



Healthcare providers' experiences of comprehensive emergency obstetric care in Somaliland: An explorative study with focus on cesarean deliveries

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ABSTRACT

Objective: This study aimed to explore the experiences of healthcare providers (HCPs) regarding the provision of emergency obstetric care (EmOC) with a focus on cesarean deliveries in a referral hospital and maternal and child health centers in Somaliland.

Methods: An exploratory qualitative approach using focus group discussions was employed at the main referral and teaching hospital and four maternal and child health centers in Hargeisa, Somaliland. Twenty-eight HCPs were divided into groups of 6–8 for discussions lasting 1 to 2 h. All HCPs included in the study had experiences with the provision of EmOC. Data were analyzed using thematic analysis.

Results: Collective family decision making was identified by HCPs as a barrier to the provision of EmOC. This tradition of decision making at a group level was perceived as time-consuming and delayed HCPs from obtaining informed consent for EmOC. Low socioeconomic status and poor knowledge about maternal healthcare among users affected care seeking among women. Suboptimal EmOC at the hospital was reported to be due to miscommunication, inadequate interprofessional collaboration and lack of infrastructure.

Conclusions: HCPs encountered difficulties with the provision of EmOC. A broad array of strategies targeting the community and healthcare system is needed, including training of HCPs on intracultural communication competence, interprofessional collaboration and use of alternative birth methods other than CS. Antenatal care can be used to prepare families for potential obstetric emergencies and as an opportunity to obtain written informed consent.

Introduction

Despite the global progress made by the Safe Motherhood Initiative and the Millennium Development Goals (MDGs) in reducing maternal mortality globally, low-income countries are still struggling to achieve their targets [1]. Somaliland is one of the lowest-resource settings in the world, struggling with some of the highest rates of maternal mortality, estimated at 732 per 100,000 live births [2]. The majority of these maternal deaths could be prevented with the timely and effective provision of emergency obstetric care (EmOC) [3]. The government of Somaliland is committed to improving access to and utilization of EmOC. Recent efforts to address maternal mortality in Somaliland have

focused on strengthening EmOC systems. Some of these efforts include equipping health facilities with medicine, supplies and technology, equipping staff with required skills, building leadership and managerial capacity and health information systems, and funding EmOC [4,5]. However, despite the increased coverage and provision of EmOC in Somaliland, the reduction of maternal mortality (MM) has been slow [2].

EmOC is categorized as Basic Emergency and Obstetric Care (BEmOC) or Comprehensive Emergency and Obstetric Care (CEmOC). Treatments within BEmOC include the administration of parenteral antibiotics, oxytocics and anticonvulsants, manual removal of the placenta, removal of retained products of conception and assisted

Abbreviations: BEmOC, Basic Emergency Obstetric Care; CEmOC, Comprehensive Emergency Obstetric Care; CS, Cesarean Section; FGD, Focus Group Discussion; HCPs, Healthcare Providers; ICU, Intensive Care Unit; MDG, Millennium Development Goals; MoHD, Ministry of Health Development; SDG, Sustainable Development Goals.

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vaginal delivery. CEmOC includes all of these and adds blood transfusion and cesarean section [3]. CEmOC thus covers the treatment and management of a number of additional maternal complications, such as obstetric hemorrhage, pre-eclampsia, sepsis, and obstructed labor [6]. In Somaliland, these severe maternal complications have been identified as common direct obstetric causes of maternal mortality [7].

Previous studies have shown that the underlying factors that contribute to maternal morbidity and mortality include poverty, illiteracy, gender inequalities, malnutrition, cultural values, and maternal behaviors [1,8]. These factors can prevent women from seeking, reaching or receiving EmOC. In Somaliland, the interconnectedness and relationships between family members in communities play a major role in how decisions are made [9]. Furthermore, when cesarean section (CS), assisted births, blood transfusion, induction of labor or dilatation and curettage for removal of retained placental tissues are indicated, informed consent has to be provided by the family in Somaliland [10]. However, the influence of this collectivist culture on Somali obstetric emergencies remains unknown.

