BMJ Open

ENHANCING UTILIZATION OF HEALTH FACILITY-BASED DELIVERY AMONG ATTENDEES OF FOCUSED ANTENATAL CARE IN SLUM RESIDENTS OF ADDIS ABABA, ETHIOPIA

Journal:	*BMJ Open*
Manuscript ID	bmjopen-2020-039189
Article Type:	Original research
Date Submitted by the Author:	07-Apr-2020
Complete List of Authors:	Sendo, Endalew; Addis Ababa University, Midwifery; Addis Ababa University, Midwifery Chauke, ME; University of South Africa School of Humanities Ganga-Limando, M; University of South Africa School of Humanities
Keywords:	Antenatal < GENETICS, Quality in health care < HEALTH SERVICES ADMINISTRATION & MANAGEMENT, Maternal medicine < OBSTETRICS

I, the Submitting Author has the right to grant and does grant on behalf of all authors of the Work (as defined in the below author licence), an exclusive licence and/or a non-exclusive licence for contributions from authors who are: i) UK Crown employees; ii) where BMJ has agreed a CC-BY licence shall apply, and/or iii) in accordance with the terms applicable for US Federal Government officers or employees acting as part of their official duties; on a worldwide, perpetual, irrevocable, royalty-free basis to BMJ Publishing Group Ltd ("BMJ") its licensees and where the relevant Journal is co-owned by BMJ to the co-owners of the Journal, to publish the Work in this journal and any other BMJ products and to exploit all rights, as set out in our licence.

The Submitting Author accepts and understands that any supply made under these terms is made by BMJ to the Submitting Author unless you are acting as an employee on behalf of your employer or a postgraduate student of an affiliated institution which is paying any applicable article publishing charge ("APC") for Open Access articles. Where the Submitting Author wishes to make the Work available on an Open Access basis (and intends to pay the relevant APC), the terms of reuse of such Open Access shall be governed by a Creative Commons licence – details of these licences and which Creative Commons licence will apply to this Work are set out in our licence referred to above.

Other than as permitted in any relevant BMJ Author's Self Archiving Policies, I confirm this Work has not been accepted for publication elsewhere, is not being considered for publication elsewhere and does not duplicate material already published. I confirm all authors consent to publication of this Work and authorise the granting of this licence.

ENHANCING UTILIZATION OF HEALTH FACILITY-BASED DELIVERY AMONG ATTENDEES OF FOCUSED ANTENATAL CARE IN SLUM RESIDENTS OF ADDIS ABABA, ETHIOPIA

[1]Sendo, Endalew Gemechu, [2] ME, Chauke (PhD) and [3] Prof M Ganga-Limando

[1]Addis Ababa University, College of Health Sciences, School of Nursing and Midwifery, Addis Ababa, Ethiopia, P.O. Box 1176, Ethiopia. Corresponding author: Email endalew.gemechu@aau.edu.et

Department of Health Studies, University of South Africa, Pretoria, South Africa. drmotsh.chauke@gmail.com ,gangam@unisa.ac.za

ABSTRACT

Objective: The purpose of this study was to explore factors influencing utilization of health facility-based delivery among attendees of FANC in Slum residents, Addis Ababa- Ethiopia.

Setting: Public health facilities (3 health center and 1 District hospital).

Study Design: A qualitative exploratory and descriptive research design was used.

Study Participants: Study participants comprised of women of reproductive age group (18-49 years) living in Slum areas of Addis Ababa, Ethiopia. Data were collected through Individual interviews. Data were analyzed concurrently with data collection. Thematic analysis was done for the study.

Results:

From the analysis of individual interview data, four (4) themes emerged, namely, perceived benefits of home delivery, knowledge deficit about health facility-based delivery, poor access to health care facilities and inadequate resources. These themes were identified as rich and detailed account of the perspectives of facility-based and home delivery among attendees of FANC in Addis Ababa, Ethiopia.

Conclusion: As public facilities are the primary suppliers for the general population, mainly for underprivileged groups, humanising the quality of ANC services at those facilities is

indispensable. Improving the skills of staff and their attitudes through in-service trainings and Behaviour change communication (BCC) is also vital.

Key words: Women, Utilization, Health facility-based delivery, focused antenatal care, Slum residents, Ethiopia.

Strengths and limitation of the study

- This study is the first to explore factors underlying the contrasting pattern between high ANC utilization rates and low utilization of health facility-based delivery among attendees of FANC in Slum residents of Addis Ababa- Ethiopia.
- The study was conducted only in public health facilities of Addis Ababa, Ethiopia. The perspectives of women attending FANC in private facilities and delivered at home were not explored in the study.
- The findings of this study applied to similar population in the study setting.

BACKGROUND

Maternal mortality related to pregnancy and childbirth remains high globally even though it has declined by 44% from 385 deaths per 100 000 live babies in 1990 to 216 per 100 000 live births in 2015[1]. The same authors mention thatj 3.9 million women will die from maternal causes in the next fifteen years if the current reduction rate of 2.9% in maternal mortality continues. The implication is that there is an urgent need to accelerate the drop in maternal mortality rate (MMR) in order to achieve the sustainable development goal 3.1 of reducing the global maternal mortality ratio to less than 70 per 100 000 live births by the year 2030 with no country having a maternal mortality rate of more than twice the global average[2]

According to Ethiopia's Federal Ministry of Health (FMoH), the maternal mortality rate dropped significantly by over 30% in five years. The 2016 Ethiopian Demographic Health Survey (EDHS) report indicates that more than 1400 mothers per 100,000 live births died in 1990, and the mortality rate dropped to 801 in 2000, 673 in 2005, 600 in 2011 and 412 per 100,000 live births in 2016. The decline was attributed to the government's interventions and commitment through expanding

emergency obstetric care services during labour with skilled birth attendants helping mothers in thousands of health facilities across the country[3].

In addition, enhanced knowledge of mothers in antenatal and postnatal care, provided by tens of thousands of health extension workers and other community interventions mainly in rural parts of the country contributed to the reduction of maternal mortality in the country[3]

However, tens of thousands of mothers still die every year in Ethiopia due to childbirth-related complications, the major ones being hemorrhage, hypertension and infection. According to Ethiopia's FMoH [4], a 75% reduction in the maternal mortality rate was planned for 2015 though the country managed to achieve 72%. The government of the Federal Democratic Republic of Ethiopia (FDRE) aims to reduce the maternal mortality to 199 per 100,000 live births in 2020 and 70 or less by 2030 in line with the target set by the World Health Organization (WHO). The target set by World Health Organization (WHO) is achievable because most of maternal deaths are preventable if access to ANC in pregnancy, skilled care during delivery and care and support in the weeks after childbirth were increased[3, 5]

One of the key and proven interventions to reduce maternal mortality related to childbirth is to increase the number of women who deliver in a health facility [6-9]. Facility-based delivery increases skilled attendance at birth by ensuring proper management of childbirth complications and or timely referral of delivering women to higher levels where childbirth complications can be better managed[7]. Annette et al[6] state that maternal mortality reduces by 52% worldwide when women deliver in health facilities. According to Kebede, Hassen and Teklehaymanot[10] in almost all countries where more than 80% of deliveries are attended by health care professionals, the maternal mortality rate is less than 200 per 100 000 live births.

Even though there was a decline in the MMR (600 in 2011 and 412 per 100,000 live births in 2016) and an increase in the proportion of women who received ANC from a skilled provider (33% in 2011 to 62% in 2016), the decline in unskilled or home deliveries and the increase in institutional deliveries were not substantial. For example, home deliveries declined from 90% in 2011 to 73% in 2016, whilst institutional deliveries increased from 10% in 2011 to 28% in 2016[3]. Despite the efforts of Ethiopia's government to promote health facility-based delivery in the country, the

majority of births (an estimated 85%) still takes place at home[10], including Slum residents of Addis Ababa, the capital city of Ethiopia.

The low utilization of maternal health care services, in particular health facility-based delivery services thus explains the slow rate at which MMR dropped during the five year period 2011-2016. There is therefore a need to accelerate the decrease in MMR and the increase in facility-based deliveries if the sustainable development goal 3.1 is to be achieved[2]. The purpose of this study was to explore factors influencing utilization of health facility-based delivery among attendees of FANC in Slum residents, Addis Ababa- Ethiopia.

Methods

Study setting

The present study was conducted from February to April 2018 in public health facilities in Addis Ababa, Ethiopia. Three (3) health centers and one district hospital were purposively selected for the present study. The public health facilities were selected because they attended to high number of women who attended FANC but attended to less skilled deliveries in the past year preceding the study.

Study Design

A qualitative exploratory and descriptive research design was used to achieve the objective of the study.

Study population and sampling strategy

Study participants comprised of women of reproductive age group (18-49 years) living in Slum areas of Addis Ababa, the capital city of Ethiopia. Purposive sampling strategy was used to select women who were able to provide rich information that adequately answered the research questions because of their experience of FANC, facility-based and home delivery. The women who met the eligibility criteria were contacted through the midwives/nurses in-charge of the maternal and child health units of the selected hospital and health centers to discuss the purpose of the study, the study activities and request for participation in the study. The researcher ensured that all women who agreed to take part in the interviews were given the necessary information regarding the interviews, and they were followed into the communities where the health facilities are located.

In order to be included in the study, the participants had to be women who attended FANC in selected health facilities and had given birth to babies at home in the past one year preceding data collection, communicates well in Amharic (Local working language), and reside in Addis Ababa for at least 6 months. Exclusion criteria comprised women who attended FANC but had not experienced home delivery.

Data Collection

Individual face-to-face interviews were used to collect the data. The researcher conducted individual interviews with women who attended FANC, and had delivered live babies at home in the past one (1) year preceding the data collection for the study. The central question that was asked was *"What were your reasons for attending FANC (which promotes the use of skilled attendance at birth) but decided to deliver your baby at home and not at the health facility?* Additional questions included: What prompted you to attend antenatal care? How many times did you receive ANC during this pregnancy? What were the benefits of attending antenatal care for you? What information did you receive from the health care providers about health facility based delivery? What is your opinion regarding delivering a baby in the health facility? What are the benefits of going for institutional delivery? Would you recommend health facility delivery to your friends? Individual interviews were conducted until saturation, which was reached after eight (8) interviews, when additional data did not lead to any new emergent codes and themes. The number of participants in qualitative research is adequate when data saturation is achieved. According to Hancock, Amankwaa, Revell and Mueller[11] the qualitative research "gold standard" for quality research is data saturation. The same authors explain that data saturation or adequacy is reached when there are no new emerging ideas of information in the data, the point in coding when no new codes occur in the data [11, 12].

During the interviews, a favourable, non-threatening and relaxed environment was created when the researcher introduced himself to the participants, explained the interview process. The interviews took place in the private rooms of selected health facilities. With the permission of the participants, the individual interviews were audio-recorded and notes were written during the interview in order to capture the original accounts of the participants' responses and to verify their

interpretations by referring back to the original responses. The researcher conducted the interviews in Amharic in a quiet and private room, free from disturbances, and where they felt safe. Individual interview session lasted for about 30-50 minutes.

Patient and Public Involvement

Patients were not involved in this study. Including Patient and Public Involvement (PPI) statements aligns closely with *BMJ Open*'s values of transparency and inclusiveness. We hope that including PPI statements in all articles is the first step of many for *BMJ Open* in encouraging patient involvement.

