explained to us about genital mutilation. She used slides and explained about the natural genital organs. We thought she was crazy. I had thought all women all over the whole world were circumcised—and now she was saying they were not. In the evening the girls sat together and started to cry. The next day the teacher continued. She told us about the complications, psychological and physical effects. Now the girls understood why they were in pain. We talked about it the whole day. I understood that this is something we must work against. Other girls said that we could not work against it because it would be too difficult in Somalia.*
>
> *When you are circumcised you are proud, and I preserved my pride until I was 18. I lost it when I got the new knowledge. When I spoke with my friends about it, we were not proud anymore. I started to mourn about my body. I comforted myself with the fact that it had happened and there was nothing I could do about it. But I promised myself that it shall not happen to my daughter. I started to work with the issue with UNICEF and the Red Cross. That was before I left Somalia and came to Norway."*

Here we see how information was dealt with in a collective class situation; it was through talking to oneself and others that information was processed, and as it moved down the levels, it involved emotional reactions, crying, and mourning. Talking with others could have both an internalization effect, leading to reflection and analysis, and a therapeutic effect. The pain associated with new information could be dealt with through these collective processes, but the pain factor can also explain why information can get to a halt when it comes to internalization, so that it stops and/or is rejected at levels one and two.

It can take time to move between levels. A woman described how surprised she was arriving at an asylum center in Norway, meeting other Muslim women that were not cut. She reacted with disbelief and surprise, memorized the information as a curiosity until some years later she began to study in a nursing college. Before this, she had studied in a high school, where FGC had not been a topic that was discussed. At the nursing college, however, she got information "...that made me fall into a deep depression. I used to be proud of my circumcision. But the information made me suffer, and I suddenly came to see myself as a victim of a terrible tradition." So here again we see that information can lead to psychological pain, and there can be a time gap within the internalization process, particularly between the levels two and three.

5.1. Key Events. The activists mentioned four types of incident that made an impact on their attitude. (1) Formal education: six persons mentioned health training, especially in anatomy classes. (2) Concrete experience of working at a hospital: four women had worked as interpreters at hospitals in Norway and saw infibulated women giving birth. Working alongside and talking with health personnel, who said that they had never seen an infibulated woman, was an eye-opener and changed their attitude to the practice. (3) Seminars and conferences, nine persons mentioned that attendance at seminars, conferences, and membership of working groups as the key events made them change their mind. These meetings were arranged by the government and different NGOs. (4) Discussions with family and friends: one woman, whose husband was a medical doctor, said it was what he had told her that caused her to change her attitude. Other activists had met people from their own background who were opposed to the practice and who convinced them that FGC is wrong. Many of them had gathered what Norwegian law said about FGC and had pondered the risk of imprisonment. The combination of information from several quarters may also have made a complementary, aggregated contribution and brought about attitudinal change.

6. Discussion

6.1. Internalization of New Knowledge. Cultural ideas in favor of FGC can be described as a specific cultural model [38], as a cognitive schema that has motivational force [31, 38], as a package of knowledge [39] that has deep cultural meaning [32], or as a paradigm [33]. Mackie [27] describes the shift of attitude to FGC in terms of breaking out of a "belief trap."

Adopting a new system of thought on FGC involves seeing the tradition as bad instead of good, as negative for female sexual identity instead of positive. As Shell-Duncan and Hernlund [4] noted from Gambia, an uncut woman is labeled as a *solema*, a highly derogatory term meaning not only uncircumcised but also "rude, ignorant, immature, uncivilized, and unclean." Information that accompanies abandonment campaigns is often based on scientifically produced knowledge which concludes that FGC does not have the beneficial health effects that the holders of the tradition claim, rather the opposite. Indeed, it can be difficult to transfer information that is valid under one system of thought to another without difficulty. It may require the structuration of a new schema within the mind, so to speak. One activist said "I used to be a proud woman, but when I learned about FGC, I lost my pride and came to see myself as a victim of a harmful tradition. I fell into a deep depression, and cried. Then I started to work against the tradition, and was proud again."

In an analysis of "moral revolutions," as in the changing of attitudes to foot binding in China, Appiah [40] argues that honoring and shaming are the motors behind this change. As a consequence of internationalization, China has included outsiders as relevant partners for discussion and thereby become dependent on them as a public that can recognize their traditions or not. The condemnation of foot binding that came from outsiders has been listened to, creating feelings of shame, and shifted their conceptions about what is honorable. As a Chinese informant said, "there is nothing which makes us objects of ridicule as much as foot binding. I, your humble servant, feel deeply ashamed at heart" [40]. The Chinese expanded their public to include oustiders who opposed the tradition. They internalized information that came from this group in spite of the fact that the information caused the painful feeling of shame.

As our informants have shown, simply living in an environment where information floats randomly around does not necessarily cause attitudes to change completely. The sender of the information needs to be recognized and given authority for information to be listened to and fully internalized. A process of recognition of outsiders seems to have taken place in China, leading to a change of attitude. There are, however, several ways of discarding information: by not recognizing the authority of the group of senders; by denying the credibility of the knowledge itself; avoiding settings in which information is given; because information campaigns do not target the target group to which one belongs.

Information, then, is not always absorbed; it can be ignored, and it can be met with barriers and resistance. When information is believed and taken serious, it may reach levels three and four (within Spiro's theory) or level three (in Lawrence and Valsiner's theory). When information is resisted and disbelieved, it will be received as a cliché, and it will only reach the first two levels. In spite of abandonment campaigns coming from the government, many of the Gambian women, having lived in Norway for years, did not seem to have received information or had received information at a superficial level, or not taken it in at all. Several of the women in the focus group said they would have cut their daughters if they had not attended the seminars at which African women made the case against FGC. Deeply internalized information can get women to promote and spread the new ideas. They transform them and get involved in a process of externalization [35], diffusion, and confirmation [26]. The idea that there are levels within a process of internalization helps us understand how information disseminated by governments and NGOs can have little lasting effect and do little to persuade people to abandon FGC, if the sender has no authority with the audience, or if the group of women being the target for the information is not at all interested or motivated to take it in past levels one and two.

When conflicting information is internalized, Strauss and Quinn [33] suggest that it can be solved either mentally through rejection, by establishing a partly integrated separate schema in the mind, by making an unconscious compromise, or through both mental and social compartmentalization. Motivation associated with the schemas can also vary, as implied by Spiro's [34] internalization dimension.

A Gambian woman explained in her own way how speech can be anchored at different internalized levels and stated: "some women will talk to you about circumcision from their throat and not from their deepest heart."

6.2. Reaching the Last Level. Bateson [41] used the phrase "hitting bottom" to represent the stage that must be reached before it is possible to stop drinking. "Hitting bottom," says Bateson, represents a turning point at a deep psychological level. At this bottom level, the person makes a "paradigmatic" shift of attitude to alcohol. Even though drinking is not a perfect analogy for FGC, the formulation of "hitting bottom" is a useful metaphor for describing the deep epistemological change that occurs when deeply held attitudes change paradigmatically at the bottom level described in the theories of internalization. As Bateson has described for the alcoholics, it involves both a loss of pride and a feeling of shame that are painful. We see a parallel with FGC where women, on "hitting bottom," seem to lose their pride, feel ashamed, and start mourning. This process of change, from honor to shame, has been described by Appiah [40] as part of a "moral revolution." It is not only a loss of personal pride, but of pride in a cultural identity. As one of the women said, "I had to recognize the fact that my forefathers, my people, had been so stupid, so incredibly stupid that they have put their daughters at risk for hundreds of years, unnecessarily."

The new information often comes from another system of thought, from people with another cultural background. The outsider may not be recognized as an authority, which can prompt people at an early stage to refuse to believe what they are told. The information can be received only at the first or second level.

In the case of the Gambian women in our case material, the information that convinced them came from a Muslim woman from their own cultural background, who was cut herself and who sang the cutting ritual song. The first seminar only made the Gambian women feel skeptical. The messenger was a foreigner living in England, not a Gambian, but a Muslim, and mostly talked about the Somali customs. Her information was deemed irrelevant, and not credible, but may

have paved the way for a change of attitude three months later. At the second seminar, however, they reacted with shock, resistance, mockery, and denial, but then, several of them accepted the information.

Writing on the epidemiology of representations, Sperber [42] argues that "authority" creates susceptibility for representations not fully understood. One woman described how she felt about the information: "it came from her, a Gambian and a doctor, and was not Western propaganda, it was real." By singing, the doctor had revealed that she was a cut woman who knew the secret song of the cutting ritual. This created empathy, credibility, and trustworthiness. Informants later said that the singing reawakened their memories of the ritual chamber. "Sitting there, I could even remember the smell." Another said "I could feel the same powerlessness that I felt as a child when my arms and legs were held during circumcision." Verbal information in this case was accompanied by and strengthened by nonverbal, visual, and metaphorical information that managed to pierce the barriers and levels, sinking down and moving the emotions.

According to Lawrence and Valsiner's [35] theory, it is at the inmost layer (layer III) that a material becomes integrated into existing knowledge and emotional structure and made part of a critical dialogue with oneself. Through this dialogue, information is accepted or rejected. One might expect people to accept only such information as is compatible with already existing information. But this is not what happens when people open up to new information about FGC.

The newly internalized knowledge represents an interpretive frame that can be used to illuminate and reflect over old knowledge. It can lead to an interpretation of the "old" paradigm so that it becomes shameful instead of honorable. The "new" paradigm represents an alternative, allowing new questions to be posed. What passes in one context for good parenting can, when seen from the point of view of another schema of interpretation, be subject to interrogation in a completely novel way. As one of our informants asked rhetorically in an accusing voice, "why did you do it, mom?" The relationship itself, between mother, daughter, and grandmother and the morality of the tradition, was reassessed. What was held as moral became immoral, what was justified became unjustified. The old, deeply internalized and embodied knowledge was questioned and defeated. It caused epistemological pain and would require the reorganization and reconnection of the schema within the structure of the mind. Strauss and Quinn [33] see the compartmentalization of information within the mind as a strategy to solve a conflict between values or schemas, a split mind and/or ambivalence, or a restructuring, creating a hierarchy of values and schemas.

This process of connection, reconnection, disconnection, and transformation of information, we think, is a way of dealing with the pain. The relationship between internalized knowledge and the motivational force it carries can also be changed. Motivation can change in an instant, something we saw several examples of, or it may take time, as we also have seen, undergoing a process of confirmation by talking with oneself and others, that would require that the person takes part in several seminars and conferences. The social process itself will pressure the person to find a solution to the conflict of values, which can be prompted and expressed in rejection, transformation, the making of new meaning, and restructuring of old information. Some of our informants blame imperialism, which happened a long time ago. As one Somali woman said, "it was originally a foreign tradition that entered our culture, we thought it was good, but it was not, so let us take our culture back and abandon FGC." A way of creating new meaning related to parental caring was also expressed by several women: "they were ignorant and did their best. We cannot blame them. They tried to be good parents."