Evidence shows that CS is associated with slower physical and psychological recovery, increased risk of sepsis, postpartum hemorrhage, uterine rupture and hysterectomy, and increased healthcare costs [11]. However, despite this knowledge, CS remains the most common mode of birth in obstetric emergencies, rather than instrumental vaginal delivery (IVD) in Somaliland [12]; the national rates of IVD and CS in Somaliland are estimated at 2 % and 4 %, respectively [12,13], lower than the reported rates in other resource-poor settings, which also have lower rates of adverse maternal outcomes [14,15]. The reason for the lower maternal mortality rates in the latter countries could be due to improvements in the provision of effective EmOC, especially in terms of timeliness [14,15]. The low rates of CS and IVD in Somaliland [12,13] suggest high rates of refusal or long delays with the provision of EmOC perhaps due to difficult encounters between healthcare providers (HCPs), women and their family members during obstetric emergencies, as shown in a previous study conducted in a high-income setting [16].

The experiences of HCPs with the provision of EmOC to the Somali population need to be further explored using a qualitative approach. To our knowledge, there is very little evidence from an HCP perspective on the barriers to the provision of lifesaving obstetric interventions in Somaliland. We use Binder et al.'s modified three-delays model [17] to conceptualize and explain our findings by identifying barriers to the provision of EmOC relative to delays with decision making to seek, reach and receive care. The three-delays model has been widely applied to identify socioeconomic, sociocultural and health-facility-related barriers contributing to delayed EmOC [17]. This study aimed to explore the experiences of HCPs regarding the provision of EmOC with a focus on CS in a national referral hospital and four maternal and child health centers in Somaliland.

Methods

Study design

This study followed an exploratory qualitative approach using focus group discussions (FGDs) [18]. The FGD method was used to explore the experiences of CEmOC that HCPs shared. Below, BEmOC and CEmOC will be referred to by the more general description "emergency obstetric care". "HCPs" include doctors, obstetricians, nurses, midwives, anesthesiologists and auxiliary nurse midwives. The study was approved by University of Hargeisa Ethical Review Board (DRCS/41/05/18) and the Somaliland Ministry of Health Development (MOHD/DG: 2/165/2018).

Study setting

Somaliland is a state located in the horn of Africa. It has a population of around 3.5 million. It is a low-resource country with relatively high levels of illiteracy and poverty, particularly in rural areas [4]. Hargeisa

is Somaliland's capital city, with a population of approximately 1.5 million. Based in Hargeisa, Hargeisa Group Hospital (HGH) is the main public and national referral hospital, serving not only the population of Hargeisa but also taking referrals from Somaliland's five other regions. For CS, there is a cost-sharing model in place, where the government subsidizes and covers the cost of surgery and families pay for the costs associated with medication and medical supplies [4]. The rate of use of a skilled birth attendant in Hargeisa is estimated at 33 % [13].

The study was conducted among HCPs who worked at the HGH and four other maternal and child health centers in Hargeisa. The HGH serves a target population of approximately 150,000, with 6,000 estimated deliveries annually. The institution's maternal mortality rates and infant mortality rates are 462 and 16 per 1,000 live births, respectively. The staff:patient ratio is approximately 1:150 in the obstetrics department, which is staffed by senior, resident and junior doctors, nurses and midwives. CS is conducted by senior doctors, or by resident or junior doctors under the supervision of senior doctors. The national CS rate is estimated at 4 % [13], while the HGH rate stands at 18 % [19]. Taken together, the four MCHs provide delivery services to about 10,224 mothers/year and antenatal and postnatal services are also provided. The average infant mortality rate in the four MCHs is estimated at 72 per 1,000 live births and the staff:patient ratio stands at 1:1322 [20].

Participants and recruitment

HCPs with expertise drawn from different areas of obstetric health were recruited by purposive sampling [18] at the HGH and the four MCHs in Hargeisa between 2018 and 2019. In order to be eligible for inclusion in the study, HCPs had to be either a doctor, nurse or midwife at the HGH or one of the four selected MCHs and to have experience of working in a delivery ward that provides obstetric care to women with severe maternal complications [19]. The HCPs were recruited from the labor ward, intensive care unit (ICU), operating rooms, gynecology wards and the four MCHs. Doctors, midwives and nurses who did not work in the departments where women with severe maternal complications were managed were excluded from this study.

The first author contacted the administration department of each of the health facilities and through the individual in charge was given access to relevant HCPs. Access was granted, and the participants were invited to the FGDs. Arrangements of the room and when the FGDs were conducted were made by the HGH matron. Information regarding the purpose of the study and how results would be disseminated was given to the participants. Before each FGD, participants were asked to give their verbal informed consent to participation, and none refused this. The recruitment of study participants continued until no new information was discerned from the study participants [18].