Data Analysis

Data were analyzed concurrently with data collection. All Individual face-to-face interviews were transcribed from the audio-recordings and notes made during the interviews and translated into English. Thematic analysis was done for the study.

The data collected were stored electronically as audio recordings to use as a form of backup and the transcriptions and notes were stored as MS word files. The MS word files were password protected to ensure confidentiality. The researcher used Techs' eight steps of qualitative data analysis method for analysing data from individual interviews[13]

Patient and Public Involvement

Patients were not involved in this study. Including Patient and Public Involvement (PPI) statements aligns closely with *BMJ Open*'s values of transparency and inclusiveness. We hope that including PPI statements in all articles is the first step of many for *BMJ Open* in encouraging patient involvement.

Research Findings

From the analysis of individual interview data, 4 (four) themes emerged. These themes were identified as the rich and detailed account of the perspectives of facility-based and home delivery among attendees of FANC in Addis Ababa, Ethiopia.

Theme I: Perceived benefits of home delivery

The first theme that emerged from data analysis was *perceived benefits of home delivery*. Within the theme, 3 (three) categories *support, familiarity and warmth of the home setting and affordability of home delivery* emerged. The sub-categories were as shown in table 1

Table 1: Theme I: Perceived benefits of home delivery

Theme	Categories	Sub-categories
Perceived benefits of home delivery	Support available during home delivery	Partner, family and neighbors' supportive presence at birth
	Familiarity and warmth of the home setting	Familiar, comfortable and convenient home setting
	Affordability of home delivery	The cost of health facility-based delivery services too high

Partner, family and neighbours' supportive presence at birth

The findings revealed that benefits of home delivery (as perceived by the participants) was one of the reasons women decided to deliver their babies at home and not at the health facilities. Some of the participants indicated that the presence of partners, family members, friends and neighbours offer the required support and assistance during delivery at home. Other participants perceived home delivery safe because of the confidence they have in experienced members of the community such mothers, grandmothers and neighbours who assist during delivery. Sample responses included;

> "I am scared of delivering at a health facility alone because family members (especially my husband) aren't permitted to attend a woman in the labour room. I won't have such problems when I deliver at home." (Participant 05).

> "Men are not allowed to accompany their wives to labour ward for the reasons I don't know. What is wrong if he is allowed to stay with wife during childbirth?" (Participant 03)

> "Yet, men aren't permitted to attend a woman in the labour room and only one female relative is sometimes allowed to be with a woman in labour ward" (Participant 02).

> "I delivered at home without any problems and was assisted by my mother" " (Participant 08).

> "My grandmother asked me to wait a little longer at home. She told me to wait and I gave birth spontaneously. We have confidence in her (TBAs)" (Participant 04).

> "When labour started me at night I was alone because my husband was on field work. So, there was nobody else close to me. I then shouted to call my neighbors but I already delivered before they came" (Participant 01).

Familiar, comfortable and convenient home setting

The findings revealed that some of the participants identified familiarity with home setting and warmth of the home setting as another benefit of home delivery, in that at home one can rest comfortably in own bed. This finding was apparent in the following sample responses;

> "At home, you can rest in *your* bed after delivery, and your family and friends feed you porridge "(Participant 05).

> "I would have lost the comfortable house where my close families, relatives and neighbors nearby me, had I gone hospital for delivery" (Participant 07).

One participant mentioned the immediate celebration of the birth of child by women singing traditional songs as one of the benefits of home delivery. In addition, she mentioned caring and feeding of the mother by the neighbours. This is what she said *'Following childbirth, neighboring women will make some porridge and will serve the woman. They (women) will celebrate this special occasion with singing traditional songs and eating porridge. If childbirth takes place in the facility, you miss this wonderful event and the warmness of your home. I think this ceremony is unique to Ethiopian women (Participant 01).*

Cost of facility-based delivery too high

The high cost of delivering at a health facility was mentioned as one of the reasons women decide to deliver their babies at home. The sample response

> "You know you need someone who arranges taxi and pays money for it.to go to health facility''

Theme II: Knowledge Deficit

The second theme that emerged from data analysis was knowledge deficit. Within the theme, two categories inadequate information received from the health professionals and beliefs about home and facility-based delivery emerged. The sub-categories were as shown in table 2.

Table 1 Theme II: Knowledge deficit

Theme	Categories	Sub-categories
Knowledge deficit	Inadequate information received from health professionals	Lack of knowledge about facility-based delivery
	Perceptions of home and facility-based delivery	Home delivery is for normal delivery Unnecessary procedures carried out at health facilities

Lack of knowledge about facility-based delivery

According to the study findings, lack of knowledge about facility-based delivery influenced the women's decision to give birth at home. Some of the participants stated that they did not know about the facility-based delivery service at public health facilities. Sample responses in that regard included:

> "We must been told the significance of health facility delivery by the service providers at the ANC clinic. Nobody raised the issue to us. So, we decided to give birth at home. There is a TBA in our community and she was called and assisted me" (Participant 02).

> "The nurse I was attended to by was busy and she only checked my abdomen and gave me an appointment to return. Otherwise, I don't recall anything I was told about facility delivery" (Participant 05).

> "I didn't receive any information about delivering in a facility. She (the midwife) only checked me and told me to come on the next appointment…. I guess it is because they are at times busy or they might not well prepared to do so (Participant 01).

Perception that home delivery is for normal delivery

The study findings revealed some participants' perceptions of home delivery that made them decide to give birth at home, even though they attended FANC. The finding was evident in the following sample responses;

> "I delivered my last child at home because it was normal delivery, however, I would have gone to hospital had any complication occurred '' (Participant 08).

> ''If I encounter difficulty to deliver in my home I can go there at last while labour is prolonged and painful.

Otherwise, why should I visit a health facility while I am healthy? '' (Participant 05).

''I delivered 5 children at home being assisted by TBA, my families and relatives. You will continue to deliver at home if you deliver the first child at home" (Participant 02)

Perception that unnecessary procedures are carried out at health facilities

According to the study findings, some of the women had a perception that unnecessary procedures are carried out at health facilities during delivery. Sample responses in that regard included:

"Lots of women are cut and stitched for the reasons I don't know. For example, if one goes to private hospital, almost every one of them deliver by operation." (Participant 01)

"Fear of Caesarean section delivery discourage us [women] to come for health facility-based delivery" (Participant 08)

Theme III: Poor Access to Health Facilities

The third theme that emerged from data analysis was poor access to health facilities. Within the theme, two categories lack of transport and financial constraints emerged. The sub-categories were as shown in table 3.

Table 2 Theme III: Poor access to health facilities

Theme	Categories	Sub-categories
Poor access to health facilities	Lack of transport	Inaccessible and inadequate ambulance service Lack of prior arrangement for transport Distance and poor roads
	Financial constraints	Lack of emergency and complications readiness planning

Inaccessible and inadequate ambulance service

According to the study findings, the participants ended up giving birth at home because of poor access to health facilities. The difficulty of getting transport, in particular ambulance services to the health facility, especially at night resulted in women delivering their babies at home. Sample responses included;

"In the night, it is difficult to get the ambulance as fast as you need it." (Participant 01)

"There is limited access to ambulance service mainly in the night."(Participant 06)

''Sometimes, driver doesn't respond to the telephone call and, the woman will deliver at home'' (Participant 03)

Lack of prior arrangement for transport

Planning for childbirth include decisions about the location of delivery, transportation planning and money to pay for the childbirth. The findings of the study revealed that study participants did not arrange for transportation to a health facility. This was evident in the sample responses;

> "We didn't arrange transportation before".
>
> "I delivered this baby at home because labor started in the night while it was heavily raining, and there was no time to arrange transport" (Participant 02).

Distance and poor roads

According to the study findings, the long distance to the health care facilities, as well as the bad state of the roads diminished access to health care facilities. One participant explained *"My home is a bit far from the main road and a taxi can't come in because of the bad road (cobblestone was under construction); (Participant 04).*

Lack of emergency and complications readiness planning

The study findings identified lack of funds in an emergency as a barrier to utilization of facility-based delivery

> "You know you need someone who arranges taxi and pays money for it.to go to health facility (Participant 03).

Two mothers reported that they delivered at home because labour was unpredictably too fast, and did not give their families a chance to reach the health facility for delivery. Childbirth after an unusually rapid labour, culminating in the rapid and spontaneous expulsion of the infant is called precipitate delivery. In precipitate delivery, the first and the second stage of labour are combined, and the duration of labour is under two to three hours[14]. The sample responses included;

> *"Suddenly*, I went into labor pain after midnight (at 1pm) and delivered normally my last child at about 2 pm. There is a well-known TBA in our community and she came and assisted me" (Participant 08).
>
> "I delivered this baby at home because labor started in the night while it was heavily raining, and the baby was born *soon"* (Participant 06).

These findings are similar to the findings, which were reported in previous studies by Alabbi, O'Mahony, Wright and Ntsaba [15] and Yakubu, Benyas, Emil, Amekah, Adanu, and Moyer [16].

Theme IV: Inadequate Resources

The fourth theme that emerged from data analysis was inadequate resources. Within the theme, two categories inadequate skilled health professionals and inadequate equipment emerged. The sub-categories were as shown in table 4.

Theme IV: Inadequate resources

Theme	Categories	Sub-categories
Inadequate resources	Inadequate skilled health care professionals	Perceived incompetence among health care professionals Negative attitudes of health care professionals and poor service at health facilities
	Inadequate equipment	Inadequate beds/ supplies

Perceived incompetence among health care professionals

From the participants' perspective, inadequacy of both skilled health care professionals and equipment are some of the reasons some women do not use health care facility-based delivery services. The findings revealed perceived incompetence of health care professionals, lack of knowledge, skill and appropriate attitudes to care for pregnant women during pregnancy and childbirth as reasons women do not go for health facility-based delivery. The participants expressed confidence in traditional birth attendants. Sample responses include

> "I was really upset with how they took care of me when I delivered my first child in the health center. She [the nurse] who attended to me didn't even know how to manage removal of the placenta, and the baby. It seemed that she didn't get proper training or she lacked some experience" (Participant 01).

> "We have confidence in traditional birth attendants" (Participant 04).

Negative attitudes of health professionals and poor service at health facilities

The findings of the study revealed that women did not choose facility-based delivery because of negative attitudes of health care professionals and poor service at health facilities. Many participants mentioned physical and verbal abuse, lack of respect and lack of sympathy at the hands of midwives and nurses. These findings were evident in the following sample responses;

> "That some of the midwives, they even beat you, and scream on you, they don't have tolerance for you. They are verbally abusive, impolite, and lack sympathy" (Participant 01).

> "There are some negligent staff. We go there to get their help, but they talk and chat about their private issues. So, it is not advisable to go there" (Participant 03)

> "While I delivered my second baby at a health center I was in pain and shouting for help to the midwife who was chatting with her friends. She didn't show any concern to me and one physician also came and yelled at me. I suggest that these people have to in the first place respect their clients and also know their professional duties and responsibilities" (Participant 06).

Inadequate equipment (beds, BP apparatus, bed sheets and thermometers)

The participants stated that the equipment required for providing quality care at health care facilities was inadequate. According to the findings, there was shortage of beds, bedsheets, blood pressure monitoring equipment, as well as thermometers, resulting in women in early labour sent home. Some of the women indicated that the health professionals sent them back home because there were no beds, hence the home delivery even though they had planned to have facility-based delivery. Sample responses included; "For me, I don't think delivering at home is safe. I wanted to give birth at health facility but they returned me home because the contractions weren't strong and there weren't sufficient admission beds in the health center" (Participant 04).