Newly internalized information is thereby connected to preexisting core values such as caring for children. According to Mackie and LeJeune [28], the basic values of parents everywhere involve caring for their children and protecting them from any harm. When parents receive new information, for example, about the harmful effect of FGC, they do not necessarily change their most basic values, but "realize their basic values more coherently and more fully" [43]. Through a process of disconnection, transformation, and reconnection, knowledge is weaved into the internal structure, creating new meaning and a proud sense of self. Information is transferred into the world by externalization, which can involve activism.

7. What Happens after "Hitting Bottom"?

All the 26 activists who were interviewed individually had started to work against the tradition by lecturing at conferences, seminars, and in small group sessions. Those activists with a high media profile have earned the admiration of their Norwegian audience, but seem to be paying a price within their community. They report being laughed at, harassed, having stones thrown at them, being excluded, accused of spying for the government, and destroying their culture. This suggests that the new knowledge that has been internalized at the deepest level has been combined with a strong motivation to express that knowledge in spite of the condemnation of parts of the community. Two of the Gambian women remain supporters of cutting, but five became activists establishing an NGO to combat FGC. The work involves other Gambian women in the group who make tea, serve cakes, or register participants at meetings and conferences.

Their activism has given them new meaning, more respect, and higher status. A few had received awards; they belonged to new networks with new contacts and felt a greater sense of integration in society. Activism can also give new meaning as a substitute for the loss of meaning.

The cost of a paradigmatic change of attitude, or change of schema, may, however, seem too high for some, and they may choose to keep the new attitude a secret, pay lip service, and compartmentalize. The problem of backsliding, or having to act against one's own principles when one is alone in one's convictions, or exposed to family and social pressure, indicates that interventions should target groups within the community, in a Western setting. The importance of talk in order for information to be internalized and confirmed has been demonstrated. The sharing of knowledge with others within communities and groups will work therapeutically and mitigate the epistemological pain; it can also make

the new knowledge more sustainable. Lessons from Africa using official declarations can also be used within seminars and conferences in the West creating group solidarity, commitment, new meaning, and work as a symbolic marker for both collective and individual changes.

8. Summary and Conclusions

In this article we have described and analyzed personal accounts of changes in attitude to FGC using a multileveled internalization theory. We have shown that new knowledge that challenges old knowledge that has been taken for granted can be painful. Internalizing information at a superficial level can also cause people to resist and/or discard information or relate to it in a superficial manner. Information internalized at "bottom" level, on the other hand, can generate new attitudes in spite of the fact that it is painful.

Most of our informants changed their viewpoints after attending seminars, conferences, or training courses. Social and attitudinal change can happen slowly or in an instant. Internal psychological processes and social processes are interlinked through talk, discourse, and the flow of information. At the social level, it is important for the receiver of a message to accept and respect the bearer of the message. Internalization theory must therefore take into account the social processes within the social context of the people when there is a wish to reach a wider audience and ensure that new groups from outside the social circle are listened to and given authority and credibility. The most effective strategy for change appears to be when the recipient obtains information from a trusted person with authority. Community-based information campaigns seem to be profitable as the meaning of the information can be discussed with others, and the pains that are felt can be shared and dealt with collectively. This is in line with lessons learned from abandonment campaigns in Africa.

Findings from this study make it difficult to argue that attitudinal change will happen automatically merely as a consequence of staying in an FGC-negative environment, where the procedure is illegal and has low status among the majority population. Targeted information may be necessary. We know there are instances where the majority of the population is against FGC, but where a minority, like the Bohras in Pakistan, practiced it for years. The Mandinga community in the Gambia practices FGC, while the Wolof does not, in spite of coexisting in the area for centuries. For information to have an impact, the sender needs to be seen as credible and trustworthy by the receiver, and the information must be regarded as relevant. It may be that this process of acknowledging "outsiders" as a relevant public, whose information can be trusted, is taking place today in Norway and Sweden in the Somali communities there, as the study of Gele et al. [18] indicates and as the study of Johnsdotter et al. [17] has shown. If so, Somali women in both countries could be increasingly susceptible to internalize knowledge and values that will change their mind, as the authors have shown. They would then also be susceptible to the feeling of shame and the epistemological and psychological pains that we have described here, as an effect of the internalization process, when information "hit bottom."

8.1. Limitations. We do not know whether this experience of pain always accompanies a shift in attitude to FGC. It may be that the pain is present for early adopters and not for very late adopters. The data from this study indicate that a psychological and epistemological pain was part of the process of change of attitude to FGC that motivated the activists that we studied to work against the practice. It was also part of the attitudinal change process that the Gambian group experienced. But we do not know if it would be experienced by all categories of adopters of a new paradigm on FGC.

Not only verbal information works in an abandonment campaign, but songs, slides, and films addressing a wide variety of topics related to the procedure are efficient tools that can reach the innermost level of internalization, where the motivation to change behavior will be the strongest. FGC-abandonment campaigns provide interesting cases for researchers seeking to understand how people react to and deal with conflicts of values, knowledge, and traditions in the modern world. As we have seen, knowledge is not only passively received, but also positively embraced as a broadening of the mind and seen as stimulating. It can sometimes be rejected and ignored; indeed, even when it is embraced and accepted, it can be experienced as psychologically very painful.

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Review Article

What Works and What Does Not: A Discussion of Popular Approaches for the Abandonment of Female Genital Mutilation

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The prevalence of Female Genital Mutilation (FGM) is reducing in almost all countries in which it is a traditional practice. There are huge variations between countries and communities though, ranging from no change at all to countries and communities where the practice has been more than halved from one generation to the next. Various interventions implemented over the last 30–40 years are believed to have been instrumental in stimulating this reduction, even though in most cases the decrease in prevalence has been slow. This raises questions about the efficacy of interventions to eliminate FGM and an urgent need to channel the limited resources available, where it can make the most difference in the abandonment of FGM. This paper is intended to contribute to the design of more effective interventions by assessing existing knowledge of what works and what does not and discusses some of the most common approaches that have been evaluated: health risk approaches, conversion of excisers, training of health professionals as change agents, alternative rituals, community-led approaches, public statements, and legal measures.

1. Introduction

Over the past 30–40, years a range of interventions has been carried out to promote the abandonment of FGM with varied success [1]. Where the Demographic and Health Survey (DHS) and the Multiple Indicators Cluster Survey (MICS) data are available for example, a variation ranging from 16% in Kenya to 0% in the Gambia [2] has been observed. This paper discusses existing evidence to provide guidance on how best to design and implement programmes that promote the abandonment of FGM. Reviews and evaluations have been conducted to ascertain the effectiveness of programmes to eliminate FGM, and this suggests that some approaches are more successful than others.

Key Facts. FGM is defined as any procedure that cuts or harms females' genitalia without medical indication [3]. In the 28 countries, from which prevalence data does exist, an estimated 101 million girls and women above 9 years have undergone FGM [4], and 3.3 million girls are at risk of being subjected to FGM annually. In these 28 countries the prevalence of FGM ranges from 0.6% to 98% although the practice of FGM is also found in other countries, including among migrants from FGM practicing countries [5].

Overall, the prevalence of FGM has declined, and in almost all countries girls and young women are less likely to have undergone FGM than older women. The pace of reduction varies widely, however, and millions of girls remain exposed to the risk of FGM in the future [4].

Reflecting on Evidence from Common Approaches. In this paper, we discuss existing evidence on the effectiveness of the most common approaches in light of our personal knowledge and experiences. Johansen, Diop, and Leye have worked on the issue of FGM for many years, designing and evaluating interventions and carrying out research. Laverack

has experience of analysing community empowerment in a wide variety of health issues. Our discussions build on available reviews [6–12], of which only one is systematic [9]. We also use evaluations of individual interventions that fall into the categories discussed here.

Successes and Challenges of Common FGM Approaches. Our discussion of the most efficient approaches in ensuring the abandonment of FGM faces three major challenges. First is the limited extent to which interventions have been properly documented and evaluated. A systematic review from 2012 only found eight interventions that had been evaluated sufficient to be included in the review [9]. Secondly, many interventions combine two or more approaches and methods, and there is limited knowledge on the interplay and relative efficacy of the different components of an intervention. Thirdly, most interventions do not have the total abandonment of all forms of FGM as the objective, though this is mostly an ultimate goal. Considering what is feasible within the available timeframe and budget, most interventions aim at secondary outcomes. This can be to break the silence and to initiate critical reflection upon FGM. Others aim at increasing knowledge and awareness of its association with health complications and its violation of human rights. Others again aim to change attitudes and intentions with regards to FGM [9] or at modifying the practice, either through reducing the extent of cutting [13], promoting its medicalization (e.g., in Egypt and Indonesia) [14] or changing the age at which FGM is carried out (e.g., in Sierra Leone).

However, while these secondary targets are considered as a first step towards total abandonment, and many see it as a stage of change, evidence shows that the translation of these secondary goals into actual abandonment of FGM is far from automatic. There are, for example, many surveys that find women who express a negative attitude to the continuation of FGM, while they still intend to let their daughters undergo the practice.

A major reason for this apparent contradiction between attitude and behaviour is a social and cultural pressure to uphold the tradition. Therefore, the importance of a community-wide change to enable individual families to abandon FGM is now widely recognized [3, 15]. Experience shows that large-scale abandonment can only be expected when FGM is no longer an all-dominant social norm and families can abandon the practice without the risk of stigmatization and exclusion.

We will now discuss seven of the most common approaches that have undergone some form of evaluation: (1) health risk approaches, (2) conversion of excisers, (3) training of health professionals as change agents, (4) alternative rituals, (5) community-led approaches, (6) public statements, and (7) legal measures.

Table 1 provides asummary of the main advantages and challenges of popular approaches towards the abandonment of FGM.

2. Health Risk Approaches

Since interventions against FGM first started more than 40 years ago, providing information about the health risks associated with FGM has been the most popular approach. It builds on the idea that if people are informed about the negative health effects of FGM, they will abandon the practice. Health risk interventions have been targeted at various population groups both as a stand-alone activity and as part of other interventions [11, 12]. In its crudest form, it can include delivering factual and didactic messages around the physical complications of FGM by local health providers, community facilitators, or NGO staff [7]. In its broadest form, it includes local knowledge and personal sharing and reflection coupled with the provision of health care services for complications of FGM [16].

It is believed that an increased knowledge of the negative health effects can stimulate reflection and critical thinking, leading to reduce the approval of, and eventually to the abandonment of, FGM.

Evidence suggests that the negative health effects of FGM presented by a health authority such as a medical professional are a key motivational factor for religious leaders to take a clear and strong stance against the practice, and which might lead to the issue religious edicts (Fatwa) against FGM [17]. Such Fatwas were issued, for example, in Egypt in 2006 [18], in Mauritania in 2010 [19], followed by a West African subregional fatwa in 2012 [17]. Fatwa's are believed to contribute to change in communities where people link the practice of FGM to Islam.