In total, 28 HCPs comprising 12 doctors and 16 nurses and midwives who had experience managing emergency obstetric situations were included in this study. Twenty were women, and eight were men; their age range was 25 to 50 years. The doctors had between 6 and 10 years' experience, while the nurses and midwives had between 4 and 22 years' experience. All of the HCPs had undergone BEmOC or CEmOC training.

Data collection

The FGD topic guide was developed, and pilot tested, followed by restructuring and rephrasing of questions. Four FGDs, each with 6–8 HCPs, were organized, one for each of the occupations represented by the HCPs. The FGD with resident doctors (FGD 1) had six participants; that with junior doctors (FGD 2) six participants; and those with the senior nurse/midwives (FGD 3) and junior nurse/midwives (FGD 4) eight participants each. The doctor groups contained both men and women, while the groups of nurses and midwives were all female. The FGDs were conducted within the healthcare facilities themselves. The FGDs were facilitated and moderated by the first author and observed by research colleagues, two of whom are fluent in Somali. While the first

author is not fluent in the native Somali language, no language barrier was encountered because all participants were fluent in English. The researchers involved in this study are healthcare professionals comprising registered nurses, midwives and an obstetrician with experience in obstetric settings.

At the first FGD (FGD 1), the first author introduced the research questions to be discussed by the group and observations were made by the second, third and fourth co-authors, who raised additional follow-up questions regarding maternity and early pregnancy complications. Participants were asked about their experience of providing care to women with severe maternal complications and what they perceived were the barriers to seeking, accessing and receiving appropriate EmOC at the right time. Follow-up questions were asked where it was felt necessary to clarify the information raised by the participants. Experiences of different types of EmOC were discussed, such as CS. This method is similar to a general interview guide approach that allows for further probing when the moderator requires additional important information [18]. At the end of the FGD, the moderator presented a summary of the discussion and the HCPs were asked if they wanted to make any additional comments or changes. None of the participants wished to add or change the moderator’s summary and the FGD then ended. The FGDs lasted 1 to 2 h and were audio recorded. Recruitment of participants to FGDs stopped when no new information emerged, which was after 4 FGDs. Shortly afterward, the first author transcribed the FGDs verbatim [18]. The transcripts were verified by the first, second and last author for accuracy. Their summaries of their observations during the FGDs were transformed into a useful set of additional notes.

Analysis

Authors in this study reflected on their own individual perceptions, thoughts and preconceived opinions in order to be explicit during data analysis. Moreover, the authors taking part in this study were guided by the emic and etic theoretical perspective [18]. An emic perspective referred to the meaningful descriptions and interpretation of the HCPs’ encounters with obstetric emergencies, while an etic perspective entailed the perspectives of the authors of this study, who aimed to be aware of their pre-understanding and as a team had continuous discussions in the analysis and interpretation of the study findings. The emic perspectives of HCPs on their experiences with the provision of CEmOC with a focus on CS were thus described from the etic lens of the authors.

The data analysis followed a thematic analysis approach with inductive coding, as described by Braun and Clarke [21]. The preliminary analysis was conducted by the first, second and last author. In the first phase, authors read the transcripts several times to familiarize themselves with the data set. The second phase involved generating codes using the inductive approach to coding the data text in relation to the study aim and seeking to bring out the HCPs’ experiences and perspectives. The data produced many recurrent semantic codes. Examples are presented in Table 1. In the fourth phase, a further check was carried out by mapping themes back onto the transcripts to ensure that they accurately reflected the text’s original meaning. These preliminary themes were then presented to the study participants to ensure their credibility. All of the authors were involved in the fifth phase and final phase of the process, which, by further defining and refining every theme, involved interpreting the data set beyond its original description.

Results

The data analysis resulted in three themes (Table 2): *Collective family decision making; Poverty and lack of awareness among users; and Miscommunication, inadequate interprofessional collaboration and infrastructure.*

Table 1
Example of thematic analysis process from FGD quotes to themes.

FGDs quotes	Codes	Theme
“The woman had placenta previa and needed blood transfusion urgently. I informed the managers about the case but because no man was present to give consent, nothing could be done. The woman was brought late at night by other female relatives. Unfortunately, the mother did not survive because we did not get consent on time” (FGD 4 Senior nurse/midwife 6)	Cultural practices dictate the process of obtaining consent for EmOC	collectivistic decision making through family ties
“The culture itself is saying that when you marry her, you have the right, for the baby because it belongs to you. However.....with the woman...she is the daughter of your father in law, so they are two. When it comes to signing consent the man from his side will say save my baby for me..... and then the other side will say save our daughter for us” (FGD 1 Resident Doctor 2).	Group level decision making rather than individual in providing consent for EmOC	

Table 2
Thematic analysis of HCP explanations for a delay in consent for emergency obstetric care among women in Somaliland.