> "I went to deliver my first born child and they sent me home and I delivered that evening at home. So, if there were enough delivery beds I wouldn't deliver at home" (Participant 05).

> "Due to shortage of beds, some women are referred from one facility to another. At times, the health facilities even don't have gloves, bed sheets, drugs, equipment like thermometer and BP apparatus" (Participant 08).

> "Let me tell you my own story. I was referred to hospital due to heavy vaginal bleeding when delivered my second baby. There was no BP apparatus in the hospital except one at the emergency room. There are staff, hospital and patients but no BP apparatus even in that big hospital" (Participant 02).

Discussion

Perceived benefits of home delivery

According to the findings, the women who took part in this study chose home based delivery because of the supportive presence of family and neighbours during childbirth as well as the comfort and convenience of the home environment. These findings were consistent with findings of previous studies. Adinew and Assefa [17] reported similar findings that Ethiopian women who took part in their study chose home-based and traditional birth attendants to facility-based delivery and health professionals, respectively. The same authors explain that the choice was based on the familiarity, comfort and convenience of the home environment. In addition the home environment does not limit the involvement of traditional birth attendants who are trusted by the community because of their status and the perceived quality of care (skill and warmth) they render during childbirth [18, 19]. According to the study findings, women indicated that the presence of family and traditional birth attendants provide physical, social and emotional support during childbirth. According to Bohren et al[20], Magoma et al[19], and Moyer, Adongo, Hodgson, Engmann and Devries[21] the availability of traditional birth attendants in the community might confirm a woman's decision to give birth at home.

The findings also revealed that it is easier to deliver at home where women are able to use their own belongings and receive support from their neighbours. One participant said, "*At home, you can rest in your bed after delivery, and your family and friends feed you porridge''*. Gebrehiwot et al [18], Magoma et al [19] and Titaley, Hunter, Dibley and Heywood [22] reported similar findings. Another important finding was that traditional practices influenced some of the women's decision to deliver at home and not at a health facility, evidenced in the sample response "*Following childbirth, neighboring women will make some porridge and will serve the woman. They (women) will celebrate this special occasion with singing traditional songs and eating porridge. If childbirth takes place in the facility, you miss this wonderful event and the warmness*

of your home. I think this ceremony is unique to Ethiopian women" This finding is consistent with the results of previous studies [18, 19, 21].

Affordability of home delivery was mentioned as one of the reasons some of the women who participated in the study preferred home-based care delivery. Yaya, Bishwajit, Uthman and Amouzou [23] conducted a survey in Ethiopia and Nigeria to examine country level variations of the self-reported causes of not choosing to deliver at a health facility. The results of the same study identified cost as one of the barriers reported for not attending health facility delivery in both countries. Oyerinde et al[24] , and Ghazi, Moudi and Vedadhir[25] reported similar findings in Sierra Leone, and Iran, respectively. There is no need to arrange and pay for transport during a home birth.

Knowledge Deficit

The findings of the study revealed that women's lack of knowledge about facility-based delivery influenced their decision to give birth at home. The findings of the study are consistent with some of the previous studies that found that knowledge deficit regarding the benefits of health facility-based childbirth made women choose home delivery. Various researchers are of the opinion that ANC workers might not be effectively instructing women on the significance of facility-based delivery service possibly because of heavy workload and constrained time due to deliberate complex matters with their clients [19, 26-28]. The findings of the study also revealed a perception among some participants of the study that home delivery is for women who had a history of normal delivery. The study findings are consistent with the research done by Øxnevad [29] on perceptions and practices related to home-based delivery and a qualitative study by Bedford, Ghandi, Admassu and Girth[30] on the location of childbirth in rural Ethiopia. According to the findings of the same studies, the birthing process was considered a normal event, and women considered home delivery first and considered facility-based delivery only if complications arose.

The results of the survey that was conducted by Yaya et al [31], showed that one in four women in Ethiopia reported that it was not necessary to attend health facility-based delivery considering that

delivery is a natural phenomenon and not an ailment requiring health facility services. Kebede et al [10] conducted a quantitative study on factors associated with institutional delivery service in Ethiopia and found that women who faced problems during pregnancy were 2.8 times more likely to utilize health care facility-based delivery than those who did not face problems during pregnancy.

This finding is consistent with the Bohren et al [26] Multiple-level life course framework of facility-based delivery in low- and middle-income countries (LMICs) according to which the previous birth experiences may affect the women's choice of the location of delivery of the baby. For a woman who delivered her first child at home without difficulties, using a health facility-based delivery for subsequent deliveries may be regarded as unnecessary [26, 32, 33] point out that some women may consider that ANC attendance will reduce the likelihood of a difficult delivery, and that ANC may be viewed as a preventative method, guaranteeing a normal pregnancy and home delivery. This may explain why in some circumstances ANC coverage is almost universal while health facility-based delivery rates stay low [19, 26]

. According to the study findings, the perception of some of the women who took part in the study was that unnecessary procedures are carried out at health facilities. The findings are consistent with some of the studies that identified fear of cutting (caesarean section, episiotomy) during delivery as one of the factors that facilitated home-based delivery [19, 25, 26].

The multiple-level life course framework of facility-based delivery in low- and middle-income countries (LMICs) suggests that medicalization of childbirth may be one of the reasons women prefer home to facility-based delivery. According to the model, women in low- and middle-income countries may fear various undesirable interventions and procedures such as episiotomies and caesarean sections and may prefer to deliver at home. This fear is usually based on the perception that birthing is a "normal" process which is a woman's "natural rite of passage" with no basis for delivering at a health facility[18, 19, 26].

Poor access to health facilities

According to the findings of the study, poor access to health facilities played an important role in influencing women's location of delivery (home-based delivery in this study). The findings

indicate that the women who took part in the study failed to reach the health care facilities because of the difficulty of getting transport to the health facility at night, long distance to travel to the health facilities, poor conditions of the roads to health facilities and financial constraints. Similar findings were reported in a variety of previous studies [18, 31, 34]. A noteworthy finding is that women who attended FANC did not make plans for emergency and complications readiness plan, as it is expected in line with WHO [2]. The WHO recommends that all pregnant women develop a written plan for dealing with birth and any unexpected adverse events such as complications or emergencies that may occur during pregnancy, childbirth, or the immediate postnatal period [35] . Birth preparedness is the process of planning for a normal birth while complications readiness refers to anticipating the actions needed in case of an emergency. Emergency planning is the process of identify and agreeing all the actions that need to take place quickly in the event of an emergency, and that the details are understood by everyone involved, and the necessary arrangements are made. The plans should be discussed with the skilled attendant at every FANC assessment and one month before the expected date of birth [31, 35, 36].

Inadequate Resources

The findings of the study revealed that women did not choose facility-based delivery because of the perceived incompetence and negative attitudes of health professionals, as well as poor service at health facilities. Similar findings were reported in previous studies. According to Adinew and Assefa [17], women who took part in their study chose home-based and traditional birth attendants to facility-based delivery and health professional respectively because of the skill and warmth demonstrated by the traditional birth attendants. A number of studies found that women were mistreated during childbirth in health facilities, hence the decision to give birth at home [17, 31, 37, 38]. The same authors reported similar findings of disrespectful treatment, unskilled care, poor health provider client interaction as reasons women preferred to give birth at home. Bohren et al [26] conducted a systemic review with the aim of synthesizing qualitative evidence related to the facilitators and barriers to delivering at health facilities in low-and middle-income countries. Thirty four studies from 17 countries were included in the review, and in the majority of studies reports of disrespectful and abusive obstetric care were found.

The multiple-level life course framework of facility-based delivery in low- and middle-income countries (LMICs) suggests that previous birth experiences may be one of the reasons women prefer home to facility-based delivery. Bohren et al [26] state that a number of women decide their level of risk for difficult deliveries based on their previous experience of delivery practices and birth results. For example a woman might choose to give birth at a health facility if she had a previous positive experience of facility-based delivery[26, 32]. The findings of the study are inconsistent with WHO [2], which supports health system approach and strengthening regarding availability of supplies and positive pregnancy and delivery experience.

Strengths and limitation of the study

This study is the first to explore the factors underlying the contrasting pattern between high ANC utilization rates and low utilization of health facility-based delivery among attendees of FANC in Slum residents of Addis Ababa- Ethiopia. It should also be clear that the emerged themes were substantiated by the local and global works. Hence, the findings are valuable to health organizations that need to improve the health facility- based delivery services. However, our study has some limitations. The study was conducted in public health facilities of Addis Ababa, Ethiopia. The perspectives of women attending FANC in private facilities and delivered at home were not explored in the study. The findings of this study applied to similar population in the study setting. Criticism related to qualitative research often refers to concerns of small sample, data interpretation and bias. In this study, however, the researcher was self-aware and cognisant of his immersion in the research process to allow the process to be as objective as possible. The researcher is of the view that the rich description of the sample, methods of data collection and the data analysis process reveal the translucent nature of the study. The researcher ensured that his beliefs, opinions and experiences about the phenomenon under study did not affect data collection and data analysis through use of bracketing. The researcher's gender (male nurse - midwife) and background did not in any way affect the data collection process and data analysis for the present study.

Conclusion

Various studies conducted in different developing countries and in different part of Ethiopia revealed different determinants of place of birth. Some of these factors are similar to those found in the current study while others were different. Most of the studies used the quantitative approach,

while others used qualitative and mixed method research. The common factors in literature that were the same as those found in the study include the perceived benefits of home delivery, lack of access to health facility, absence of previous pregnancy related complications, women's lack of knowledge of the importance of FANC, misconceptions regarding FANC and home delivery.

In Ethiopia, researchers have documented a variety of the reasons women are not accessing facility-based delivery services. The findings of this qualitative study adds the existing body of knowledge on perspectives of attendees of FANC on home and facility-based delivery.

Acknowledgements

We are indebted to Addis Ababa University, College of Health Sciences for its financial support for data collection through its Post Graduate Student Grant Scheme. We are also thankful to University of South Africa for its technical support. We are indebted to Addis Ababa City Health Bureau for providing us permission to conduct the study in public health facilities. Finally, the authors are also thankful to the study participants who profoundly took part in the study to share their experiences, and voiced for other women. Our understanding was deepened through them.

Authors' contributions

Sendo, EG conceived of the research topic, designed the methods and materials, involved in the data collection, conducted Data analysis, drafted and finalized the manuscript. **ME, Chauke** and **M Ganga-Limando** participated in designing of the study, data analysis, interpretation and presentation of results and were involved in final revision of the manuscript. All the authors have read and approved the final manuscript.

Competing interests

The authors declare that they have no competing interests.

Funding

Small grant for data collection was obtained through grants offered by Federal Ministry of Education through Addis Ababa University post graduate office.

Ethics approval and consent to participate

Ethical clearance was obtained from the Research Ethics Committee of the Department of Health Studies, University of South Africa. Permission to conduct the study was granted by Addis Ababa City Government Health Bureau. The authors obtained informed written consent from all participants to conduct the interviews. The voluntary nature of participation in this study was underlined. Confidentiality was assured about the identity and other personal information of all interviewees.