Health information has also influenced policy makers to promote laws and regulations such as the care for complications in Mali [20] and recently adopted legislation in Kenya and Guinea Bissau. Media attention given to health complications can also have positive effects. In 2007, the death of two girls after FGM was carried out by health care providers in Egypt was instrumental in strengthening legislation against the practice. The realization, publication, and spreading of the results of clinical studies on the negative health effects of FGM can lead to positive changes in terms of engagement of national authorities. A clinical study in 2009 and requested by the Gambian Vice-President and Minister of Women's Affairs demonstrated for the first time the magnitude of immediate and long-term health consequences of FGM in the country [21]. The results of this study were a key instrument to ensure institutional pre- and in-service training for all health personnel.

There are however also challenges to health risk approaches.

2.1. Medicalization or Change of Type to Reduce the Health Risks. Experience suggests that health information can lead to changes other than abandonment, most commonly an increase in the extent to which health providers are performing FGM [14, 20, 22], a trend associated with a risk of institutionalisation and continuation of FGM rather than its abandonment. It can also lead to the intention to change the type of FGM, as noted among others in Somalia and Sudan [23, 24].

Table 1: A summary of the main advantages and challenges of popular approaches towards the abandonment of FGM.

Approach	Advantages and potential successful results	Risks and disadvantages	Measures to overcome risks and disadvantages
Health risk info	(i) Stimulate resistance to FGM among lay people → reflection/abandonment religious leaders → fatwa politicians → laws and policies health providers → share information + denounce medicalization (ii) Improve health care for complications	(i) Medicalization (ii) Change type of FGM (ii) Disbelief (iv) Inadequate quality of information (v) Defence reactions (vi) Social norm overrules health risks	(i) Ensure health information is locally adapted, communicated nondjudgementally by a reliable source and combined with care for complications gibing space for reflection and experience exchange
Conversion of excisers	(i) Reduce availability of excisers (ii) Easy success indicators (iii) Media coverage providing visibility to issue	(i) Does not reduce demand for FGM (ii) Continue secretly or by apprentices (iii) Others take over task (iv) Ex-excisers unreliable sources against FGM (v) Alternative income may not motivate abandonment	(i) Ensure that work with excisers is only an aspect of a wider approach adapted to their roles in the particular community. (ii) Do not expect it to reduce the demand for FGM
Training of health professionals	(i) Improved quality of care (ii) Refrain to perform FGM (iii) Provide information and counselling (iv) Build local evidence on health consequences	(i) Resistance to work against FGM (ii) Inadequate content of training (iii) Lack of time and recourses to implement	(i) Comprehensive training for prevention and management into standard curricula (ii) Training target potential acceptance of the practice. (iii) Ensure an enabling environment for implementation of knowledge.
Alternative rites	(i) Facilitate community ownership and support, as it maintains key cultural practice (ii) Increased knowledge and empowerment of girls (iii) Publicity about change through community celebrations	(i) Only viable in communities in which FGM is a part of a rite of passage (ii) Limited integration of the whole community (iii) Insufficient adaptation into the specific sociocultural situation of each community	(i) Use only where fit into local culture (ii) Include the whole family and community (iii) Consider alternative measures if the actual cutting is done at other times (iv) Ensure community ownership for sustainability.
Community-led	(i) Community own problem and solution (ii) Broader support, less resistance (iii) Addressing underlying causes (iv) Reduce/remove FGM as a social norm, facilitating and stimulating change	(i) The community might decide to change, rather than to abandon, the practice. (ii) Failing to ensure community participation and resorting to traditional "lecturing"	(i) Ensure community ownership and adaptation (ii) Ensure long-term support to secure viable and broad change, reaching reluctant abandoners and neighbouring communities
Public statements	(i) Create a sense of social change among a group (ii) Facilitate and stimulate abandonment for group members	(i) Public statements by subgroups only lack of community ownership (ii) "Fake" opinions and/or lack of authority	(i) Ensure community-wide support (ii) Having legislation and policies in place provides support to people ready to change (iii) Further research is needed to investigate the effects of public statements from single groups, especially religious leaders (e.g., fatwas).
Legal measures	(i) Create an enabling framework (ii) Discourage FGM	(i) Practice can go underground (ii) Fear of seeking health care for complications	(i) Ensure community support for the law (ii) Ensure regulations that guarantee care for complications.

2.2. People May Not Believe the Information Given. One study in the Gambia and Senegal showed that only those who were already critical to FGM believed in the information of health risks [25, 26]. One reason for this is that the immediate complications of FGM are often attributed to other factors such as witchcraft or evil spirits [27, 28]. Another aspect is a gap between the information given and people's personal experiences, because not all women experience health complications and those who do tend to keep silent about it. Finally, both women and health professionals have generally been found not to attribute long-term health consequences to FGM [16, 21, 26, 29].

2.3. Inadequate Quality of the Information. Several researchers have pointed to the difficulties posed by employing a "laundry list" of health risks that is not adapted to the local setting [30]. For example, though only approximately 10% of all FGM cases are infibulations (Type III FGM), the "health risk approach" often highlights complications mainly associated with type III as common complications of all types of FGM, whilst other common complications (e.g., cysts and scarring) are rarely mentioned.

2.4. Condemning, Violent, and Shocking Messaging Can Provoke Defence Reactions. To highlight the negative health effects of FGM, health information messages often use strong visual images, such as the use of razor-blades and blood. However, one review found that such messages were seen as imposing (e.g., "Stop excising"), demoralising (e.g., "Stop excision or your daughter will die"), or were difficult for people to understand [8].

2.5. Health Risks Are Considered a Lesser Danger Than the Dangers Associated with Abandoning FGM. In communities where FGM is common, it is upheld as a social norm and enforced through social sanctions of individuals or families that do not conform. The risk of being socially ostracized, excluded from community activities, denied financial and practical support, as well as marriage possibilities, can outweigh the health risks associated with the practice [26, 29].

3. Conversion of Excisers

The vast majority of FGM in Africa, around 80%, is carried out by traditional practitioners, that is, excisers [31]. A popular approach has been to target excisers to convince them to stop performing FGM. Such interventions usually include education on the physiology of female genitalia, the harmful health consequences of FGM, their role in perpetuating it, and encouragement to stop performing FGM. In some cases, training and financial support is provided for excisers to help them find sources of income other than performing FGM [32, 33]. The expected outcome is a reduction in the numbers of excisers performing FGM subsequently leading to a reduction in the number of FGM performed.

One advantage of this type of intervention is their clear and limited scope and consequently clear and simple indicators to measure success, that is, number of excisers "dropping their knife" [27]. Furthermore, reports of public ceremonies of "dropping knives" shown in the media provide visibility to the issue of FGM and can stimulate debate. However, several concerns have been observed with the conversion of excisers.

3.1. Converted Excisers May Continue to Practice or Hand over Their Knife to Apprentices. A major review found that many excisers did not keep their promise to stop performing FGM [8]. In Mali, an evaluation found that 29 of the 41 excisers interviewed after completing the conversion programme declared that they still performed FGM and were not convinced that what they were doing was wrong. Also, most people in the study sites did not know of any practitioners who had stopped working as excisers [32].

Furthermore, if there is no change in the request for FGM, other persons will step in to fill the demand, including other excisers, health care providers, or newcomers [34]. For example, in Kenya, excisers stopped because their services had been taken over by health providers [29]. In some cases, excisers handed over their post to their apprentices, who are often family members [34], while in other settings excisers are brought in from other regions or countries [26].

3.2. Ex-Excisers May Not Be Considered Reliable When Turning against FGM. A key motivation for converting excisers is to take advantage of, and uphold, the respected position they are alleged to have in the community. However, few assessments of their social role and position are reported. Ethnographic research and the experience of the authors of this paper in the field display a wide variety in the role of excisers from powerful ritual specialists (e.g., in Liberia and Sierra Leone) to low cast or stigmatized ethnic groups (e.g., in Senegal, Mali, and Somalia) [23, 27]. Furthermore, being an exciser is rarely a full-time engagement and is usually combined with other tasks, such as support in childbirth. Little is known about the extent to which community members are listening to or are convinced by the arguments of converted excisers [27].

3.3. Income Might Not Be a Major Motivation for Excisers. Alternative income for excisers is meant to compensate for their loss in income if they give up FGM. However, existing information indicates that the financial gain for excisers is usually quite small (e.g., tokens of soap or food). Most excisers' duties are requested irregularly and hence the income from FGM appears to be a supplement rather than their main income [27]. Income might not be a major motive, and excisers in Mali, for example, felt that the funds received for dropping their knives' could not compensate for the social status associated with performing FGM [34].

Excisers share their often precarious living situations with the majority of the community. Some evidence suggests that singling out excisers for financial support and training in such precarious settings could contribute to internal conflicts and can boost the role of the excisers in the community or contribute to the recruitment of new excisers [35].

4. Training of Health Professionals as Change Agents

Several interventions have targeted health professionals, with the aim of preventing them from performing FGM, building their capacities to identify and treat complications and recruiting them as change agents [9, 35, 36].

Evaluations performed at the end of trainings for health professionals report an increased knowledge about FGM, health complications of FGM, and how to manage the complications, as well as an increased negative attitude to FGM [32, 36–38]. In an intervention study in the Gambia, health providers expressed shock, surprise, and anger when realising that the gynaecological complications they had been treating were consequences of FGM. This realisation contributed to a change in attitude and a willingness to engage in community outreach to prevent the practice [38].

However, interventions of engaging health providers as change agents have been met with a number of challenges.

4.1. Health Care Providers May Resist Working against FGM. Health care providers are often part of the same communities that support FGM. Hence, these health professionals may support FGM or be scared of involving themselves in such a sensitive issue [37, 39–41]. Studies have documented that some health care providers support FGM in general [21] and in its medicalized form in particular [22, 37, 40].

4.2. Content of the Training May Be Inadequate. The training time and content in the interventions varies widely from two 60-minute sessions [42] to five sessions of seven days with a comprehensive reproductive and child-health training [12]. Though no analysis comparing the content of the training is available, it is evident that shorter training gives less room for content, reflection, and discussion.

4.3. Systemic Difficulties in Putting Knowledge into Practice. The work burden and lack of inclusion of FGM relevant measures within standard procedures can inhibit a practical implementation of counselling and the provision of information [43]. The ability of health professionals to translate training into action both requires structural support, that is, in the form of resources and time allocated, and techniques, encouragement and empowerment strategies. A study from Mali [32] found that health care providers were not counselling against FGM after their training because of the extra burden on an already heavy workload. The effectiveness of the training will therefore depend on the position of health providers against FGM, their motivations and commitment to stand up against FGM, as well as the resources (including time) they have at their disposal to work on the topic.