Themes
Theme 1: Collectivistic decision making through family ties
Theme 2: Poverty and lack of awareness among users
Theme 3: Miscommunication, inadequate interprofessional collaboration and infrastructure

Collective family decision making

HCPs described family ties in the context of maternal care as an obstacle that impeded the timely provision of EmOC. The Somali practice of extended family decision making in relation to the consent process was perceived to be time consuming and to contribute to adverse maternal outcomes. HCPs described difficult experiences and unexpected encounters with family members when consent was required for EmOC.

“The woman had placenta previa and needed blood transfusion urgently. I informed the managers about the case but because no man was present to give consent, nothing could be done. The woman was brought late at night by other female relatives. Unfortunately, the mother did not survive because we did not get consent on time.” (FGD 4 Senior nurse/midwife 6)

Collective family decision making can extend to individuals who are not blood relations and can create a maternal-fetal conflict of interest, illustrated by one of the doctors in FGD 1:

“The culture itself is saying that when you marry her, you have the right for the baby because it belongs to you. However, it’s different with the woman because she is the daughter of your father-in-law.....so they are two. When it comes to signing consent the man from his side will say ‘save my baby for me’. And then the other side will say ‘save our daughter for us’.” (FGD 1 Resident Doctor 2)

HCPs repeatedly stated that they had the capacity and skills to perform emergency CS but because of these family conflicts could not

always perform them in time to prevent a maternal near miss or mortality. One doctor stated: "I remember that case because it was very disastrous. We did not operate because we don't have one person to sign the consent" (FGD 2 junior doctor 3). HCPs also stated that family members had been aggressive towards them and threatened to take them to court or even kill them when they had suggested CS or other emergency interventions. Moreover, HCPs agreed that most of their patients believed it was only the woman's husband and/or male blood relatives who could give consent for EmOC. The informants shared their interpretation of a Somali tradition that women could not sign in their own right:

"When it comes to consent form, the mother cannot sign herself during surgery, even surgeon and operating theatre department will not accept to do surgery if you [mother] sign yourself. They often ask, 'where is your husband or father?' However, a man can sign the consent for another man that requires operation." (FGD 4, Midwife 6)

Poverty and lack of awareness among users

As HCPs described, financial constraints limited the women's ability to access and utilize EmOC. HCPs noted that most of the women with complications who attended public health facilities came from low socioeconomic backgrounds, indicating a high burden of maternal morbidity in poor families. Moreover, the long distances many families needed to travel in order to reach a healthcare facility and the desire to avoid expenses at them meant that many families opted for home-based care. This delayed provision of timely care, and women were often brought to EmOC facilities later on, in a critical condition.

"Mostly mothers deliver at home with the help of traditional birth attendants because it's cheap with no transportation costs and that's why they prefer them. However, when a complication becomes severe, they come to the hospital but late." (FGD 4 Senior nurse/midwife 5)

All HCPs described a lack of knowledge regarding danger signs during pregnancy as a major problem contributing to adverse maternal outcomes. The HCPs pointed out that family members played an important role in influencing women's access to and utilization of EmOC. HCPs described how family members were obstacles to women's timely access to EmOC.

"Relatives do not always have any information or knowledge about the risks and complications of pregnancy for the patient. Always we meet patients with scars, and they delayed at home to have normal delivery. Then they come to hospital very late, and still want to deliver normally." (FGD 3 Junior nurse/midwife 3)

Miscommunication and inadequate interprofessional collaboration and infrastructure

Across the HCPs, poor communication, interprofessional collaboration and infrastructure were described as key problems in the provision of EmOC. When HCPs failed to effectively communicate with patients and family members, distrust manifested as delayed decision making or family members' refusal of timely provision of EmOC. Moreover, when HCPs recommended different emergency obstetric interventions, patients and family members became suspicious and lacked confidence about whether the more invasive EmOC recommended was necessary. HCPs thus articulated effective communication as most likely to facilitate timely decision making by family members and optimal provision of EmOC.