List of References

1. Alkema C, Hagan, Zhang, Moller, Gemmill, Ma Fat, Boerma, Temmerman, Mathers & Say **Global, regional, and national levels and trends in maternal mortality between 1990 and 2015, with scenario-based projections to 2030: a systematic analysis by the UN**

Maternal Mortality Estimation Inter-Agency Group. *Lancet* 2016, **387**:462-474.
2. Organization WH: **Sustainable development goals (SDG). Health and health related targets.** In.; 2016.
3. CSA: **Central Statistical Agency Ethiopia, ICFinternational. Ethiopia demographic and health survey . Addis Ababa, Ethiopia and Calverton, Maryland, USA**. In.; 2016.
4. FMOH: **Management Protocol on Selected Obstetrics Topics. Federal Democratic Republic of Ethiopia**. In.; 2010: 8- 228.
5. FDRE: **The Federal Democratic Republic of Ethiopia Ministry of Health: Ethiopia-health-system-transformation(HSTP) 2015/16 - 2019/20**. In.; 2015: 1- 159
6. Annette C, Wung, BA, Ivo, KK, Atanga, SN, Fon NP, et al.: **Facility-Based Delivery Service Utilisation Among Women of Childbearing Age in Nguti Health District, Cameroon: Prevalence and Predictors**. *Gynecology & Obstetrics* 2016, **6**(12).
7. Baffour-Awuah A, Mwini-Nyaledzigbor PP, Richter S: **Enhancing focused antenatal care in Ghana: An exploration into perceptions of practicing midwives**. *International Journal of Africa Nursing Sciences* 2015, **2**:59-64.
8. Bellows B, Kyobutungi C, Mutua MK, Warren C, Ezeh A: **Increase in facility-based deliveries associated with a maternal health voucher programme in informal settlements in Nairobi, Kenya**. *Health policy and planning* 2013, **28**(2):134-142.
9. Miltenburg S, van der Eem L, Nyanza EC, van Pelt S, Ndaki P, Basinda N, Sundby J: **Antenatal care and opportunities for quality improvement of service provision in resource limited settings: A mixed methods study**. *PLoS One* 2017, **12**(12):1-15
10. Kebede A, Hassen, K., &Teklehaymanot, AN: **Factors associated with institutional delivery service utilization in ethiopia**. *International Journal of Women's Health* 2016, **8**:463 - 475.
11. Hancock ME, Amankwaa, L., Revell, M. A., & Mueller, D.: **Focus Group Data Saturation: A New Approach to Data Analysis. The Qualitative Report, 21(11), 2124-2130**. 2016.
12. Saunders B, Sim J, Kingstone T, Shula Baker S, Waterfield J, Bartlam B, Burroughs HJ, C.: **Saturation in qualitative research. exploring its conceptualization and operationalization. Journal of quality & quantity.** . 2018, **52**(4):1893-1907.
13. CresWell W: **Research Design: Qualitative, quantitative, and mixed methods approaches.**, 4th edn: Thousand Oaks, California . SAGE; 2014.

14. Suzuki S: **Selective uterine fundal pressure maneuver during the second stage of the first twin delivery at near term**. *The Journal of Maternal-Fetal & Neonatal Medicine* 2015, **28**(5):519-521.
15. Alabi AA OMD, Wright G NM: **Why are babies born before arrival at health facilities in King Sabata Dalindyebo Local Municipality, Eastern Cape, South Africa? A qualitative study**. *Afr J Prm Health Care Fam Med* 2015, **7**(1).
16. Yakubu J, et al.: **It's for the Greater Good: Perspectives on Maltreatment during Labor and Delivery in Rural Ghana.** *Open Journal of Obstetrics and Gynecology,* 2014, **4**:383-390.
17. Adinew YA, N: **Experience of Facility Based Childbirth in Rural Ethiopia: An Exploratory Study of Women's Perspective**. *Hindawi Journal of Pregnancy* 2017:1- 6
18. Gebrehiwot T, Goicolea I, Edin K, Sebastian MS: **Making pragmatic choices : women ' s experiences of delivery care in Northern Ethiopia**. *BMC Pregnancy and Childbirth* 2012, **12**(113).
19. Magoma M, Requejo J, Campbell O, Cousens S, Filippi V: **High ANC coverage and low skilled attendance in a rural Tanzanian district : a case for implementing a birth plan intervention**. *BMC Pregnancy and Childbirth* 2010, **10**(13):1 - 12
20. Bohren MA, Hunter EC, Munthe-kaas HM, Souza JP, Vogel JP: **Facilitators and barriers to facility-based delivery in low- and middle-income countries : a qualitative evidence synthesis**. *Reproductive Health* 2014, **11**(71):1 - 17.
21. Moyer A, & Mustaf., A.: **Drivers and deterrents of facility delivery in sub-Saharan Africa : a systematic review**. *Reproductive Health* 2013.
22. Titaley CR, Hunter CL, Dibley MJ, Heywood P: **Why do some women still prefer traditional birth attendants and home delivery ?: a qualitative study on delivery care services in West Java Province , Indonesia**. *BMC Pregnancy and Childbirth* 2010, **10**(43):1- 14.
23. Yaya S BG, Uthman OA, and Amouzou A: **Why some women fail to give birth at health facilities: A comparative study between Ethiopia and Nigeria**. *PLoS ONE* 2018, **13**(2).
24. Oyerinde K, Yvonne Harding, Y, Amara, P, Garbrah-Aidoo, N, Kanu, R, Oulare, M, Shoo, R and Kizito, Dao: **Barriers-to-uptake-of-emergency-obstetric-and-newborn-care-services-in-sierra-leone-a-qualitative-study**. *J Community Med Health Educ* 2012, **2**(5):2161-0711.
25. Ghazi T: **Home birth and barriers to referring women with obstetric complications to hospitals: a mixed- methods study in Zahedan, southeastern Iran**. *Reproductive Health* 2012, **9**(5).
26. Bohren MA, Hunter EC, Munthe-Kaas HM, Souza JP, Vogel JP, Gülmezoglu AM: **Facilitators and barriers to facility-based delivery in low-and middle-income countries: a qualitative evidence synthesis**. *Reproductive health* 2014, **11**(1):71.
27. Izugbara C, Caroline W. Kabiru, Eliya M. Zulu: **Public Health Report. International Observer**. In., vol. 124; 2009.
28. Moyer CA, Mustafa A: **Drivers and deterrents of facility delivery in sub-Saharan Africa: a systematic review**. *Reproductive health* 2013a, **10**(40):1 - 14
29. Øxnevad M: **Perceptions and practices related to home based and facility based birth. A qualitative study from Agemssa, Ethiopia**. University of Bergen, Norway; 2011.
30. Bedford J, Gandhi, M, & Admassu, M, Girma A: **A Normal Delivery Takes Place at Home': A Qualitative Study of the Location of Childbirth in Rural Ethiopia**. *Matern Child Health J* 2012.
31. Yaya S, Bishwajit G, Uthman OA, Amouzou A: **Why some women fail to give birth at health facilities: A comparative study between Ethiopia and Nigeria**. *PloS one* 2018, **13**(5):1-11.
32. Shiferaw S, Spigt M, Godefrooij M, Melkamu Y, Tekie M: **Why do women prefer home births in Ethiopia ?** *BMC Pregnancy and Childbirth* 2013, **13**(5):1- 10

33. Story WT, Burgard SA, Lori JR, Taleb F, Ali NA, Hoque DE: **Husbands' involvement in delivery care utilization in rural Bangladesh: A qualitative study**. *BMC pregnancy and childbirth* 2012, **12**(1):28.
34. Spangler SA, Bloom SS: **Use of biomedical obstetric care in rural Tanzania: the role of social and material inequalities**. *Social science & medicine* 2010, **71**(4):760-768.
35. Annette C, Wung B, Ivo K, Atanga S, Fon N: **Facility-Based Delivery Service Utilisation Among Women of Childbearing Age in Nguti Health District, Cameroon: Prevalence and Predictors**. *Gynecol Obstet (Sunnyvale)* 2016, **6**(12):416
36. Tarekegn SM, Lieberman LS, Giedraitis V: **Determinants of maternal health service utilization in Ethiopia : analysis of the 2011 Ethiopian Demographic and Health Survey**. *BMC Pregnancy and Childbirth 2014* 2014, **14**(161):1- 13.
37. Bohren MA, Vogel JP, Hunter EC, Lutsiv O, Makh SK, Souza JP, Aguiar C, Coneglian FS, Diniz ALA, Tunçalp Ö: **The mistreatment of women during childbirth in health facilities globally: a mixed-methods systematic review**. *PLoS medicine* 2015, **12**(6):e1001847.
38. Ishola F, Owolabi O, Filippi V: **Disrespect and abuse of women during childbirth in Nigeria: a systematic review**. *PloS one* 2017, **12**(3):1 -17.

BMJ Open

WHY SOME WOMEN WHO ATTENDED FOCUSED ANTENATAL CARE FAIL TO DELIVER IN HEALTH FACILITIES: A QUALITATIVE STUDY OF WOMEN'S PERSPECTIVES FROM SLUMS OF ADDIS ABABA, ETHIOPIA

Journal:	*BMJ Open*
Manuscript ID	bmjopen-2020-039189.R1
Article Type:	Original research
Date Submitted by the Author:	12-Aug-2020
Complete List of Authors:	Sendo, Endalew; Addis Ababa University, Midwifery; Addis Ababa University, Midwifery Chauke, ME; University of South Africa School of Humanities Ganga-Limando, M; University of South Africa School of Humanities
Primary Subject Heading:	Obstetrics and gynaecology
Secondary Subject Heading:	Health services research
Keywords:	Antenatal < GENETICS, Quality in health care < HEALTH SERVICES ADMINISTRATION & MANAGEMENT, Maternal medicine < OBSTETRICS

I, the Submitting Author has the right to grant and does grant on behalf of all authors of the Work (as defined in the below author licence), an exclusive licence and/or a non-exclusive licence for contributions from authors who are: i) UK Crown employees; ii) where BMJ has agreed a CC-BY licence shall apply, and/or iii) in accordance with the terms applicable for US Federal Government officers or employees acting as part of their official duties; on a worldwide, perpetual, irrevocable, royalty-free basis to BMJ Publishing Group Ltd ("BMJ") its licensees and where the relevant Journal is co-owned by BMJ to the co-owners of the Journal, to publish the Work in this journal and any other BMJ products and to exploit all rights, as set out in our licence.

The Submitting Author accepts and understands that any supply made under these terms is made by BMJ to the Submitting Author unless you are acting as an employee on behalf of your employer or a postgraduate student of an affiliated institution which is paying any applicable article publishing charge ("APC") for Open Access articles. Where the Submitting Author wishes to make the Work available on an Open Access basis (and intends to pay the relevant APC), the terms of reuse of such Open Access shall be governed by a Creative Commons licence – details of these licences and which Creative Commons licence will apply to this Work are set out in our licence referred to above.

Other than as permitted in any relevant BMJ Author's Self Archiving Policies, I confirm this Work has not been accepted for publication elsewhere, is not being considered for publication elsewhere and does not duplicate material already published. I confirm all authors consent to publication of this Work and authorise the granting of this licence.

WHY SOME WOMEN WHO ATTENDED FOCUSED ANTENATAL CARE FAIL TO DELIVER IN HEALTH FACILITIES: A QUALITATIVE STUDY OF WOMEN'S PERSPECTIVES FROM SLUMS OF ADDIS ABABA, ETHIOPIA

[1] Endalew G, Sendo (Ph.D.) [2] Motshedisi E. Chauke (Ph.D.) and [3] M Ganga-Limando (Prof)

[1]Addis Ababa University, College of Health Sciences, School of Nursing and Midwifery, Addis Ababa, Ethiopia, P.O. Box 1176, Ethiopia. Corresponding author: Email endalew.gemechu@aau.edu.et

[2, 3] Department of Health Studies, University of South Africa, Pretoria, South Africa. drmotsh.chauke@gmail.com,gangam@unisa.ac.za

ABSTRACT

Objective: The purpose of this study was to explore why some women who attended focused antenatal care (FANC) fail to deliver in health facilities from slums of Addis Ababa, Ethiopia.