5. Alternative Rites Programmes

In many communities, FGM is part of a larger rite of passage, often around puberty, that facilitates and marks the integration of a girl as a more mature member of the community. In some of these communities, interventions have been developed to replace the rite of passage with FGM, by an alternative rite without FGM. Such alternative rites programmes are expected to fulfil the cultural tradition of a coming of age ritual, so that girls can be socially accepted without having to go through FGM. These interventions are believed to show positive attitude and respect for cultural traditions and thereby prevent defensive reactions against efforts to abandon FGM and to facilitate abandonment of FGM by maintaining the ritual framework [29, 44]. In other situations, a key motivating factor to implement such interventions has been to safeguard girls during ritual seasons [28]. In some cases, excising rituals are replaced with a version without FGM (e.g., in Sierra Leone and Kenya), in others, previously used rituals have been revitalised [44], or a new form of education and "marking" has been introduced [45].

In Kenya, such interventions were first developed by community-based organisations in consultation with community members, such as families and local political, ritual, and religious leaders [28, 44–46]. Commonly they consist of a period of training, often in seclusion, and a public celebration and/or a certificate to mark the conclusion of the ritual. The training itself often aims at empowering the young girls to take charge of their sexual and reproductive health and rights, and the ceremony functions as a public statement of abandonment of FGM.

Two assessments in Kenya found that after this type of an intervention, more girls knew about reproductive health issues and expressed gender egalitarian attitudes, and more of the girls' families stated that there were no benefits to FGM and had increased knowledge about health, social and psychological problems associated with FGM. In addition, fewer people stated the intention to subject their daughters to FGM [45]. The promising aspects of this approach as it was first developed are the involvement of family and community members in designing the project and the entry point it can provide to promote dialogue among family members [28, 29, 35].

Some of the factors that can reduce the efficacy of such interventions however are the following.

5.1. Limited Integration of the Whole Community. There is a huge variation as to the extent in which families, and communities are involved in alternative rites programmes. Most interventions do include both girls and their families, but the extent to which the wider community is actively involved varies significantly. Alternative rites cannot be introduced without a preceding or accompanying process of sensitization in which an attitudinal change has to have occurred [45].

5.2. Insufficient Adaptation into the Specific Sociocultural Situation of Each Community. The role and meaning of traditional rites of passage and of FGM vary considerably between ethnic groups. For example, in some West African communities, the actual FGM and the confirming initiation ritual are often separated in time (e.g., in Senegal [47, 47], Sierra Leone [48, 48], and the Gambia [44]. In one programme in the Gambia, the girls that participated in the

alternative ritual had already undergone FGM at an earlier age, and the purpose of the ritual was therefore to train the girls so that they would resist FGM on their future daughters [44].

6. Community-Led Approaches

Community-led programmes have been identified as a necessary factor to tackle the social convention of FGM [15, 35, 49]. Evaluations of FGM abandonment interventions suggest that community involvement is key to create sustainable change [28, 35]. Community-led interventions to abandon FGM aim at promoting the empowerment of women and girls and the community at large to enable them to critically examine their own tradition and to gain the power to abandon FGM for their own benefit [15, 29, 35, 45]. Empowerment refers to the process by which the girls, women, and their communities gain control over the factors and decisions that shape their lives [50]. Understood as an empowerment exercise, interventions usually integrate the issue into a wider learning package, including aspects such as gender and development, as well as the social, political, legal, health, and economic development of a community.

The current most widespread and systematically implemented community-led programmes show promising results [29, 51]. One of these consists of an education programme with four modules, covering hygiene, problem solving, women's health, and human rights and has been carried out in several countries [2]. Such programs may have positively affected the prevalence of FGM and participants' knowledge about the consequences of FGM [29, 51].

6.1. Success Varies between Communities. A long-term evaluation of an intervention in Senegal showed a reduction of prevalence in the youngest generation (0–9 years of age) of almost 70% compared to 40% in a control village. In another area in the same country the reduction was about 24% [10]. However, when run in neighboring Burkina Faso only 3% reduction was identified compared to the control group [51]. When the same programme was run in Somalia, the public declaration achieved was only to change the type of cutting, rather than abandonment of FGM [52]. Egypt had a similar experience, in that the success of a community-led programme in one village was not paralleled in the neighboring village, suggesting differences in social and religious factors as key to variation [25].

6.2. Insufficient Community-Engagement. A particular challenge with community-led approaches is that some interventions that claim to be empowering use vertical programs that "lecture" and "educate" the communities, rather than using a participatory approach to involve others to empower themselves [51].

7. Public Statements

An important element in the process of mobilizing communities is a public statement (often referred to as public declarations) of a decision to abandon FGM by a larger group, usually a significant part of a community. Such public statements both express and facilitate change in the social conventions of the community. Public statements can take different forms, including signing a statement, alternative rites of passage celebrations, and multivillage gatherings.

A public statement can create a sense of collective change, which can help to empower families to abandon FGM and encourage others to follow. When public statements are made, this suggests that a sufficient number of individuals have decided to abandon FGM, which can further promote broad-scale abandonment. It is important to note however, that when a public statement has been made, this does not necessarily indicate that the whole community supports the abandonment of FGM and some may continue to do so. Depending on the stage of readiness for change and processes running prior to the public statements, they can mark a final decision already made to abandon FGM in some communities, whereas in others they are a milestone that signifies readiness for change, and further support is needed to sustain and accelerate the process [12].

Though public statements seem vital to facilitate large-scale change in high prevalence communities, there are certain risks.

7.1. Public Statements by Subgroups Only. Interventions ensuring public statements from subgroups rather than whole communities rarely result in abandonment, even when the selected subgroups form an authoritative voice, such as excisers, religious leaders, or men. For example, while public statements from men are expected to be influential due to their powerful role in society, evidence suggests that their potential influence is mitigated by the fact that the responsibility for FGM most often lies with the women [53]. Furthermore, while fatwas from high-ranking religious organizations or personalities are hoped to create change, the effect has never been systematically measured [54].

8. Legal Measures

Studies indicate that legislation and its implementation can have a preventive effect [26, 55, 56]. Most African countries with documented FGM have now passed laws against the practice. This provides an official legal platform for action and offers legal protection for women and can discourage excisers and families for fear of prosecution [35]. It can also offer health professionals a legal framework to oppose requests for performing FGM.

Laws against FGM are an important policy commitment and create an enabling environment. When preceded and complemented by education campaigns and advocacy and the sensitization of leaders, as well as adequate implementation, their effect is expected to be higher. For example, it was found that the beginning of the abandonment of FGM in Burkina Faso mostly coincides with the time of the adoption and application of the law banning the practice. [57].

8.1. Challenges with Legislative Measures. One challenge to the effectiveness of legal measures is that the practice may go underground. FGM rituals appear to have diminished but instead the cutting has continued in some countries outside the law as a way to avoid legal implications [47]. In several contexts, laws and debates about passing or enforcing legal measures led to resistance and protest, as for example, in Senegal, Mali, and Egypt [17]. A final concern has been that the existence of a law may also scare people with immediate health complications after FGM from seeking health care [8].

9. Discussion

The rather slow decline in prevalence after nearly four decades of campaigning against FGM raises questions about the effectiveness of interventions to eliminate this practice. Some of the most commonly used approaches discussed in this paper have a notable lack of thorough evaluations. However, the existing information is sufficient to discuss some important successes and challenges.

Evidence on the effectiveness of interventions is insufficient, particularly whether they have led to an actual decline in the incidence or prevalence of FGM. There is also insufficient evidence on whether secondary goals, such as change of attitude and increased knowledge, eventually lead to a decline in the practice. There is limited evidence on the key factors of successful interventions, especially since almost identical interventions can have very different results in different settings. Such information would be key to improve and scale up successful approaches.

Interventions tend first to appeal to those that are already questioning or have abandoned the practice, seeing the intervention as a way to get social acceptance for their change [26, 29, 45]. This is a common pattern in social change [58] and helps those that are already converted to translate their conviction into action and gives a push towards change to those that are ambivalent. This seems to be a necessary first step that subsequently facilitates change among more conservative members of the community [58]. However, this might imply that the next steps trying to bring along the more sceptical or conservative groups may require a revision of approaches and support for a longer period.

The need for interventions to be driven by and involve the whole community underlines the importance of gaining in-depth knowledge of the community and the need to pay careful attention to strategies to engage with communities. Reviews have shown that targeting FGM is most effective and well received when a broader approach is used, assisting the community with other challenges [10, 51]. While conversion of leading persons such as community and religious leaders to speak out against FGM and a favourable legal framework create an enabling environment; evidence shows the importance of peer groups. Only when information comes from someone similar to oneself, are the majority of people willing to accept and adapt to the information [29, 51, 58].

Resources for the abandonment of FGM including financial support from foreign donors can be instrumental to get interventions carried out, and incentives can be key to ensure participation and engagement. However, it can also complicate the process. People who engage in interventions can be motivated by access to resources, such as money or power. Incentives can be used directly, such as sponsored weddings or education for uncut girls, alternative income for excisers, and compensation for taking part in training and meetings. Free training, funding of activities, and access to employment are more indirect incentives. If this leads to actual change in attitude and practice, the project can be seen as successful, though sustainability may be a challenge. But there is also a risk that the conviction is not genuine, and people just pretend to give support for the cause to get access to the resources promised. More common is an expressed mistrust of how genuine the message of leaders against FGM is, and people and their messages, have been accused of being "bought" by the donors. These issues are however rarely discussed in evaluation reports.

We believe that many of the challenges discussed here can be overcome if they are included in a more comprehensive programme, rather than as stand-alone approach to abandon FGM.

Although information about health complications might be insufficient in bringing about large-scale changes alone, it is a key component in all interventions. People have a right to get information about health and the health complications associated with FGM. Concern over the health consequences of FGM is one of the most significant motivations for abandonment of the practice [9]. However, to be effective, it has to be reliable and communicated in a way that it can be absorbed and integrated into a wider health information package.

The involvement of health providers in identifying and caring for complications as well as disseminating their local knowledge might be a potential way to improve this approach. Training of health providers on all aspects of FGM needs to take into account that most health providers tend to share the same support for the practice as the community they serve. Therefore, interventions must ensure that they also take a stand against the practice and realise that medicalizing the practice will not benefit the community. The training must become integrated as a standard curriculum for all health providers, monitoring, and followup of trained providers being an essential part.

Whereas conversion of excisers as a stand-alone activity cannot be expected to have an effect on the prevalence of FGM, including excisers in a comprehensive programmes can prevent a risk that they obstruct the intervention and that they are not ostracized from the community. Alternative rites programmes can be an effective approach only in communities in which FGM is a traditional part of such a ritual, and where girls, their families, and the whole community are involved in the efforts to abandon FGM. Interventions based on community engagement require long-term investment, a comprehensive education package, and a supportive context. It is key that it is well adapted to the local setting, including sociocultural and religious factors, as well as human resources (i.e., well-trained individuals).