"Sometimes the staff do not explain deeply to the relative and the patient. Due to poor communication, patient and family members don't understand the importance of emergency obstetric care as a solution. The

healthcare providers tell the patient and relatives 'we will make a cesarean section; will you sign or not?'" (FGD 3, Junior nurse-midwife 5)

All HCPs participating in this study described how inadequate team-based care affected the provision of EmOC and led to delays in the provision of EmOC. HCPs attributed the current insufficient interprofessional collaboration in the provision of EmOC as barriers, such as HCPs working independently, use of different standards and protocols in providing care due to the difference in pre-service training across HCPs, and unfamiliarity of roles among different cadres. Most importantly, these barriers to interprofessional collaboration were described by HCPs as contributing to delayed care and adverse maternal outcomes.

"We are not working together; some of the healthcare providers don't monitor the vital signs of the patient, others do not use effectively the partograph. I remember there is one mother who stayed for many hours without monitoring she was just in bed..." (FGD 4 Senior midwife 2)

"The anesthetist will take time and then they will come; the surgical team will take 2 to 3 h to come. The patient is waiting, the doctors are waiting, everyone is waiting. The concept itself of timely decision making and being present on time is missing, from so many people." (FGD 1, Doctor 2)

Shortages of equipment and technology were mentioned as a challenge faced by HCPs in providing optimal EmOC. Furthermore, HCPs in this study emphasized the need for educated and informed communities, good governance, effective management and strong healthcare systems. HCPs mentioned that these areas were vital to overcome weaknesses in the current healthcare system. They stated that changes needed to be made to bridge the gap between families, their community networks, and the healthcare system. This will in turn enable the provision of timely consent in obstetric emergencies and provision of EmOC without delays.

"We are lacking a system that is working properly that can ensure we can effectively provide care to patients. Also, I think there is need for supervision of healthcare providers in everything they do." (FGD senior midwife 4)

Discussion

To the best of our knowledge, few studies examining maternal healthcare provision have been conducted in Somaliland [7,10,19]. The study participants provided rich descriptions of their experiences with the provision of EmOC. Our findings provide significant evidence to show the importance of HCPs working together with members of the patient's extended family within the community to reduce the delays in the provision for EmOC. In particular, our main findings from the perspective of HCPs show that the Somali emphasis on collective (family) decision-making, poverty and lack of awareness among users and poor communication and coordination processes could result in delays in the provision of EmOC. Below, we synthesize and discuss the main findings using Binder et al.'s modified three-delays model [17], illustrated in Fig. 1.

Our findings show that the first delay in seeking care resulted mainly from poverty and lack of awareness among users. HCPs reported that the inability of families to cover the costs of services was an economic barrier that discouraged women and their families from making the decision to seek EmOC. However, HCPs also pointed out the likelihood that the barriers at the health facility level, namely poor communication and collaboration and inadequate infrastructure, contributed to sub-optimal care, poor maternal outcomes, and lack of trust in EmOC. In this regard, it is likely that distrust with EmOC among women and family members [17] influenced the choice of women and family members to opt for home births. Our findings are consistent with previous studies that identified socioeconomic barriers and sub-optimal obstetric care as key obstacles when deciding to seek EmOC [17,22,23].

The second delay in reaching care mainly arose from

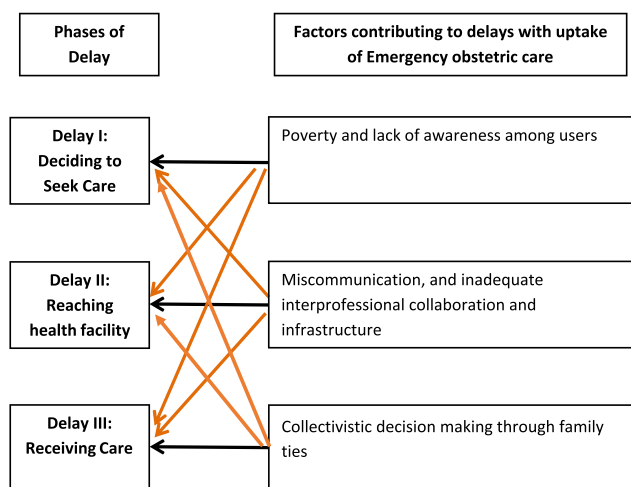


Fig. 1. Factors influencing utilization and provision of emergency obstetric care illustrated using the modified Binder et al.'s [26] three-delays model. Arrow shows the influence of factors on delays in a specific phase.