Setting: Public health facilities (3 health centers and 1 District hospital).

Study Design: A qualitative exploratory and descriptive research design was used.

Study Participants: Study participants comprised of women of reproductive age group (18-49 years) living in slum areas of Addis Ababa, Ethiopia. We used 20 in-depth audio-recorded interviews. Data were analyzed concurrently with data collection. Thematic analysis was done for the study. A multi-level life-course framework of facility-based delivery in low- and middle-income countries (LMICs) developed by Bohren, et al was used to frame the current study and link the findings of the study to the body of knowledge.

Results:

From the analysis of in-depth interview data, four themes emerged, namely, perceived benefits of home delivery, knowledge deficit about health facility-based delivery, poor access to health care facilities, and inadequate (demand side) resources. These themes were identified as a rich and detailed account of the perspectives of facility-based and home delivery among attendees of Focused Antenatal Care (FANC) in Addis Ababa, Ethiopia.

Conclusion: The findings of this qualitative study revealed that perceived benefits of home delivery, knowledge deficit about health facility-based delivery, poor access to health care facilities, and inadequate (demand side) resources were related to low uptake of the facility-based delivery services. Use ANC visits to advise women about Birth preparedness and complication readiness, the use of facility deliveries and risks of home delivery to the mother and the new-born.

Keywords: Women, Health facility-based delivery, focused antenatal care, slum residents, Ethiopia.

Strengths and limitation of the study

- The analyzed data were based on information obtained from only women who delivered their last child at home in the last 12 months.
- The perspectives of women attending FANC in private facilities and delivered at home were not explored in the study.
- The information obtained from study participants could be subject to recall bias.
- The researcher was self-aware and cognizant of his immersion in the research process to allow the process to be as objective as possible.
- The findings of this study applied to a similar population in the study setting.

BACKGROUND

Maternal mortality related to pregnancy and childbirth remains high globally even though it has declined by 44% from 385 deaths per 100 000 live babies in 1990 to 216 per 100 000 live births in 2015[1]. The same authors mention that 3.9 million women will die from maternal causes in the next fifteen years if the current reduction rate of 2.9% in maternal mortality continues. Women's chance of dying from problems of being pregnant and childbirth through the span of her lifetime is one in a hundred and sixty in Sub-Saharan Africa(SSA), paralleled to 1 in 3,700 in developed nations [2-4]. These same regions account for, 98% of about 3.3 million international neonatal deaths that occur every year. The implication is that there is an urgent need to accelerate the drop in maternal mortality rate (MMR) in order to achieve the sustainable development goal 3.1 of reducing the global maternal mortality ratio to less than 70 per 100 000 live births by the year 2030 with no country having a maternal mortality rate of more than twice the global average[5].

In Ethiopia, even though there was a decline in the MMR (600 in 2011 and 412 per 100,000 live births in 2016) and an increase in the proportion of women who received ANC from a skilled provider (33% in 2011 to 62% in 2016), the decline in unskilled or home deliveries and the increase in institutional deliveries were not substantial. For example, home deliveries declined from 90% in 2011 to 73% in 2016, whilst institutional deliveries increased from 10% in 2011 to

28% in 2016[6]. Home delivery in our study is defined as a delivery that is not being attended by a skilled health worker using a safe delivery kit; it is rather attended by non-trained women (the majority of whom are family members or unskilled TBA) during delivery[7].

In city slums, the poor women are a tremendously liable and marginalized group with unplanned/poor housing, no essential services, and low use of skilled care at delivery[2, 8]. Morbidity in urban poor populations is also influenced by way of social determinants such as social gradient, social exclusion, social support, stress, and physical activity; and suboptimal health behaviours [2]. Though there is no scientific evidence, a large number of urban populations in Addis Ababa live in slums. These slums draw a high density of low- income employees and or jobless individuals, with low levels of literateness. In spite of the efforts of Ethiopia's government to promote health facility-based delivery in the country, the majority of births (an estimated 85%) still takes place at home[9], including slum dwellers of Addis Ababa, the capital city of Ethiopia. Still, there is no study on facility deliveries in urban slums of Addis Ababa. The purpose of this study was to explore why some women who attended focused antenatal care (FANC) fail to deliver in health facilities from slums of Addis Ababa, Ethiopia.

Methods

Study design and setting

A qualitative exploratory and descriptive research design was used to achieve the objective of the study. The present study was conducted from February to April 2018 in public health facilities in Addis Ababa, Ethiopia. Three health centers and one district hospital were purposively selected for the present study. The public health facilities were selected because they attended to a high number of women who attended FANC but attended to less skilled deliveries in the past year preceding the study. In this study, a slum household is defined as a group of individuals living under the same roof lacking one or more of the following conditions: access to improved water, living on petty trade/ daily labor, access to improved sanitation, sufficient living area, and durability of housing. The study included the slums dwellers of Ketchne and Kolfe Keraniyo, which are mainly low-income residential areas and are characterized by a large number of poor people in the city center.

Study population and sampling strategy

Study participants comprised of women of reproductive age group (18-49 years) living in slum areas of Addis Ababa, the capital city of Ethiopia. The purposive sampling strategy was used to select women who were able to provide rich information that adequately answered the research questions because of their experience of FANC, facility-based, and home delivery. The women who met the eligibility criteria were contacted through the midwives/nurses in-charge of the maternal and child health units of the selected hospital and health centers to discuss the purpose of the study, the study activities, and request for participation in the study. Then the researcher approached all women who agreed to take part in the interviews face-to face and they were followed into the communities where the health facilities are located.

In order to be included in the study, the participants had to be women who attended FANC in selected health facilities and had given birth to babies at home in the past one year preceding data collection, communicates well in Amharic (Local working language), and reside in slums of Addis Ababa for at least 6 months. Exclusion criteria comprised women who attended FANC but had not experienced home delivery. We contacted 30 eligible women for the interview and interviewed 20 of them. Ten women contacted were not engaged in the interviews, 3 as of relocation out of the study setting, 7 they were busy, and refused to participate (Table 1).

Table 1: Sampling (N = 20)

Health facilities	Younger women (<24yrs)	Older women (25 yrs. and above)
HC 1	2	2
HC 2	2	3
HC 3	3	2
District Hospital	3	3
Total	10	10

Data Collection

The principal author with the trained female research assistant conducted in-depth face-to-face interviews. An interview guide was used to outline the open-ended topics in English and Amharic. The interview guide used in this study was attached as 'Annex 1'.

The researcher piloted the interview schedule on three women who met the set eligibility criteria. These women were not included in the main study. The results were not included in the main study as the purpose was to test whether the research questions generated appropriate responses. The pilot study helped the researcher to improve the interview guide. Some changes were made due to the issues that emerged during the pilot study. For example, some questions were rephrased and sequentially aligned.

The interviews covered the central question "What were your reasons for attending FANC (which promotes the use of skilled attendance at birth) but decided to deliver your baby at home and not at the health facility? Additional questions included: What prompted you to attend antenatal care? How many times did you receive ANC during this pregnancy? What were the benefits of attending antenatal care for you? What information did you receive from the health care providers about health facility-based delivery? What is your opinion regarding delivering a baby in the health facility? What are the benefits of going for institutional delivery? Would you recommend health facility delivery to your friends? In-depth interviews were conducted until saturation, which was reached after 20 interviews when additional data did not lead to any new emergent codes and themes. The number of participants in qualitative research is adequate when data saturation is achieved. According to Hancock, Amankwaa, Revell, and Mueller[10] the qualitative research "gold standard" for quality research is data saturation. The same authors explain that data saturation or adequacy is reached when there are no new emerging ideas of information in the data, the point in coding when no new codes occur in the data [10, 11].

During the interviews, a favourable, non-threatening, and relaxed environment was created when the researcher introduced himself to the participants, explained the interview process. The interviews took place in the private rooms of selected health facilities. With the permission of the participants, the assistant researcher audio-recorded the interviews and took written notes during the interview in order to capture the original accounts of the participants' responses and to verify their interpretations by referring back to the original responses.

The researcher listened attentively to research participants as they responded to the interview questions. During the in-depth interviews, one participant expressed reservation about the use of

the audiotapes, even after the researcher had assured confidentiality of the collected data for the study. The researcher respected her wish by switching off the audiotape for her interview.

In this study, on the spot member checking was performed during the interviews by repeating what the participant said and what was documented in the field notes to the participants and confirming that is what they wanted to say. Through member checking, the feedback was given to the participants. The researcher also obtained feedback regarding the participants' response to the interpretation of the data from them as individuals. The researcher spent considerable time(four weeks) interacting with the participants during in-depth interviews in order to develop a rich understanding of their perceptions of facility-based and home delivery service until data saturation. The time spent during data collection was sufficient to establish rapport with the participants. The researcher conducted the interviews in Amharic and lasted for about 30-50 minutes.

Patient and Public Involvement

Patients were not involved in this study. Including Patient and Public Involvement (PPI), statements align closely with *BMJ Open*‘s values of transparency and inclusiveness. We hope that including PPI statements in all articles is the first step of many for *BMJ Open* in encouraging patient involvement.

Data Analysis

Descriptive statistics were used to summarize socio-demographic characteristics of participants.

Data were analyzed concurrently with data collection. All transcribed data were read and categorized into meaningful units that were subsequently coded manually by the principal researcher. The analysis involved the use of both a priori codes (from the question guide) and emergent inductive codes. Thematic analysis was done for the study. The researcher used Techs’ eight steps of qualitative data analysis method [12]. To ensure dependability in the study, the researcher liaised with the two senior research supervisors regularly by email, personal contact, and phone calls to track any changes carried out in the protocol and procedures, including reviewing themes, defining and naming themes identified. Moreover, verbatim quotes were designated and used to elucidate study findings.

Ethics approval and consent to participate

Ethical clearance was obtained from the Research Ethics Committee of the Department of Health Studies, University of South Africa. Permission to conduct the study was granted by Addis Ababa City Government Health Bureau. The authors obtained informed written consent from all participants to conduct the interviews. The voluntary nature of participation in this study was underlined. Confidentiality was assured about the identity and other personal information of all interviewees. The data collected were stored electronically as audio recordings to use as a form of backup and the transcriptions and notes were stored as MS word files. The MS word files were password-protected to ensure confidentiality.

Research Findings

Characteristics of study participants

A total of 20 participants involved in the in-depth interviews. The mean age of the total sample was 28.96 (±SD = 4.19) years. Educational characteristics of the participants show that the majority (14 out of twenty) was found to have no formal education and two-thirds of them were found to have one to three children. All of them delivered their last child at home during this study.

Themes:

From the analysis of in-depth interview data, 4 (four) themes emerged. These themes were identified as the rich and detailed account of the perspectives of facility-based and home delivery among attendees of FANC in Addis Ababa, Ethiopia.