Sustainability is best achieved through the effect of change, in which the abandonment of FGM by a smaller

group or community is disseminated to the larger community, for which organizational support is provided. Public statements can be an important way of making publicly known that the local social convention is changing. Such statements should be the result of a community-wide process to be effective, as statements made by subgroups have limited effect. Further research to investigate the effects of religiously founded public statements, such as fatwas against FGM, could be useful, and having legislation and policies in place provides support to people ready to change.

10. Conclusion

Besides the above-mentioned importance of a comprehensive and holistic programme for the abandonment of FGM including different types of activities, the authors believe that it is equally important to have a thorough design and planning and local adaptation of the intervention. The basic content of this should be a situation analysis and baseline assessment prior to any intervention. This will establish a community's readiness to change, as well as other factors related to FGM (decision making processes, power dynamics, meanings attributed to FGM, etc). A good design should equally include plans and procedures for monitoring the process. This entails a thorough documentation of each step of the intervention. Finally, a good design should include evaluation of the output and outcomes to either compare the situation before and after and/or establish a comparison site. It should be taken into account that interventions require substantial time before they can result in actual change. The time needed may vary considerably between communities, depending on various local and contextual factors.

Disclosure

The lead author was a staff member of the World Health Organization. The author alone is responsible for the views expressed in this article and they do not necessarily represent the decisions, policy or views of the World Health Organization.

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Research Article

Attitudes toward Female Circumcision among Men and Women in Two Districts in Somalia: Is It Time to Rethink Our Eradication Strategy in Somalia?

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Somalia has the highest global prevalence (98%) of female circumcision (FC), and, despite a long history of abandonment efforts, it is not clear as to whether or not these programmes have changed people's positive attitudes toward the practice. Against this background, this paper explores the attitudes of Somalis living in Hargeisa and Galkayo districts to the practice of FC. *Methods*. A purposive sampling of 24 Somalis, including activists and practitioners, men and women, was conducted in Somalia. Unstructured interviews were employed to explore the participants' knowledge of FC, their attitudes toward the continuation/discontinuation of the practice, and the type they want to continue or not to continue. *Result*. The findings of this qualitative study indicate that there is a strong resistance towards the abandonment of the practice in Somalia. The support for the continuation of Sunna circumcision is widespread, while there is a quite large rejection of Pharaonic circumcision. *Conclusion*. Therefore, since the "zero tolerance policy" has failed to change people's support for the continuation of the practice in Somalia, programmes that promote the pinch of the clitoral skin and verbal alteration of status, with the goal of leading to total abandonment of FC, should be considered for the Somali context.

1. Background

The traditional practice involving the removal or injury of female external genitals, namely, female genital mutilation/cutting (FGM/C), or female circumcision (FC), which is the term we use in this paper and is a literal translation from the Somali language (gudniinka dumarka), has long survived in Africa in the name of tradition though in recent decades the practice has received worldwide attention, with its abolishment determined by a broad international consensus [1]. Accordingly, ever more countries have incorporated the penalty against performing FC in their constitutions, and more communities and civil societies have increasingly turned their advocacy towards abolishing FC. Nevertheless, the goal remains far from being realized. With steady progress in some countries, the FC operations continue unabated in many practicing countries, thus exacerbating the already pervasive suffering for millions of women living in resource-poor countries [2]. Therefore, identifying the factors that impede the cessation of the practice may enable us to advance our understanding of the practice and the subsequent adoption of a culturally acceptable strategy towards its abandonment.

Female circumcision is most prevalent in 28 African countries, but is also found in Asia and Western countries that host immigrants from areas with FC traditions [3]. Approximately 140 million women and girls living today are estimated to have undergone FC, with three million girls at risk Of the practice every year [4]. The motives for the practice are complex and vary between different communities, contexts, and over time [5]. These motives are all rooted in tradition and culture, though none of them carries a religious or scientific basis. The procedure is often performed on young girls by a layperson with no medical training, but in some countries health professionals performing the practice outnumber traditional practitioners [6]. A WHO study shows that 18% of all girls in countries

from which data is available are cut by health professionals [7], and the operation is performed through one of four types classified by the WHO [4]: Type I involves the partial or total removal of the clitoris and/or the prepuce, while Type II involves the partial or total removal of the clitoris and labia minora. Being the most radical form, Type III involves the partial or total removal of the external genitalia and a sealing of the vaginal opening, leaving only a small hole for urine and menstrual blood to pass (whether with or without cutting the clitoris). Lastly, Type IV involves all other harmful procedures to the female genitalia for nonmedical reasons.

The victims of this practice may suffer tissue damage that may negatively affect the health of the girls over the course of their lifetime [8]. Local and generalized infections, severe pain, acute haemorrhage, and even death may be short-term complications, with other possible complications also including the retention of urine and difficulties in menstruation [9]. A WHO study shows associations between the number of adverse obstetric outcomes and FC [8], while evidence from Norway shows that perinatal complications, such as foetal distress, emergency caesarean sections, and prelabour deaths, were more frequent among infibulated Somali women (with Type 3) compared to Norwegian women [9]. The psychological consequences following FC were described as posttraumatic shock and depression, as well as a loss of trust and a lack of bodily wellbeing [10].

The efforts towards the abandonment of FC date back to the early 20th century when European missionaries and colonial powers in Africa attempted to stop the practice by introducing laws and church rules, the result of which was anger against the colonial powers [11]. According to Rahman and Toubia, the governments of Egypt and Sudan passed laws on FC in the 1940s and 1950s although these laws did not work due to the absence of prior public awareness [12]. The African activism against the practice became more apparent in the 1960s and 1970s, which was the spark that motivated the WHO's first conference on FC in Khartoum in 1979. This conference and subsequent sustained activism have drawn worldwide attention to the health and human rights consequences of FC. As a result, the abandonment of all forms of FC was recommended, while the notion of reducing the physical complications of FC by performing the practice in health facilities was deemed to be unacceptable [13]. Since then, a growing number of countries have approved laws prohibiting FC [13, 14]. Nonetheless, 34 years after the first WHO conference, FC continues unabated in most high-prevalence countries in Africa, with slow progress being seen in some low-prevalence countries [2].

Accordingly, a number of professionals with extensive research experience on FC in Africa suggested the importance of reducing the harm when total abandonment is not feasible [15, 16]. Others stressed the importance of professional health workers performing the attenuated form of FC where the alternative is to have it performed by a traditional practitioner in an unhygienic environment [16, 17]. The harm reduction procedures include pricking, which is defined as a procedure in which the skin is pricked to draw a drop of blood while no tissue is removed [1]. Despite strong opposition by activists and international organizations such as the WHO, the data from several countries in Africa show that the milder cutting is already replacing more severe forms in many communities [18]. In those countries, the harm reduction procedure is often performed by health professionals with the intention of reducing the harm caused by the more severe procedures [19]. While the harm reduction procedure is recognized by many as a fair intermediate step offering safer solutions in the process of change in areas where total abandonment is not feasible, a joint statement by the WHO and other UN agencies raised concerns that pricking (if it is accepted) may serve as cover-up for more invasive procedures [1].

The country with the highest prevalence of FC in the world is Somalia, where virtually all girls in the country are circumcised (98%) [20]. The practice is often performed on Somali girls between the ages of 4–10 by a medical practitioner, or most often by a traditional practitioner from a family in which generations of that family have been traditional practitioners. Somali people classify female circumcision into two types: the Sunna form (*gudniinka sunniga ah),* which is perceived as mild, but can encompass anything less than Pharaonic, and the *Pharaonic* form (*gudniinka fircooniga ah),* which is considered to be severe and involves suturing the side fleshes together, leaving a small opening for urine and menstrual blood to pass through [21–23]. The term "*Sunna,*" literally means "tradition" in Arabic. For Somalis though, the word "*Sunna*" means any tradition of the Prophet Mohamed that his followers preserve. As a result, many Somalis may opt for this form, subsequently becoming resistant to abandoning any practice that carries the name "*Sunna*" [24].

The circumcision of both girls and boys is equally perceived as a normal aspect of being a Somali [24], and the age range of circumcision is similar among both Somali boys and girls (<10 years). It is the mother's duty to make arrangements for the circumcision of daughters, whereas the father is expected to organize the circumcision of their sons. The rationale behind this is that young girls may not be eligible for marriage if left uncircumcised. Like many other societies in which women have limited access to education and employment [25], marriage in Somalia is critical for women's economic security. Thus, ensuring that a daughter undergoes circumcision is a loving act aimed not only to boost a girl's chance of a successful marriage, but also to promote integration into her culture. A failure to circumcise daughters may result in a long-lasting stigma and shame on the girl and her mother. The word "*buuryo qab*" (uncircumcised), which is the worst kind of insult a Somalian can hurl at another Somali, is frequently said to the daughter by her age-mates, with this applying to boys as well. Regardless of gender, being uncircumcised therefore remains outside of the accepted Somali cultural standards.

Beginning in the 1970s, the former Somali regime openly took a stance against FC and backed numerous campaigns aimed at eliminating the practice using a variety of approaches. The Somali Women's Democratic Association (SWDA) was founded in 1977 to implement anti-FC projects with overall goal to abolish the practice in Somalia by the year 2000 [26]. One of the recommendations by SWDA was a promotion of the pricking form to be performed in hospitals

with an expectation that this milder form will eventually replace infibulations [27]. Unfortunately, since people had no prior awareness, this strategy did not work. Lastly, the practice was banned from hospitals, and the total abandonment strategy was adopted in 1988 [27]. The Somali government and Swedish agency (SAREC) provided support to the Somali Academy of Science and Arts to engage in research on the topic. Simultaneously, knowledge creation campaigns were initiated in schools and community meeting centres, and a nationwide "media-based" campaign was launched. All government efforts against FC collapsed with the overthrow of the military regime in 1991, and decades of conflict in the country interrupted not only academic research on the topic, but also halted any effort to coordinate a national action plan of any kind [28]. Since 1996, though, some uncoordinated programmes on FC have been implemented in different parts of the country by both international and local women organizations. Most of these efforts have been based on awareness-raising lectures and seminars at the community level, in which the health and human rights risks associated with the Pharaonic cut have been discussed. However, the use of high-level advocacy activities to create a social and political atmosphere that rejects all forms of the practice has been very scarce. Some years ago Tostan, a civil society organization that made a significant improvement in FC abandonment in Senegal [29], also replicated its FC abandonment programme in villages in Somaliland, the same region where the present study was conducted. However, according to a film entitled, *"My daughter, dry your tears,"* which was made as a result of a Tostan programme in Somalia, the programme seemed to have maintained the status quo by rejecting the Pharaonic cut only. A prior assessment report on FC programmes in Somalia shows that programmes "lack systematic approaches, strategies, consistent messages and appropriate materials" [23]. Thus, the question of whether or not these programmes have changed the predominantly positive attitudes of Somalis toward the practice of FC remains unanswered [23].