miscommunication between HCPs and EmOC users, inadequate interprofessional collaboration between HCPs and inadequate infrastructure at the health facility level. According to Binder et al. [17], the barriers identified in our findings can contribute not only to the third delay in receiving care but also to the second delay. This is because access to HCPs with low levels of competence can contribute to women and family members taking more time to initiate intra-hospital transfer or inter-health facility referrals [24]. Among our study participants, the need for HCPs to work together and effectively communicate with users was evident. An interprofessional teamwork approach, as implemented in other settings, can build the competences of HCPs in Somaliland [25]. This can be achieved through HCPs sharing common goals, having clear roles and responsibilities, having regular training and competency checks, showing mutual respect and trust, communicating effectively and having defined workflows and workflow mapping [25,26].

We identified that collective family decision making mainly contributed to the third delay of receiving care. This study showed that the difficult encounters of HCPs with the woman and family members interfered with the timely and adequate provision of EmOC. The concept of individual autonomy and self-efficacy manifested through the individual written informed consent system for EmOC conflicted with the Somali community's patriarchal kinship, an important social-cultural structure. Our findings illustrate specific challenges the HCP has to deal with when informed consent from more than the patient herself is expected. The HCPs spoke about how stressful it was for them to navigate these conversations professionally. On the one hand, they knew that, according to obstetric guidelines [27], they needed to carry out essential interventions to save the fetus or the mother's life. On the other hand, they knew they needed to show professionalism, with respect for patients and their wishes. If HCPs proceeded to provide EmOC without the consent from family members despite the woman being in active labor, litigation was often pursued. Currently, the requirement of family consent for surgical interventions is a subject of debate and discussions are ongoing on drafting and enacting a maternal health emergency policy that will empower HCPs [2]. There is a need within the healthcare system to implement changes that will make EmOC more culturally acceptable to women and their families [28]. This can be achieved by training staff on cultural awareness to understand intracultural practices impeding the provision of EmOC. HCPs can thus explain the indication for EmOC from the position of women and family members, and advise and suggest proven alternatives for birth apart from CS [14,15,28]. These alternatives can be assisted vaginal births with vacuum or instrumental forceps and embryotomy to facilitate vaginal delivery

[14], which would be more culturally acceptable and could be conducted by HCPs working in maternal and child health centers that are close to homes and less costly [15].

The three themes identified in this study reflect the complexity of timely provision of EmOC [29]. For instance, when EmOC is recommended by HCPs and costs are involved, poverty and lack of awareness by users raise the need for collective family decision making in order to get financial support from family members and consult each other on the recommended EmOC [23,24]. Moreover, when women and family members receive poor-quality EmOC because of miscommunication, inadequate interprofessional collaboration and infrastructure, they are likely to doubt the EmOC indicated. This leads to further engagement in collective family decision making and since this is a time-consuming process, it can contribute to adverse maternal and fetal outcomes [24]. For this reason, the barriers identified in the three themes emanating from the experiences of HCPs require combined and simultaneous interventions addressing each theme in order to prevent delays and improve provision of EmOC [23].

Strengths and Limitations

A key strength of this study lies in the use of FGDs to elicit verbal descriptions of the encounters of HCPs with severe maternal complications. The FGDs allowed the HCPs to comment on each other's views and opinions regarding their provision of EmOC [16]. The diversity of the experiences obtained from the HCPs, who described sub-optimal care at the community and health facility level, is a further strength of this study. Furthermore, the groups comprised HCPs doing similar jobs with similar levels of experience in treating women with severe maternal complications gave the discussions a high level of homogeneity [18].

The criteria recommended by Lincoln and Guba [30] to increase the trustworthiness of the findings in terms of credibility, transferability, dependability and confirmability were applied in this study. Credibility and confirmability were increased through a member-checking session with study participants who reviewed the study themes and interpretations and confirmed that the themes accurately reflected their experiences. Where some themes were noted by the study participants as overlapping with others, the first author later merged them. The researchers involved in this study, drawn from different disciplinary backgrounds, helped prevent the first author from expressing personal pre-understandings or excessively influencing the findings. In this regard, the researchers engaged in regular meetings and dialogue during the data collection and analysis and shared the responsibilities equally. To ensure transferability, a clear description of background data for study participants and procedures for recruitment and a detailed description of the study setting were provided. An audit trail consisting of field notes, audio recording and notes with analysis and coding details was kept, enhancing confirmability. Moreover, an in-depth description of the methodological approach was done to ensure dependability.