The theme I: Perceived benefits of home delivery

The first theme that emerged from data analysis was the perceived benefits of home delivery. Within the theme, 3 (three) categories support, familiarity, and warmth of the home setting and affordability of home delivery emerged. The sub-categories were as shown in table 2

Table 2: Theme I: Perceived benefits of home delivery

Theme	Categories	Sub-categories
Perceived benefits of home delivery	Support available during home delivery	Partner, family and neighbors' supportive presence at birth
	Familiarity and warmth of the home setting	Familiar, comfortable and convenient home setting
	Affordability of home delivery	The cost of health facility-based delivery services too high

Partner, family and neighbours' supportive presence at birth

The findings revealed that the benefits of home delivery (as perceived by the participants) were one of the reasons women decided to deliver their babies at home and not at the health facilities. Some of the participants indicated that the presence of partners, family members, friends, and neighbours offer the required support and assistance during delivery at home. Sample responses included;

> "I delivered at home without any problems and was assisted by my mother" " (Participant 08).

> When I was in labor, my family and TBA from neighbors were with me. The presence of family and TBA was to provide me physical, social, and emotional support during childbirth (Participant 16).

> "When labor started me at night I was alone because my husband was on fieldwork. So, there was nobody else close to me. I then shouted to call my neighbors but I already delivered before they came" (Participant 01).

Elder women influence the decision- making power regarding delivery place in Ethiopia. However, decision-making processes are dominated by men and the male household head is regularly accountable for making the final decision. Other participants perceived home delivery safe because of the confidence they have in the experienced members of the community such as mothers, grandmothers, and neighbours who assist during delivery. Furthermore, the availability of

traditional birth attendants (TBAs) in the community might confirm a woman's decision to give birth at home.

> "My grandmother asked me to wait a little longer at home. She told me to wait and I gave birth spontaneously. We have confidence in her (TBAs)" (Participant 04).

> As the labor progressed, I asked them to take me to a facility. But my husband said no because he wanted me to deliver at home (Participant 18).

A study suggests that birth companionship especially continual support in labor and delivery can advance women's childbirth experience and birth outcomes[13]. The issue of husband/partner companionship during labour is regarded with concern by the study participants, who opted for home delivery. The findings of the study found that most women wanted to be accompanied by their partner to the facility for childbirth and most of them wanted to have a companion stay with them during labour and after delivery. Women's reasons for desiring a companion were mostly related to having someone around to help them meet their physical needs; more so than for emotional support. The results, nevertheless, suggest that women are less likely to be allowed continuous support at delivery if the companion was a male partner. These findings suggest that we need to find better ways of changing social norms about the role of men during labor and delivery and encouraging the participation of male partners in maternal and child healthcare while prioritizing women's preferences. Sample responses included;

> "I am scared of delivering at a health facility alone because family members (especially my husband) aren't permitted to attend a woman in the labor room. I won't have such problems when I deliver at home." (Participant 05).

> "Men are not allowed to accompany their wives to the labor ward for the reasons I don't know. What is wrong if he is allowed to stay with his wife during childbirth?" (Participant 03)

> "Yet, men aren't permitted to attend a woman in the labour room and only one female relative is sometimes allowed to be with a woman in labour ward" (Participant 02).

Familiar, comfortable and convenient home setting

The findings revealed that some of the participants identified familiarity with home setting and warmth of the home setting as another benefit of home delivery, in that at home one can rest comfortably in their own bed. This finding was apparent in the following sample responses;

> "At home, you can rest in *your* bed after delivery, and your family and friends feed you porridge "(Participant 05).

> "I would have lost the comfortable house where my close families, relatives, and neighbors nearby me, had I gone hospital for delivery" (Participant 07).

> "I never find a place like my home. It is my pleasure to deliver my baby on my own bed…. (Participant 13).

One participant mentioned the immediate celebration of the birth of a child by women singing traditional songs as one of the benefits of home delivery. In addition, she mentioned the caring and feeding of the mother by the neighbours. This is what she said 'Following childbirth, neighboring women will make some porridge and will serve the woman. They (women) will celebrate this special occasion by singing traditional songs and eating porridge. If childbirth takes place in the facility, you miss this wonderful event and the warmness of your home. I think this ceremony is unique to Ethiopian women (Participant 01).

Cost of facility-based delivery too high

The high cost of delivering at a health facility was mentioned as one of the reasons women decide to deliver their babies at home. Although maternal service is free in Ethiopia, indirect costs linked with childbearing were too high for numerous women who regarded themselves as too poor to deliver in a health facility. For instance, economically constrained women might have concerns obtaining funds to pay for gloves, medications, and lab tests during facility-based delivery care at the time-of-service, predominantly those families who depend on intermittent labor. Some women regarded costs outside of the direct cost for childbirth as "unseen" and difficult to prepare for. The sample response

"You know you need someone who arranges taxi and pays money for it to go to health facility'' (Participant 6).

''When you go there (HF) for childbirth, you are required to buy gloves, medications and lab tests, etc. Had there is a strong national health insurance system in place, you could have used it to cover your expenses'' (Participant 10).

Theme II: Knowledge Deficit

The second theme that emerged from data analysis was the knowledge deficit. Within the theme, two categories of inadequate information received from the health professionals and beliefs about home and facility-based delivery emerged. The sub-categories were as shown in table 3.

Table 3 Theme II: Knowledge deficit

Theme	Categories	Sub-categories
Knowledge deficit	Inadequate information received from health professionals	Lack of knowledge about facility-based delivery
	Perceptions of home and facility-based delivery	Home delivery is for normal delivery Unnecessary procedures carried out at health facilities

Lack of knowledge about facility-based delivery

According to the study findings, a lack of knowledge about facility-based delivery influenced the women's decision to give birth at home. Some of the participants stated that they did not know about the facility-based delivery service at public health facilities. Sample responses in that regard included:

"We must be told about the significance of health facility delivery by the service providers at the ANC clinic. Nobody raised the issue to us. So, we decided to give birth at home. There is a TBA in our community and she was called and assisted me" (Participant 02).

"The nurse I was attended to by was busy and she only checked my abdomen and gave me an appointment to return. Otherwise, I don't recall anything I was told about facility delivery" (Participant 05).

> "I didn't receive any information about delivering in a facility. She (the midwife) only checked me and told me to come on the next appointment…. I guess it is because they are at times busy or they might not be well prepared to do so (Participant 01).

The perception that home delivery is for normal delivery

The study findings revealed some participants' perceptions of home delivery that made them decide to give birth at home, even though they attended FANC. The finding was evident in the following sample responses;

> "I delivered my last child at home because it was a normal delivery, however, I would have gone to the hospital had any complication occurred '' (Participant 08).

> ''If I encounter difficulty to deliver in my home I can go there at last while labor is prolonged and painful. Otherwise, why should I visit a health facility while I am healthy? '' (Participant 15).

> ''I delivered 5 children at home being assisted by TBA, my family, and relatives. You will continue to deliver at home if you deliver the first child at home" (Participant 02)

The perception that unnecessary procedures are carried out at health facilities

According to the study findings, some of the women had a perception that unnecessary procedures are carried out at health facilities during delivery. Sample responses in that regard included:

> "Lots of women are cut and stitched for the reasons I don't know. For example, if one goes to a private hospital, almost every one of them delivers by the operation." (Participant 01)

> "Fear of Caesarean section delivery discourages us [women] to come for health facility-based delivery" (Participant 08)

Theme III: Poor Access to Health Facilities

The third theme that emerged from data analysis was poor access to health facilities. Within the theme, two categories of lack of transport and financial constraints emerged. The sub-categories were as shown in table 4.

Table 4 Theme III: Poor access to health facilities

Theme	Categories	Sub-categories
Poor access to health facilities	Lack of transport	Inaccessible and inadequate ambulance service Lack of prior arrangement for transport Distance and poor roads
	Financial constraints	Lack of emergency and complications readiness planning

Inaccessible and inadequate ambulance service

According to the study findings, the participants ended up giving birth at home because of poor access to health facilities. The difficulty of getting transport, in particular, ambulance services to the health facility, especially at night resulted in women delivering their babies at home. Sample responses included;

"In the night, it is difficult to get the ambulance as fast as you need it." (Participant 01)

"There is limited access to ambulance service mainly in the night."(Participant 06)

''Sometimes, the driver doesn't respond to the telephone call and, the woman will deliver at home'' (Participant 03)

Lack of prior arrangement for transport

Planning for childbirth includes decisions about the location of delivery, transportation planning, and money to pay for childbirth. The findings of the study revealed that study participants did not arrange for transportation to a health facility. This was evident in the sample responses;

"We didn't arrange transportation before" (Participant 19).

"I delivered this baby at home because labor started in the night while it was heavily raining, and there was no time to arrange transport" (Participant 02).

Distance and poor roads

According to the study findings, the long distance to the health care facilities, as well as the bad state of the roads diminished access to health care facilities. One participant explained "My home

is a bit far from the main road and a taxi can't come in because of the bad road (cobblestone was under construction); (Participant 04).

Lack of emergency and complications readiness planning

The study findings identified the lack of funds in an emergency as a barrier to the utilization of facility-based delivery

> "You know you need someone who arranges taxis and pays money for it to go to health facility (Participant 03).

" There is no strong national health insurance system in place in our country to cover your expenses during childbirth…. The government should do more on this '' (Participant 14).

Two mothers reported that they delivered at home because labor was unpredictably too fast, and did not give their families a chance to reach the health facility for delivery. Cchildbirth after unusually rapid labour, culminating in the rapid and spontaneous expulsion of the infant is called precipitate delivery. In precipitate delivery, the first and the second stage of labour are combined, and the duration of labour is under two to three hours[14]. The sample responses included;

> *"*Suddenly, I went into labor pain after midnight (at 1 pm) and delivered normally my last child at about 2 pm. There is a well-known TBA in our community and she came and assisted me" (Participant 08).

> "I delivered this baby at home because labor started in the night while it was heavily raining, and the baby was born *soon"* (Participant 06).

These findings are similar to the findings, which were reported in previous studies by Alabbi, O'Mahony, Wright, and Ntsaba [15] and Yakubu, Benyas, Emil, Amekah, Adanu, and Moyer [16].

Theme IV: Inadequate (demand side) Resources

The fourth theme that emerged from data analysis was inadequate resources. Within the theme, two categories inadequate skilled health professionals and inadequate equipment emerged. The sub-categories were as shown in table 5.

Table 5 Theme IV: Inadequate resources

Theme	Categories	Sub-categories
Inadequate resources	Inadequately skilled health care professionals	Perceived incompetence among health care professionals Negative attitudes of health care professionals and poor service at health facilities
	Inadequate equipment	Inadequate beds/ supplies

Perceived incompetence among health care professionals

From the participants' perspective, the inadequacy of both skilled health care professionals and equipment are some of the reasons some women do not use health care facility-based delivery services. The findings revealed the perceived incompetence of health care professionals, lack of knowledge, skill, and appropriate attitudes to care for pregnant women during pregnancy and childbirth as reasons women do not go for health facility-based delivery. The participants expressed confidence in traditional birth attendants. Sample responses include

> "I was really upset with how they took care of me when I delivered my first child in the health center. She [the nurse] who attended to me didn't even know how to manage the removal of the placenta, and the baby. It seemed that she didn't get proper training or she lacked some experience" (Participant 01).

> ''They [Providers] lack experiences to assist women in labor and childbirth…'' (Participant 14).

> "We have confidence in traditional birth attendants" (Participant 04).