2. Behavioural Change Theories

When people lack an awareness of how their behaviour affects their health and wellbeing, they have little reason to put themselves through the misery of changing the risk behaviours they have engaged in for many years. Although increased knowledge creates a precondition for change, yet additional communal or self-influences are needed to overcome the impediments to adopting and maintaining new behaviours. There are large numbers of behavioural change theories, but changing the behaviour of FC requires a unique approach, as it is a communal rather than individual behaviour. One of the main characteristics of FC is that even if each individual in the intermarried group thinks of abandoning the practice, no single individual acting alone can succeed [30]. According to Mackie, the best possible way to achieve a successful change is to accomplish a convention shift of intermarrying communities and a public declaration that marks the shift, in which every family understands that FC is harmful. Nevertheless, there is no single family that can act alone, as a group of intermarrying families is required to abandon the practice simultaneously [30]. Convention theory illustrates that where all families in an intermarrying society choose not to have their daughters circumcised, cutting would not be an incentive to any family's daughter [30]. This situation has been seen among Somalis in Norway [31, 32]. However, in the absence of a collective shift, the practice will continue even if every person wants to stop it on an individual basis [30]. The most successful programmes that have led to a reduction in the prevalence of FC include the Tostan programme in Senegal [29]. Moreover, comprehensive approaches adopted by Norway for the abandonment of FC led to a significant attitude change among Somali immigrants in Norway [31, 33], with other European countries also reporting similar results [3, 34]. In Somalia, there are a number of FC programmes underway, including the Tostan project in Somaliland. Even so, there is no evidence as to whether or not these programmes have changed people's positive attitudes toward the practice of FC. This study may be useful in helping to better understand the current attitudes of the Somali people toward this persistent but widely criticized practice, in addition to creating discussions of possible, context-specific alternatives to help minimize the suffering due to FC, as well as to ultimately abolish the practice.

3. Materials and Methods

3.1. The Context. Somalia is a Horn of African country with population of 7-8 million, of which approximately 20–30% live outside their home country, with majority of them living in Western countries. Roughly 44.7% of Somalis are between the ages of 0–14 years, the total fertility rate is 6.26 children per woman, and the literacy rate is 49.7% for males and 25.8% for females. While infibulations, which are associated with various obstetric complications [9], constitute 85–90% of all types in Somalia, women who give birth in hospitals and receive professional care during the delivery constitute only 9% of all total deliveries in Somalia [23]. Accordingly, a prior study shows an extremely high maternal mortality rate of 31 deaths in 734 deliveries in Galkaayo, Somalia (4,223 in 100,000) [28], with all the women in this study being victims of infibulations. The infant mortality rate in Somalia is 180 per 1,000 live births, while the maternal mortality ratio is 120 per 100,000 live births [35].

3.2. Study Design. A qualitative study using unstructured interviews was conducted in Galkaayo and Hargeisa from July to October of 2011 and May of 2012. An unstructured interview is not only a flexible tool for accessing people's experiences, inner perceptions, attitudes, and feelings of reality, but also a tool for understanding the complex behaviour of people without imposing any a priori categorization that might limit the field of inquiry [36]. Gaining trust and establishing good relationships are essential to the success of unstructured interviews, as only when a trustful and harmonious relationship is cultivated the interviewee can share his/her knowledge and experience on sensitive topics such as FC with the interviewer.

A purposive sampling of 24 Somalis aged ≥18 was conducted in Somalia. Of the participants, 11 were men and 13 were women. Among them were two activists against FC from local NGOs and two trained midwives, who at the same time served the community as circumcisers. The remaining 20 participants were ordinary people from various walks of life, but all of them were part of an urban population.

We followed common research ethics principles in the carrying out of this study, including informed consent, the right to refuse, withdrawal, and confidentiality. Afterwards, verbal consent was obtained from each participant, and this study was ethically cleared by both the Norwegian Ethical Committee and the Ethical Committee of the Ministry of Health of Somaliland.

The topic of FC is not a sensitive topic, nor is it illegal in Somalia as it is in Western countries; hence, people openly expressed their experiences and perceptions towards the practice. However, the discussion of FC between males and females is rare. Thus, to reduce gender sensitivity related to FC, we assigned a female assistant to interview the female participants and a male assistant to interview the men. Interviewers received training about how to conduct qualitative interviews, as well as how to develop trust and intimate relationships with participants prior to the initiation of the interview. Moreover, they were given information about the study's objectives, in addition to the research question that the study intended to answer. Activists and midwives were interviewed by the first author, and two days were set aside for each participant, the first day for getting to know one another and building a relationship and the second day to inform them about the study and to subsequently obtain their consent for participation. Being a male interviewer did not affect the quality of the interviews of female midwives and activists since the participants had to talk about their professional experience on the subject, but not their personal situations. The interviews were conducted in the Somali language, which was the native language of the participants and interviewers.

3.3. Content of the Interview. During the interviews, the terms *gudniinka dumarka* (female circumcision), gudniinka sunniga (milder forms), and *gudniinka fircooniga* (infibulation) were used, and the participants were asked about their understanding of the practice, as well as their perspectives regarding the continuation/discontinuation of the practice. They were also asked if they circumcised their daughters or had intentions to do so. The participants' denotation about the Sunna and Pharaonic cut was also explored, and the interview process continued until it was clear that no new information was emerging from the additional interviews; that is when saturation was achieved.

3.4. Analysis. The first author translated the audiotaped interviews into English and transcribed them verbatim. The transcripts were thoroughly read several times [37]. We used a thematic analysis to identify and analyse important themes [38], with the coding process involving the recognition and encoding of the identified themes prior to interpretation [39]. According to Leininger [40], themes can be identified by bringing together fragments of ideas, experiences, and beliefs that are often meaningless when viewed alone. For that reason, themes that emerged from the informants' stories were pieced together to form a comprehensive picture of the participants' shared experience [41]. The themes that were identified through coding were further divided into categories based on the participants' experience, knowledge, and attitude towards FC [42]. The consistency of the findings from different methods we used (i.e., interviews and quantitative data that were published elsewhere) has served to ensure the trustworthiness and credibility of the study's results.

4. Results

4.1. Participants' Knowledge on Types of FC and Its Health-Related Problems. The majority of the study participants divided the types of FC as Pharaonic (Type 3) and *Sunna*. *Pharaonic* was perceived as the procedure involved in cutting most of the external genital tissue, with the sides fused together to leave only a small opening. By contrast, the *Sunna* was perceived as the milder form that does not lead to any health-related problems. However, some participants mentioned Sunna circumcision as having two stitches, which generated a motivation to interview the circumcisers to help explore the extent of the cut entailed in the Sunna circumcision. They described two types of FC that they perform:

> *There are two types of Sunna. One is where a drop of blood is obtained from the clitoris, or the tip of the clitoris is incised, while the other type is called Kaatun (ring), which most commonly involves the removal of the prepuce. The clitoris is either removed totally or partially, and then two stitches are made. (A 59-year-old female circumciser)*

The circumcisers' information is supported by activists who reported that what people perceive as Sunna can be categorized as Type 3 because of the involvement of the cutting of different tissues:

> *There are no people who are trained for doing Sunna circumcision. The same people who used to do the Pharaonic are also doing the Sunna. They cut all the parts that they used to cut in the Pharaonic. The only difference is whether they suture less or not. (56-year-old female activist)*

4.2. Knowledge on the Health and Human Rights Consequences of the Practice. The vast majority of the study participants knew that FC had health-related problems, including recurrent pain, the retention of urine and menstruation, and infection and complications in childbirth. Moreover, fistula, as well as sexual dissatisfaction and psychological problems, was also mentioned, whereas some participants attributed the frequent school absenteeism of the girls to FC. Even so, none of the participants blamed the Sunna form for any health problems, while most of the participants attributed all health complications due to FC to Pharaonic circumcision:

Pharaoanic circumcision creates lots of problems for girls; . . . they are sutured during the operation, they are defibulated at their first marriage, they are defibulated again when giving birth. What kinds of benefit can it have? Nothing! It has only disadvantages. (50-year-old female)

There are lots of problems, that is, in the Pharaonic form, girls have difficulties in passing urine and menstrual blood. Urine may keep draining for a long period, because urine that is retained under the sutured flesh may keep draining long after the initial urination. (35-year-old female)

It creates so many problems, including blood retention, urine retention, difficulties in child birth and other problems. (26-year-old male)

When the passage for urine, blood and childbirth is closed, complications are unavoidable. Sometimes fistula develops, which is very serious. Moreover, men experience problems when they marry a woman who was circumcised with Pharaonic. (41-year-old male)

Some participants acknowledged that FC has adverse health effects on the sexual satisfaction of women, which they perceived to be a problem:

Uncircumcised girls have their natural feelings (sexual satisfaction), but the circumcised ones have lost their natural feelings. (20-year-old female)

Circumcision destroys the sexual life of girls, and I believe it affects them psychologically too. (25-year-old female)

The potential impact of FC on girls' education was also recognized by some of the participants, while the high level of school dropouts and school absenteeism among Somali girls was also attributed to the practice:

If the girl goes to school, she may miss class at least one week every month because of problems associated with Pharaonic circumcision. (43-year-old female)

Pharaonic circumcision causes pain that sometimes stop girls from going to school. (36-year-old male)

Moreover, the participants knew that FC was a violation of human rights of women and girls. They mentioned that cutting natural female genitals is unreligious and ruins the health of the women, therefore violating the rights of girls to a healthy life:

You have a responsibility. You should treat girls according to the Islamic religion, you do not have to harm them. (32-year-old female)

I think every person whether young or old has a right for his/her natural body to not be mutilated. If there was an advantage to mutilating the body of women, God wouldn't have created those tissues in the first place. (28-year-old male)

Every person has a right to health; when his/her right to health is ruined by cutting important parts of the body, that is a violation of human rights. (37-year-old male)

4.3. Circumcision Status of the Participants' Daughters. Despite a good amount of knowledge on the health and human rights consequences of FC, none of the participants had any intention to leave his/her daughter uncut. The majority reported having subjected their daughters to the Sunna form, which they perceived as being similar to being untouched:

Now I did not suture my girls, I only circumcised them with the Sunna form, and I thank God that they did not experience all the pain associated with the Pharaonic form. (44-year-old male)

I have two daughters and I subjected them to a minor Sunna and I did not touch them. (35-year-old female)

I have two daughters. They are still too young to be circumcised, but I will circumcise them with Sunna circumcision. (28-year-old female)

I have girls and I circumcised them with the Sunna form. (39-year-old female)

Nonetheless, three participants reported having their daughters circumcised with the Pharaonic form, though one mother mentioned having her daughters circumcised with Sunna and subsequently with the Pharaonic circumcision:

I have five daughters. At the beginning, me and my husband disagreed about the type of circumcision for the girls, as he wanted the Sunna form. I accepted his suggestion and the first two daughters were circumcised with Sunna, but after some months with the Sunna circumcision, I took them back to the circumcisers and they were sutured. I circumcised the other three girls with Pharaonic circumcision too. (41-year-old female)

I have four daughters and I will circumcise them with the Pharaonic form. (33-year-old female)

I have a daughter and I circumcised her using Pharaonic with three stitches. More than three stitches is impossible. (20-year-old female)

4.4. Resistance to Total Abandonment. Almost all the participants in this study supported the continuation of FC in one form or another, admitting that the tradition of leaving girls untouched has no room in their culture. However, they supported the *Sunna* cut, which they believed to be a religious requirement with no health-related problems:

Untouched girls!! That is too much and impossible here. The message should be very clear; girls must be circumcised with Sunna, which is a religious duty. But, girls will not be circumcised at all! That is a very strange story here. (38-year-old female)

In our culture there are no uncircumcised girls. Girls should be either circumcised with Pharaonic circumcision or the way the religion accepts (Sunna). (40-year-old male)

We are people who have a long history of circumcising girls, we moved from the Pharaonic to a milder form and further to the mildest form. I think if total abandonment is suggested, there is nobody who is going to accept it. (35-year-old female)

I do not support the total abandonment of FC, but I want the Pharaonic type to be abandoned. Girls should get the mild Sunna. It is harmless and it does not interrupt the daily work of girls. (35-year-old female)

4.5. Justifications for the Continuation of FC. Different justifications were put forward for the defense of girls' circumcision. Those who were sympathetic to Sunna circumcision forwarded totally different arguments for the continuation of the practice than those who were supportive of the Pharaonic form. Religion was the main justification for the continuation of the Sunna form, while the belief that Sunna circumcision has no health-related problems was also widespread:

Our old generations used to circumcise our daughters with Pharaonic, but recently people have abandoned Pharaonic because they came to know that religion does not accept the Pharaonic. I support the Sunna form because it is good for religion and it does not cause harm. (28-year-old female)

In the old days (with Pharaonic circumcision), girls were used to being on the bed for eight to nine days with their legs tied together. But the Sunna form has no problems at all. Girls are cut and they go without any problems. (39-year-old female)

Many of the participants rejected the Pharaonic circumcision, as it is perceived as being un-Islamic and harmful to one's health. Yet some women believe that the Pharaonic cut has to be continued regardless of its un-Islamic nature and its adverse effect on the health of girls and women. The main reason they forwarded was its potential for virginity and marriageability:

Pharaonic is a crime according to our religion and it is not allowed, but every person has his/her choice, I always support Pharaonic and I still support it. Let God punish me for that if God wishes. In my neighbours and relatives, I have not seen a single girl that is left with only Sunna circumcision (all are cut in Pharaonic). (20-year-old female)

Islam does not accept Pharaonic circumcision. But each individual does what he/she thinks is safer and good for his/her daughters, and we feel that Pharaonic is more secure for us. I know what is good for my daughter, it is my responsibility to do it. (41-year-old female)

I believe the former type (Pharaonic) was better, the Sunna form is not good. In the Sunna form, there is no difference between old women and girls regarding virginity because both are open. When a mother of 10 children and a young girl cannot be differentiated regarding virginity, as both are open, it is a big shame. I support the Pharaonic form and I encourage mothers to subject daughters to Pharaonic. (20-year-old female)

4.6. Obstacles to Total Abandonment of the Practice

4.6.1. Suspicions Surrounding the Abandonment Programmes. Activists told about the factors they believe are obstacles toward a successful attitude change towards FC, with their stories revolving around two issues. First, people are suspicious about the social change itself, which they think is a foreign-driven agenda that is offensive to their religion and culture. Secondly, the practice of FC remains as a strong social convention that traps everyone in the society, and no one can escape the trap alone; if so, that person will pay a steep price:

People are defensive; they say that these people (NGOs) want to change our religion. Others say that if we stop FC they will again tell us to stop men's circumcision, and then they will tell us something more unusual. (47-year-old female activist)

In 1991, we performed the first awareness campaigns, and I reflect on a young girl whose mother decided not to circumcise her. After 20 years when the girl got married, she was divorced immediately after her husband realized that she was not sutured. She was circumcised later at the age of 20. So, there are suspicions. The question people ask is: How can I trust that my daughter will have a successful marriage if I do not circumcise her? (56-year-old female activist)

4.6.2. Uncooperative Opinion Leaders. One of the main obstacles toward the total abandonment of FC that emerged from the interviews was the fact that opinion shapers, such as religious leaders are sympathetic to Sunna circumcision, and therefore encourage its continuation:

After people understood the health problems of FC, they asked religious leaders about the position

of Islam on FC, and they were told to use the Sunna circumcision. We invited some Somali religious leaders to Saudi Arabia, where they were told that FC has nothing to do with Islam. When we came back home, they insisted that the Sunna should not be stopped. People said that if we abandoned Pharaonic circumcision, then let us keep doing the Sunna. (56-year-old female activist)

We invited highly academic religious leaders from Alazar[sic] University in Egypt to come here, and they supported the total abandonment of FC. Somali religious leaders did not accept that by saying that the Sunna form should continue. (47-year-old female activist)

4.6.3. Awareness Programmes That Reject Only One Form. In response to a question about "whether the participants have attended awareness programmes and what they have learned from the programme," almost all the participants who attended awareness programmes or heard about it on TV were told to abandon Pharaonic circumcision. Some participants stated that they were told to circumcise girls with Sunna circumcision and abandon Pharaonic:

Yes I attended seminars. I was informed that the Pharaonic form should be abandoned because it is wrong. Girls should be subjected to the Sunna form, which is not harmful to girls. (35-year-old female)

I attended seminars. . .I have learned that Somalis should abandon the Pharaonic circumcision, as it causes a number of health problems. (21-year-old female)

I attended seminars and I learned about the problems of Pharaonic circumcision. (26-year-old male)

I did not attend a seminar, but I heard from the radio and the media that Pharoanic[sic] circumcision should be stopped. (31-year-old male)

4.6.4. Absence of a Law against FC. Participants were asked about their perspectives toward the criminalization of FC in their country. The vast majority of the study participants stated that the criminalization of the practice would not be a solution, but that it may instead create a confrontation between the government and the public. The illegalization of Sunna circumcision is perceived as a violation of religious rights and a serious issue that cannot be tolerated:

If the government accepts that girls are circumcised with Sunna circumcision, people will accept it, but surely people will not accept total abandonment. Rejecting the Sunna form that religion requires is like saying "abandon your religion". (39-year-old male)

This is a strong tradition that existed for a long time. If it is intervened through the legal system, it will grow even stronger. People may say that the government is against our culture, tradition and religion. This may put the government at risk. (22-year-old male)

I would not support illegalization because if the government gets involved with this long tradition, while very few people shifted to Sunna and the majority still used Pharaonic, the government will have difficulties. I think they should wait until more people shift to Sunna. People should be encouraged to abandon the practice and be given knowledge about it. But the government and NGOs should leave the decision about its abandonment to the people. (30-year-old male)

5. Discussions and Conclusions

This qualitative study explored the attitudes toward FC among Somali men and women in the Hargeisa and Galka'ayo districts of Somalia. The findings show that almost all the participants supported the continuation of female circumcision, with the majority supporting the continuation of the *Sunna* form in particular, while rejecting the *Pharaonic* form. This finding is consistent with prior quantitative findings in Somalia [43, 44], in which 90% or more supported the continuation of the practice, particularly *Sunna* circumcision. Given the fact that many Somalis may support one form of FC while rejecting others, the importance of the categorization of questions addressing FC by type is underlined; a failure to do that may cause a risk that researchers will draw the wrong conclusions. For instance, the Multiple Indicator Cluster Survey (MICS) by UNICEF in 2006 demonstrated that only 32% of people in the northwest region of Somalia support the continuation of FC [20], which contradicts virtually all of the other studies conducted in Somalia. The difference between the MICS and other studies could be the way the questions were formulated, as the MICS asked the people about their support in relation to the continuation or discontinuation of FC, while our study categorized the practice into *Sunna* and *Pharaonic,* asking them which one should be continued or discontinued. The MICS also considered the categorization of the practice by type in their published questionnaire although they did not consider the answers to this question in their report [20].

The present study explored the extent of the cut involving the *Sunna* circumcision in Somalia, with the findings revealing that the most prevalent Sunna cut in Somalia involves either the partial or total removal of the clitoris, followed by two stitches. When the operation involves stitching, the WHO classifies it as Type III regardless of the number of stitches [4], which is consistent with prior findings that reported that most Somali parents ask their infants to undergo the larger excisions [28]. Some of the participants who defended the continuation of the Sunna cut defined the "Sunna cut" they advocated for as the "pricking of the clitoris." Nevertheless, none of the participants clearly

indicated to have his/her daughter subjected to this mild type. Prior studies on FC among both Somalis in exile and other similar communities argued that circumcisers may claim that they performed Sunna when they really performed a more extensive form [32, 45]. At this stage, we do not know whether or not the circumcisers decide what to cut and what not to cut, or whether it is the parents who should regulate the extent of the cut to be performed by the practitioner. An interview with circumcisers reported that the mild form involving the "prick of the clitoris" exists in their setting, but is rare. Through my personal experience, if you ask a Somali about the definition of the Sunna cut that religion accepts, virtually everyone may say "the pricking of the clitoris." However, the findings of this study make it clear that the Sunna form that people in Somalia might have shifted to is not as mild as we may once had thought.

This study reports a pervasive resistance to the total abandonment of FC in Somalia. The majority of the participants in this study supported the continuation of Sunna circumcision, while few people supported the continuation of Pharaonic circumcision. The Sunna cut may involve anything different from the Pharaonic cut, and behind the support of the Sunna circumcision lies the belief that Sunna circumcision is a religious requirement. Generally speaking, supporters of Sunna circumcision use a single Hadith as a justification for their argument. The hadith says, "*Do not cut too severely, as that is better for a woman and more desirable for a husband.*" However, many religious scholars regarded this passage as having little credibility or authenticity. Even so, the Koran clearly rejects an alteration of the human body from the way God has created it. Female circumcision is therefore a controversial topic within Muslim circles; still, the important point to note is that Islam safeguards women's rights to sexual enjoyment and health, and if female circumcision violated those rights it would automatically be considered as being forbidden.