A limitation of this study is that we missed the voices of women and the community, which would have added valuable depth to the experiences shared by HCPs about EmOC. Moreover, since the study was conducted in one specific context and geographic area in Somaliland, the transferability of findings to other settings could be limited. Another likely limitation is that the use of FGDs could have influenced the experiences shared by HCPs. This is because it is possible that some of the HCPs felt uncomfortable to talk freely due to fear of being judged by other HCPs. To address this limitation, HCPs were informed that anonymity and confidentiality would be ensured.

Conclusions

The experiences of HCPs revealed the need to use a multifaceted approach to improve the provision of EmOC. Changes should be targeted not only at the community but also at the healthcare system. Within the healthcare system, it is essential for HCPs, with support from the

Ministry of Health Development, to resolve the difficulty of obtaining consent by raising potential preventive strategies with the mother and her family during antenatal care. Moreover, in-service training on team-based care and intracultural communication competence for HCPs involved with EmOC could improve the healthcare system and would, in the long term, enhance trust and confidence within families and communities and make EmOC more acceptable. Alternative delivery methods to cesarean section such as vacuum extraction or instrumental forceps can be recommended to reduce delays or refusal with the provision of EmOC.

Pregnant women from low socioeconomic backgrounds and those with a low level of maternal health literacy should be given more attention, so that their utilization of antenatal care increases. This study suggests that the hypothesis of a family-based approach to collectivistic decision making as a prerequisite for consent be tested and women's and community perspectives and views on their experiences with EmOC be explored in further studies.

Consent to publish

Not applicable.

Availability of data and materials

The datasets generated and analyzed during the current study are not publicly available due to privacy consideration of the participants but are available from the corresponding author upon reasonable request.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Ethics approval and consent to participate

Ethical approval was obtained from the University of Hargeisa Ethical Review Board (DRCS/41/05/18) and the Somaliland Ministry of Health Development (MOHD/DG: 2/165/2018). Informed verbal consent was sought from participants, who were informed that the study was voluntary and could withdraw at any given time. The method of acquiring the consent was approved by the ethics committees.

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Authors' Contribution

All authors participated in the conception and design of this study. JK was responsible for data collection and initial data analysis and the

writing of the manuscript. They each read the FGD transcripts and contributed to the data analyses. They all contributed to the interpretation and results sections and took part in member checking and reviewing of the manuscript. All authors participated sufficiently in the work to take public responsibility for appropriate portions of the content. All authors reviewed and approved the final manuscript.