Negative attitudes of health professionals and poor service at health facilities

The findings of the study revealed that women did not choose facility-based delivery because of the negative attitudes of health care professionals and poor service at health facilities. Many

participants mentioned physical and verbal abuse, lack of respect, and lack of sympathy at the hands of midwives and nurses. These findings were evident in the following sample responses;

> "That some of the midwives, they even beat you, and scream on you, they don't have tolerance for you. They are verbally abusive, impolite, and lack sympathy" (Participant 01).

> "There is some negligent staff. We go there to get their help, but they talk and chat about their private issues. So, it is not advisable to go there" (Participant 03)

> "While I delivered my second baby at a health center I was in pain and shouting for help to the midwife who was chatting with her friends. She didn't show any concern to me and one physician also came and yelled at me. I suggest that these people have to in the first place respect their clients and also know their professional duties and responsibilities" (Participant 06).

Inadequate equipment (beds, BP apparatus, bedsheets, and thermometers)

The participants stated that the equipment required for providing quality care at health care facilities was inadequate. According to the findings, there was a shortage of beds, bedsheets, blood pressure monitoring equipment, as well as thermometers, resulting in women in early labor sent home. Some of the women indicated that the health professionals sent them back home because there were no beds, hence the home delivery even though they had planned to have facility-based delivery. Sample responses included; "For me, I don't think delivering at home is safe. I wanted to give birth at health facility but they returned me home because the contractions weren't strong and there weren't sufficient admission beds in the health center" (Participant 04).

> "I went to deliver my firstborn child and they sent me home and I delivered that evening at home. So, if there were enough delivery beds I wouldn't deliver at home" (Participant 15).

> "Due to the shortage of beds, some women are referred from one facility to another. At times, the health facilities even don't have gloves, bed sheets, drugs, equipment like thermometer and BP apparatus" (Participant 08).

> "Let me tell you my own story. I was referred to the hospital due to heavy vaginal

bleeding when delivered my second baby. There was no BP apparatus in the hospital except one in the emergency room. There is staff, hospitals, and patients but no BP apparatus even in that big hospital" (Participant 02).

Discussion

This study explored why some women who attended focused antenatal care (FANC) fail to deliver in health facilities in slum residents of Addis Ababa, Ethiopia. A multi-level life-course framework of facility-based delivery in low- and middle-income countries (LMICs) developed by Bohren, et al[17] was used to frame the current study and link the findings of the study to the body of knowledge.

Perceived benefits of home delivery

According to the findings, the women who took part in this study chose home-based delivery because of the supportive presence of family and neighbours during childbirth as well as the comfort and convenience of the home environment. These findings were consistent with findings of previous studies among urban poor in Mumbai-India and Nigeria where over half delivered outside hospital facilities and 81.8% of those deliveries were not attended by a skilled health provider[18, 19]. Adinew and Assefa [20] reported similar findings that Ethiopian women who took part in their study chose home-based and traditional birth attendants to facility-based delivery and health professionals, respectively. The same authors explain that the choice was based on the familiarity, comfort, and convenience of the home environment. In addition, the home environment does not limit the involvement of traditional birth attendants who are trusted by the community because of their status and the perceived quality of care (skill and warmth) they render during childbirth [21, 22]. According to the study findings, women indicated that the presence of family and traditional birth attendants provide physical, social, and emotional support during childbirth. According to Bohren et al[17], Magoma et al[22], and Moyer, Adongo, Hodgson, Engmann, and Devries[23] the availability of traditional birth attendants in the community might confirm a woman's decision to give birth at home.

The findings also revealed that it is easier to deliver at home where women are able to use their own belongings and receive support from their neighbours. Gebrehiwot et al [21], Magoma et al

[22] and Titaley, Hunter, Dibley and Heywood [24] reported similar findings. Another important finding was that traditional practices influenced some of the women's decision to deliver at home and not at a health facility, evidenced in the present study. This finding is consistent with the results of previous studies [21, 22, 25]. A parturient woman may not be in control of the decision to seek facility-based delivery, instead of relying on decisions made by elder women, husbands, other family members, and neighbors. [17, 21, 26]. Elder women hold the greatest influence and decision- making power regarding delivery location across Asia and sub-Saharan Africa, including Ethiopia. Decision-making processes are dominated by men and the male household head is regularly accountable for making the final decision [17, 21-23].

Skilled attendants during labour, delivery, and in the early postpartum period, can prevent up to 75% or more of maternal death. Yet, in many developing countries, a few mothers make at least one antenatal visit and even less receive delivery care from skilled professionals[27]. In Ethiopia, the majority of childbirth takes place at home by unskilled persons. Home delivery assisted mostly by relatives or unskilled TBAs is as high as 74% in Ethiopia[6]. Hence, the Community-based Skilled Birth Attendant (CSBA) program should be introduced to increase accessibility to skilled delivery at home.

Affordability of home delivery was mentioned as one of the reasons some of the women who participated in the study preferred home-based care delivery. Yaya, Bishwajit, Uthman, and Amouzou [28] conducted a survey in Ethiopia and Nigeria to examine country-level variations of the self-reported causes of not choosing to deliver at a health facility. The results of the same study identified cost as one of the barriers reported for not attending health facility delivery in both countries. Oyerinde et al[29] , and Ghazi, Moudi, and Vedadhir[26] reported similar findings in Sierra Leone, and Iran, respectively. There is no need to arrange and pay for transport during a home birth.

The high cost of delivering at a health facility was mentioned as one of the reasons women decide to deliver their babies at home. This finding is consistent with the Bohren et al[17] Multiple-level life-course framework of facility-based delivery in low- and middle-income countries (LMICs) according to which the cost of childbirth may become a barrier to facility-based delivery.

According to Bohren economically constrained women might have concerns obtaining funds to pay for facility-based delivery care. The same authors indicate that some women regarded costs outside of the direct cost for childbirth as "unseen" and difficult to prepare for [17, 22, 30]

Knowledge Deficit

The findings of the study revealed that women's lack of knowledge about facility-based delivery influenced their decision to give birth at home. The findings of the study are consistent with some of the previous studies that found that knowledge deficit regarding the benefits of health facility-based childbirth made women choose home delivery. Various researchers are of the opinion that ANC workers might not be effectively instructing women on the significance of facility-based delivery service possibly because of heavy workload and constrained time due to deliberate complex matters with their clients[17, 22, 31] . The findings of the study also revealed a perception among some participants of the study that home delivery is for women who had a history of normal delivery. The study findings are consistent with the research done by Øxnevad [32] on perceptions and practices related to home-based delivery and a qualitative study by Bedford, Gandhi, Admassu, and Girth[33] on the location of childbirth in rural Ethiopia. According to the findings of the same studies, the birthing process was considered a normal event, and women considered home delivery first and considered facility-based delivery only if complications arose.

The results of the survey that was conducted by Yaya et al [34], showed that one in four women in Ethiopia reported that it was not necessary to attend health facility-based delivery considering that delivery is a natural phenomenon and not an ailment requiring health facility services. Kebede et al [9] conducted a quantitative study on factors associated with institutional delivery service in Ethiopia and found that women who faced problems during pregnancy were 2.8 times more likely to utilize health care facility-based delivery than those who did not face problems during pregnancy

This finding is consistent with the Bohren et al [17] Multiple-level life-course framework of facility-based delivery in low- and middle-income countries (LMICs) according to which the previous birth experiences may affect the women's choice of the location of delivery of the baby.

For a woman who delivered her first child at home without difficulties, using a health facility-based delivery for subsequent deliveries may be regarded as unnecessary [17, 27, 35] point out that some women may consider that ANC attendance will reduce the likelihood of a difficult delivery and that ANC may be viewed as a preventative method, guaranteeing a normal pregnancy and home delivery. This may explain why in some circumstances ANC coverage is almost universal while health facility-based delivery rates stay low [17, 22]

According to the study findings, the perception of some of the women who took part in the study was that unnecessary procedures are carried out at health facilities. The findings are consistent with some of the studies that identified fear of cutting (caesarean section, episiotomy) during delivery as one of the factors that facilitated home-based delivery [17, 22, 26]. The multiple-level life-course framework of facility-based delivery in low- and middle-income countries (LMICs) suggests that medicalization of childbirth may be one of the reasons women prefer home to facility-based delivery. According to the model, women in low- and middle-income countries may fear various undesirable interventions and procedures such as episiotomies and caesarean sections and may prefer to deliver at home. This fear is usually based on the perception that birthing is a "normal" process which is a woman's "natural rite of passage" with no basis for delivering at a health facility[17, 21, 22].

Poor access to health facilities

According to the findings of the study, poor access to health facilities played an important role in influencing women's location of delivery (home-based delivery in this study). The findings indicate that the women who took part in the study failed to reach the health care facilities because of the difficulty of getting transport to the health facility at night, long distance to travel to the health facilities, poor conditions of the roads to health facilities and financial constraints. Similar findings were reported in a variety of previous studies [21, 34, 36]. A noteworthy finding is that women who attended FANC did not make plans for emergency and complications readiness plan, as it is expected in line with WHO [5]. The WHO recommends that all pregnant women develop a written plan for dealing with birth and any unexpected adverse events such as complications or emergencies that may occur during pregnancy, childbirth, or the immediate postnatal period [37].

Birth preparedness is the process of planning for a normal birth while complications readiness refers to anticipating the actions needed in case of an emergency. Emergency planning is the process of identifying and agreeing all the actions that need to take place quickly in the event of an emergency, and that the details are understood by everyone involved, and the necessary arrangements are made. The plans should be discussed with the skilled attendant at every FANC assessment and one month before the expected date of birth [34, 37, 38].

Inadequate (demand-side) Resources

The findings of the study revealed that women did not choose facility-based delivery because of the perceived incompetence and negative attitudes of health professionals, as well as poor service at health facilities. Similar findings were reported in previous studies. According to Adinew and Assefa [20], women who took part in their study chose home-based and traditional birth attendants to facility-based delivery and health professional respectively because of the skill and warmth demonstrated by the traditional birth attendants. A number of studies found that women were mistreated during childbirth in health facilities, hence the decision to give birth at home [20, 34, 39, 40]. The same authors reported similar findings of disrespectful treatment, unskilled care, poor health provider-client interaction as reasons women preferred to give birth at home. Bohren et al [17] conducted a systemic review with the aim of synthesizing qualitative evidence related to the facilitators and barriers to delivering at health facilities in low-and middle-income countries. Thirty-four studies from 17 countries were included in the review, and in the majority of studies reports of disrespectful and abusive obstetric care were found. The multiple-level life-course framework of facility-based delivery in low- and middle-income countries (LMICs) suggests that previous birth experiences may be one of the reasons women prefer home to facility-based delivery. Bohren et al [17] state that a number of women decide their level of risk for difficult deliveries based on their previous experience of delivery practices and birth results. For example, a woman might choose to give birth at a health facility if she had previous positive experience of facility-based delivery[17, 27]. The findings of the study are inconsistent with WHO [5], which supports the health system approach and strengthening regarding the availability of supplies and positive pregnancy and delivery experience.