The participants who supported the continuation of Pharaonic circumcision used its importance for the virginity and marriageability of girls as a justification for the continuation of FC though it is unfortunate that the practice designed to make girls reproductive (marriageable) may ultimately cause them to become infertile [46]. While being fully aware of the health consequences of the practice, as mothers themselves have gone through the adverse consequences of the practice, they still subject the same procedure on their daughters. In a country where almost all the women have been circumcised, being uncut has become a social stigma, as uncut woman may have little chance of getting a husband. Thus, it is not surprising that there is pressure by mothers and relatives to allow their daughters to undergo female circumcision [47]. The theory of reasoned action and the theory of planned behaviour argue that before individuals change their behaviour, they often consider the consequences of the change [48]. The health consequences of FC are vast, but it is disproportional to the adverse social and cultural consequences that, if left uncircumcised, girls and their families may endure. This is the reason that despite a very good knowledge of the health consequences of FC, all of the participants who had daughters reported that they either subjected their daughters to FC or had the intention to do so. The question then that programme leaders must ask themselves before designing any intervention is how much control does a mother have in stopping her daughter from circumcision? In the case of FC in Somalia, no single individual has control over their behaviour concerning FC since the practice is a deeply believed social norm. In such a social environment, knowledge creation and awareness campaigns alone, as the situation has been for the past 30 years, may not be enough to change the status quo.

This study shows the number of obstacles toward the abandonment of the practice in a study setting, with the most important thing being the support and tolerance of the practice by opinion leaders. The importance of religious leaders/politicians' involvement in the abandonment of the practice has been documented [14]. However, the information received by Somalis from religious institutions regarding FC is that the "*Sunna* circumcision is allowed by religion and it should be continued" [49], as the political leaders are either silent or support the continuation of the practice. The recent objection against the illegalization of all forms of the practice by parliamentarians in the Puntland state of Somalia was a clear indication of the widespread tolerance of the practice at the political level. In addition to the rejection of illegalizing the practice, those who brought the case in the Parliament were alleged to have violated the basic religious values of the community until they eventually pled that "they meant to abolish Pharaonic circumcision only."

This study also indicates that campaigners in Somalia reject the Pharaonic form only, and not the Sunna form. Hence, it is important to note that FC is a strongly believed in tradition, and that whoever dares to oppose it in Somalia does so against the tide of public sentiment. The campaigners themselves are part of society and cannot go against the will of the public or they may pay a heavy price. It is therefore very clear that the public rejection of the Pharaonic cut is widely prevalent in Somalia while the Sunna cut, which is anatomically undefined, entertains overwhelming support because of its association with religion and the perception that the Sunna cut does not have any health problems. Shell-Duncan states that "harm reduction strategies may be a sound and compassionate approach to improving women's health in settings where total abandonment of the practice is not immediately attainable" [16]. The author used the example of other widely accepted harm reduction strategies such as the treatment of heroin addicts with the use of methadone, which improves the health of heroin addicted individuals, and since it is orally administered, it also reduces the risk of blood transmitted diseases. Shell-Duncan concludes that "a harm reduction approach shares the goal of eventually eliminating female genital cutting, but is willing to promote intermediate steps that offer safer solutions in the process of change" in areas where the more severe form of FC is predominant and total abandonment is not feasible [16]. According to Yoder et al., FC practicing families live in three different social environments: (1) "those in which nearly everyone has their girls cut, (2) those in which no one has their girls cut, and (3) those in which some girls get cut while others do not" [18]. Families who live in the latter two social environments are

more likely to give up the practice through zero tolerance-based interventions, as they interact with communities who do not circumcise their daughters, thus possibly inspiring them to abandon the practice. When Somalis migrated to countries such as the UK, Sweden, and Norway, many of them give up the practice because FC is not embraced by the mainstream communities in the host countries or with other Muslim immigrants such as those from Pakistan [3, 33, 50].

In 2011, the WHO published a policy brief entitled, Female Genital Mutilation programmes to date: what works and what does not [51]. The report concluded that the "interventions that worked included those which involved coordination between NGOs and governments" in which governments adopted laws against the practice. The report neglected to answer the question: what works for whom? The strategy that can work in communities located in conflict areas where there are no effective governments, such as Somalia, was not considered in the report. Nonetheless, the generalization of highly diverse contexts, communities, and cultures has been the reality over the last three to four decades. In reality, the strategy that works among Somalis in Norway may not work in the Somali community in Somalia because the two contexts are different. Similarly, the strategies that work in the Kisii community in Kenya may not work in the Somali community in Kenya, since almost everything surrounding the practice is different in the two cultures. Therefore, the total abolishment of FC in Somalia, where there is no effective government, requires a context-specific strategy designed solely for the Somali community in Somalia.

Recently, the Public Policy Advisory Network on Female Genital Surgeries in Africa published a policy report entitled, "Seven things to know about female genital surgeries in Africa" [52]. This policy brief has opened the door for a broader debate about the current global policy on FC, thereby highlighting the failure of FC abandonment by conservative policies, such as a "zero tolerance of FC," which have been based on the notion that "this way (zero tolerance) or no way at all." According to the report, the "zero tolerance of FC" slogans closed the door on the diverse discussions that have been a precondition in finding solutions for this age-old practice that affects the health of millions of women all over the world [52]. According to Shweder, there are discrepancies between the global discourse and the experience of many field researchers in Africa [53]. In an effort to minimize health risks due to more extensive forms of FC, several proposals for harm reduction methods have been developed. Mathews stated that the Royal Australian and New Zealand College of Obstetricians and Gynecologists (RANZCOG) considered the sanctioning of the medically performed pricking form to prevent the more severe procedures, but after harsh criticism from activists the decision was revoked [54]. Similarly, the American Academy of Pediatrics' Committee on Bioethics endorsed the importance of ritual nick to save some girls from undergoing disfiguring and life-threatening procedures [55]. Later on, the decision drew storms of criticism from activists and was subsequently revoked [56]. Whenever there has been a proposition of an alternative procedure by researchers or other professional institutions such as pediatrics and gynecologists, a fierce criticism by activists arises. We all respect the human rights of women and children, and we endeavour to find ways to put this practice to an end. However, there is a discrepancy in the understanding of the process leading us to the abolishment of this age-old practice. It has been over three decades since we began advocating for a zero tolerance of FC, with the progress made being far from the desired extent. Yet, despite several recommendations for the pricking form as a transition to total abandonment, no chance has been given to testing the impact of such an intermediate step for the abandonment of FC in countries where zero tolerance has failed.

This study shows that both ordinary people and opinion leaders in Somalia are against the total abandonment of FC but supporting for the continuation of the Sunna form. Campaigners against the practice could not dare to also promote zero tolerance slogans since this goes against the will of the public majority. The Somali government adopted a zero tolerance strategy in 1988 after the pricking form strategy failed though it did not work well [27]. As mentioned earlier, high-profile government ministers who attempted to promote zero tolerance in the Puntland state of Somalia in early 2012 faced serious opposition from Parliament, and a threat to lose their government positions, until they finally revised their claim. This clearly shows that the zero tolerance strategy has been attempted several times in Somalia, but failed through strong public resistance. Accordingly, our recent quantitative study of the urban population of Hargeisa (soon to be published) shows a prevalence for FC of 97%, with over 80% of the women being infibulated. This is consistent with studies that were conducted in early 1990s [57], and it is an indication that girls' circumcision, particularly with Type III, continues unabated. Hence, after 30 years of a failed strategy in Somalia, shall we still wait and watch the pain and suffering endured by thousands of girls who are infibulated every year until the zero-tolerance strategy works in Somalia, or should we open the doors for discussions and alternatives? The time is right for local communities and donors to act decisively to support what is working to end female circumcision in Somalia.

For many ethnic groups in Africa, FC represents the central component of a traditional rite of passage ceremony in which girls are expected to pass through a transition from puberty to adulthood. In these communities, in making the decision to not circumcise their daughters, parents may face the dilemma of what to do about the traditional ritual that allows them and their daughters to publicly announce the transition to womanhood. To address this problem, the idea of an "alternative ritual," which excluded genital cutting but maintained the ceremony and the public declaration for community recognition, has been adopted. A symbolic ceremony strategy without genital cutting has been reported to become successful in parts of Kenya [58]. Thus, a similar strategy tailored to Somalis' understanding about the practice is crucial for the future abolishment of female circumcision in Somalia.

This study has some limitations. The results of the study reflect the perceptions of a limited number of participants

in the study, and not necessarily those of the entire Somali population in Somalia. The failure to generalize the findings of this study to the Somali community in Somalia is a general limitation of the qualitative methods used. Most of the views and opinions were repeatedly expressed among different individuals, and the result is consistent with our earlier quantitative results in Hargeisa, thereby increasing our confidence in the validity of the findings.

In conclusion, will the promotion of the pinch of the prepuce and verbal alteration of status may be a better strategy for the eventual abandonment of FC in Somalia? The idea is not to promote a shift to a milder form of FC, but to formulate a harmless situation that mimics a circumcision through a transition to untouched behaviour. The pinch of the prepuce will alleviate the suffering due to Type III, Type II, and even Type I, while it may be much less painful than widely tolerated practices such as genital piercing, ear piercing, and male circumcisions [59]. The advocacy for the pricking form may not be an option in areas where total abandonment can be achieved through zero tolerance. However, it may be a fairly temporary solution (as a transition to total abandonment) in areas where there is no immediate feasibility of total abandonment, and infibulation is the most common procedure [16].

There are a number of assumptions for the potential of this strategy in abolishing FC in Somalia. First, the "the pinch of the clitoral hood" may break the religious argument surrounding the practice, which is the most important argument for the continuation of FC among Somalis, and it may neutralize the religious leaders' opposition to total abandonment. Nonetheless, it is important for programme leaders to avoid using the term "Sunna" when promoting this mild form, as detaching the practice from religion is crucial in any effort towards the total abandonment of FC in Somalia.

Secondly, it will break the link between marriageability and FC, which is the second main reason for perpetuating FC in Somalia. In this case, the association between virginity (marriageability) and FC will eventually disappear as the Pharaonic, which has been perceived as guaranteeing virginity, will be eliminated through public consensus. Down the road, there is an expectation that people will gradually adopt uncut behaviour, as the pinch of the clitoral hood will no longer be seen as being necessary for virginity and marriageability; nor will people (peers or the groom) have a way to differentiate a girl with a pinched clitoral hood from an untouched girl. Thus, those who were already against the practice, but had it performed on their daughters because of the social pressure, may automatically abandon the practice at all.

Thirdly, it may give a reasonable voice to activists to advance their advocacy against the practice, since they can easily convince politicians and religious leaders to be on board in their advocacy towards the abandonment of all other forms of FC. It is an idea that every person in Somalia can easily digest since the majority of Somalis are convinced that Pharaonic circumcision and all forms involving the cutting of tissues are neither religious nor a good part of the culture. The bottleneck for the past 30 years has been the notion that girls should be left untouched, which can be neutralized by adopting this circumcision mimicking form. The prerequisite here is that programme leaders should have a clear mind in terms of what is to be promoted (the pricking of the clitoral hood), such that the pricking form should not serve as a cover-up for more severe forms of the practice.

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