References

- [1] Girum T, Wasie A. Correlates of maternal mortality in developing countries: an ecological study in 82 countries. *Maternal Health, Neonatol Perinatol* 2017;3.
- [2] MoHD, *Health Sector Strategic Plan II*. 2017, Ministry of Health Development: Hargeisa.
- [3] Otolorin E, Gomez P, Currie S, Thapa K, Dao B. Essential basic and emergency obstetric and newborn care: From education and training to service delivery and quality of care. *Int J Gynecol Obstet* 2015;130:S46–53.
- [4] MoHD, *Essential Package of Health Services*. 2009, Ministry of Health Development: Hargeisa.
- [5] Ameh C, Adegoke A, Hofman J, Ismail FM, Ahmed FM, van den Broek N. The impact of emergency obstetric care training in Somaliland. *Somalia* 2012;117(3): 283–7.
- [6] Tembo T, Chongwe G, Vwalika B, Sitali L. Signal functions for emergency obstetric care as an intervention for reducing maternal mortality: a survey of public and private health facilities in Lusaka District, Zambia. *BMC Pregn Childbirth* 2017;17(1).
- [7] Kiruja J, Osman F, Egal JA, Essén B, Klingberg-Allvin M, Erlandsson K. Maternal near-miss and death incidences - Frequencies, causes and the referral chain in Somaliland: A pilot study using the WHO near-miss approach. *Sex Reprod Healthc* 2017;12:30–6.
- [8] Nyfløt L, Sitrás V. Strategies to reduce global maternal mortality. *Acta Obstet Gynecol Scand* 2018;97(6):639–40.
- [9] Ahmed AJ. *The invention of Somalia*. Lawrenceville, NJ: Red Sea Press; 1995.
- [10] Abdillahi HA, Hassan KA, Kiruja J, Osman F, Egal JA, Klingberg-Allvin M, et al. A mixed-methods study of maternal near miss and death after emergency cesarean delivery at a referral hospital in Somaliland. *Int J Gynaecol Obstet* 2017;138(1): 119–24.
- [11] Nolens B, et al. Women's recommendations: vacuum extraction or cesarean section for prolonged second stage of labour, a prospective cohort study in Uganda. *Trop Med Int Health: TM & IH* 2019;24(5):553–62.
- [12] Lundeby KM, Heen E, Mosa M, Abdi A, Stordal K. Neonatal morbidity and mortality in Hargeisa, Somaliland: an observational, hospital based study. *PAMJ* 2020;37.
- [13] CSD, *The Somaliland Health and Demographic Survey 2020*, M.o.P. and N. Development, Editors. 2020, Somaliland Government: Hargeisa.
- [14] Bailey P, et al. Assisted vaginal delivery in low and middle income countries: An overview. *BJOG: Int J Obstet Gynaecol* 2017;124.
- [15] Nolens B, Capelle M, van Roosmalen J, Mola G, Byamugisha J, Lule J, et al. Use of assisted vaginal birth to reduce unnecessary cesarean sections and improve maternal and perinatal outcomes. *The Lancet Global Health* 2019;7(4):e408–9.
- [16] Essén B, Binder P, Johnsdotter S. An anthropological analysis of the perspectives of Somali women in the West and their obstetric care providers on cesarean birth. *J Psychosom Obstet Gynecol* 2011;32(1):10–8.
- [17] Binder P, Johnsdotter S, Essen B. Conceptualising the prevention of adverse obstetric outcomes among immigrants using the 'three delays' framework in a high-income context. *Soc Sci Med* 2012;75(11):2028–36.
- [18] Creswell JW, Poth CN. *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. SAGE Publications; 2018.
- [19] Jama Ali Egal, Jonah Kiruja., Helena Litorp, Fatumo Osman, Kerstin Erlandsson, Marie Klingberg-Allvin, Incidence and causes of severe maternal outcomes in Somaliland using the sub-Saharan Africa maternal near-miss criteria: A prospective cross-sectional study in a national referral hospital. *Int J Gynaecol Obstetrics: Official Organ Int Fed Gynaecol Obstet*, 2022.
- [20] MoHD, *Population Estimates of study Populations Report of 2018*, MoHD, Editor. 2018: Hargeisa, Somaliland.
- [21] Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol* 2006;3(2):77–101.
- [22] Serbanescu F, et al. Addressing the First Delay in Saving Mothers, Giving Life Districts in Uganda and Zambia: Approaches and Results for Increasing Demand for Facility Delivery Services. *Global Health: Sci Pract* 2019;7(Supplement 1):S48–67.
- [23] Tesfaye G, Chojenta C, Smith R, Loxton D. Delaying factors for maternal health service utilization in eastern Ethiopia: A qualitative exploratory study. *Women and Birth* 2020;33(3):e216–26.
- [24] Actis Danna V, Bedwell C, Wakasiaka S, Lavender T. Utility of the three-delays model and its potential for supporting a solution-based approach to accessing intrapartum care in low- and middle-income countries. A qualitative evidence synthesis. *Global health action* 2020;13(1):1819052.
- [25] Guise J-M, Segel S. *Teamwork in obstetric critical care*. Best practice & research. *Clin Obstet Gynaecol* 2008;22(5):937–51.
- [26] Baik D. Team-Based Care: A Concept Analysis. *Nurs Forum* 2017;52(4):313–22.
- [27] WHO, *Standards for Improving Quality of Maternal and Newborn Care in Health Facilities*. 2016.

- [28] Aragaw A, Yigzaw T, Tetemke D, G/Amlak W. Cultural Competence among Maternal Healthcare Providers in Bahir Dar City Administration, Northwest Ethiopia: Cross sectional Study. *BMC Pregn Childbirth* 2015;15(1).
- [29] Aden JA, Ahmed HJ, Östergren P-O. Causes and contributing factors of maternal mortality in Bosaso District of Somalia. A retrospective study of 30 cases using a Verbal Autopsy approach. *Global Health Action* 2019;12(1):1672314.
- [30] Lincoln YS, Guba EG, Pilotta JJ. Naturalistic inquiry. *Int J Intercult Relat* 1985;9(4):438–9.