The most important policy and program implications of this study are the facts that stress has to be given to urban poor residents in a similar fashion to rural populations in the country. Individuals in slums might have physical access as presented in the present study. Nonetheless, a number of factors, including lack of money and awareness about the benefits of facility childbirth might be considered as barriers among others. Increasing health facility births among the slum dwellers can be enhanced through interventions tailored at increased awareness, starting ANC in early stages of pregnancy, and attending at least 4 ANC visits[2]. Responsiveness to the health of urban poor women could lead to augmented access to a facility delivery consequently improving the health status of the entire population. For instance, guaranteeing appropriate and timely referrals to a higher-level health facility for emergency care, arranging for ambulance service, and care during transport may motivate women to deliver in a facility. Decreasing referring to women to health facilities of similar status in the district might also help prevent delay in seeking care. It might also be useful to focus on rigorous outreach in vulnerable areas by community-based health workers(Health extension workers in the context of Ethiopia), who may perhaps play a greater role in assisting women to plan their deliveries and making sure that they get help in time. The Community-based Skilled Birth Attendant (CSBA) program should also be introduced to increase accessibility to skilled delivery at home in the country.

Various studies conducted in different developing countries and in a different part of Ethiopia revealed different determinants of place of birth. Some of these factors are similar to those found in the current study while others were different. Most of the studies used the quantitative approach, while others used qualitative and mixed-method research. The common factors in literature that were the same as those found in the study include the perceived benefits of home delivery, lack of access to the health facility, absence of previous pregnancy-related complications, women's lack of knowledge of the importance of FANC, misconceptions regarding FANC and home delivery. In Ethiopia, researchers have documented a variety of the reasons women are not accessing facility-based delivery services. The findings of this qualitative study add the existing body of knowledge on perspectives of attendees of FANC on home and facility-based delivery among slums of Addis Ababa, Ethiopia.

Strengths and limitation of the study

This study is one of the first studies in Ethiopia to explore access to facility-based delivery care in urban slum settings.It should also be clear that the emerged themes were substantiated by the local and global works. Hence, the findings are valuable to health organizations that need to improve health facility-based delivery services. However, our study has some limitations. The study was conducted in public health facilities of Addis Ababa, Ethiopia. Hence, more emphasis should be paid on the need for including other stakeholders in such analysis in the future. The findings of this study applied to a similar population in the study setting. Criticism related to qualitative research often refers to concerns of the small sample, data interpretation, and bias. In this study, however, the researcher was self-aware and cognizant of his immersion in the research process to allow the process to be as objective as possible. The researcher is of the view that the rich description of the sample, methods of data collection and the data analysis process reveal the translucent nature of the study. The researcher ensured that his beliefs, opinions, and experiences about the phenomenon under study did not affect data collection and data analysis through the use of bracketing. The researcher's gender (male nurse - midwife) and background did not in any way affect the data collection process and data analysis for the present study.

Conclusion

The findings of this qualitative study revealed that perceived benefits of home delivery, knowledge deficit about health facility-based delivery, poor access to health care facilities, and inadequate (demand side) resources were related to low uptake of the facility-based delivery services. The results of this qualitative study add the existing body of knowledge on perspectives of attendees of FANC on home and facility-based delivery. Use ANC visits to advise women about Birth preparedness and complication readiness, the use of facility deliveries and risks of home delivery to the mother and the new-born.

Acknowledgments

We are indebted to Addis Ababa University, College of Health Sciences for its financial support for data collection through its Post Graduate Student Grant Scheme. We are also thankful to the University of South Africa for its technical support. We are indebted to Addis Ababa City Health

Bureau for providing us permission to conduct the study in public health facilities. Finally, the authors are also thankful to the study participants who profoundly took part in the study to share their experiences, and voiced for other poor women. Our understanding was deepened through them.

Authors' contributions

Sendo, EG conceived of the research topic, designed the methods and materials, involved in the data collection, conducted data analysis, drafted and finalized the manuscript. **ME, Chauke**, and **M Ganga-Limando** participated in designing the study, data analysis, interpretation, and presentation of results and were involved in the final revision of the manuscript. All the authors have read and approved the final manuscript.

Competing interests

The authors declare that they have no competing interests.

Funding: A small grant for data collection was obtained through grants offered by the Federal Ministry of Education through the Addis Ababa University postgraduate office(Grant no: 12283/018).

.

Data Availability Statement: All data relevant to the study are included in the article or uploaded as supplementary information.

Ethics approval and consent to participate

Ethical clearance was obtained from the Research Ethics Committee of the Department of Health Studies, University of South Africa. Permission to conduct the study was granted by Addis Ababa City Government Health Bureau. The authors obtained informed written consent from all participants to conduct the interviews. The voluntary nature of participation in this study was underlined. Confidentiality was assured about the identity and other personal information of all interviewees.

List of References

1. Alkema C, Hagan, Zhang, Moller, Gemmill, Ma Fat, Boerma, Temmerman, Mathers & Say **Global, regional, and national levels and trends in maternal mortality between 1990 and 2015, with scenario-based projections to 2030: a systematic analysis by the UN**

Maternal Mortality Estimation Inter-Agency Group. *Lancet* 2016, **387**:462-474.
2. Atusiimire LB, Waiswa P, Atuyambe L, Nankabirwa V, Okuga M: **Determinants of facility based–deliveries among urban slum dwellers of Kampala, Uganda**. *PloS one* 2019, **14**(4):e0214995.
3. Say. L, A . : **WHO Systematic Analysis.** In: *Lancet.* 2014.
4. WHO: **Maternal Mortality**. In.; 2018.
5. Organization WH: **Sustainable development goals (SDG). Health and health related targets.** In.; 2016.
6. CSA: **Central Statistical Agency Ethiopia, ICFinternational. Ethiopia demographic and health survey . Addis Ababa, Ethiopia and Calverton, Maryland, USA**. In.; 2016.
7. Belay A, Sendo E: **Factors determining choice of delivery place among women of child bearing age in Dega Damot District, North West of Ethiopia: a community based cross-sectional study**. *BMC pregnancy and childbirth* 2016, **16**(1):229.
8. Dimanin P: **Exploring livelihoods of the urban poor in Kampala, Uganda**. *An institutional, community, and household contextual analysis ACF* 2012.
9. Kebede A, Hassen, K., &Teklehaymanot, AN: **Factors associated with institutional delivery service utilization in ethiopia**. *International Journal of Women's Health* 2016, **8**:463 - 475.
10. Hancock ME, Amankwaa, L., Revell, M. A., & Mueller, D.: **Focus Group Data Saturation: A New Approach to Data Analysis. The Qualitative Report, 21(11), 2124-2130**. 2016.
11. Saunders B, Sim J, Kingstone T, Shula Baker S, Waterfield J, Bartlam B, Burroughs HJ, C.: **Saturation in qualitative research. exploring its conceptualization and operationalization. Journal of quality & quantity.** . 2018, **52**(4):1893-1907.
12. CresWell W: **Research Design: Qualitative, quantitative, and mixed methods approaches.**, 4th edn: Thousand Oaks, California . SAGE; 2014.
13. Afulani P, Kusi C, Kirumbi L, Walker D: **Companionship during facility-based childbirth: results from a mixed-methods study with recently delivered women and providers in Kenya**. *BMC pregnancy and childbirth* 2018, **18**(1):150.
14. Suzuki S: **Selective uterine fundal pressure maneuver during the second stage of the first twin delivery at near term**. *The Journal of Maternal-Fetal & Neonatal Medicine* 2015, **28**(5):519-521.
15. Alabi AA OMD, Wright G NM: **Why are babies born before arrival at health facilities in King Sabata Dalindyebo Local Municipality, Eastern Cape, South Africa? A qualitative study**. *Afr J Prm Health Care*

Fam Med 2015, **7**(1).
16. Yakubu J, et al.: **It's for the Greater Good: Perspectives on Maltreatment during Labor and**

Delivery in Rural Ghana. *Open Journal of Obstetrics and Gynecology,* 2014, **4**:383-390.

17. Bohren MA, Hunter EC, Munthe-Kaas HM, Souza JP, Vogel JP, Gülmezoglu AM: **Facilitators and barriers to facility-based delivery in low-and middle-income countries: a qualitative evidence synthesis**. *Reproductive health* 2014, **11**(1):71.
18. Das S, Bapat U, More NS, Chordhekar L, Joshi W, Osrin D: **Prospective study of determinants and costs of home births in Mumbai slums**. *BMC pregnancy and Childbirth* 2010, **10**(1):38.
19. Olusanya B, Alakija O, Inem V: **Non-uptake of facility-based maternity services in an inner-city community in Lagos, Nigeria: an observational study**. *Journal of biosocial science* 2010, **42**(3):341.
20. Adinew YA, N: **Experience of Facility Based Childbirth in Rural Ethiopia: An Exploratory Study of Women's Perspective**. *Hindawi Journal of Pregnancy* 2017:1- 6
21. Gebrehiwot T, Goicolea I, Edin K, Sebastian MS: **Making pragmatic choices : women ' s experiences of delivery care in Northern Ethiopia**. *BMC Pregnancy and Childbirth* 2012, **12**(113).
22. Magoma M, Requejo J, Campbell O, Cousens S, Filippi V: **High ANC coverage and low skilled attendance in a rural Tanzanian district : a case for implementing a birth plan intervention**. *BMC Pregnancy and Childbirth* 2010, **10**(13):1 - 12
23. Moyer CA, Mustafa A: **Drivers and deterrents of facility delivery in sub-Saharan Africa: a systematic review**. *Reproductive health* 2013, **10**(1):40.
24. Titaley CR, Hunter CL, Dibley MJ, Heywood P: **Why do some women still prefer traditional birth attendants and home delivery ?: a qualitative study on delivery care services in West Java Province , Indonesia**. *BMC Pregnancy and Childbirth* 2010, **10**(43):1- 14.
25. Moyer A, & Mustaf., A.: **Drivers and deterrents of facility delivery in sub-Saharan Africa : a systematic review**. *Reproductive Health* 2013.
26. Ghazi T: **Home birth and barriers to referring women with obstetric complications to hospitals: a mixed- methods study in Zahedan, southeastern Iran**. *Reproductive Health* 2012, **9**(5).
27. Shiferaw S, Spigt M, Godefrooij M, Melkamu Y, Tekie M: **Why do women prefer home births in Ethiopia ?** *BMC Pregnancy and Childbirth* 2013, **13**(5):1- 10
28. Yaya S BG, Uthman OA, and Amouzou A: **Why some women fail to give birth at health facilities: A comparative study between Ethiopia and Nigeria**. *PLoS ONE* 2018, **13**(2).
29. Oyerinde K, Yvonne Harding, Y, Amara, P, Garbrah-Aidoo, N, Kanu, R, Oulare, M, Shoo, R and Kizito, Dao: **Barriers-to-uptake-of-emergency-obstetric-and-newborn-care-services-in-sierra-leone-a-qualitative-study**. *J Community Med Health Educ* 2012, **2**(5):2161-0711.
30. Gebrehiwot T, Sebastian MS, Edin K, Goicolea I: **Health workers ' perceptions of facilitators of and barriers to institutional delivery in Tigray , Northern Ethiopia**. *BMC Pregnancy and Childbirth* 2014, **14**(137).
31. Izugbara CO, Kabiru CW, Zulu EM: **Urban poor Kenyan women and hospital-based delivery**. *Public Health Reports* 2009, **124**(4):585-589.
32. Øxnevad M: **Perceptions and practices related to home based and facility based birth. A qualitative study from Agemssa, Ethiopia**. University of Bergen, Norway; 2011.
33. Bedford J, Gandhi, M, & Admassu, M, Girma A: **A Normal Delivery Takes Place at Home': A Qualitative Study of the Location of Childbirth in Rural Ethiopia**. *Matern Child Health J* 2012.
34. Yaya S, Bishwajit G, Uthman OA, Amouzou A: **Why some women fail to give birth at health facilities: A comparative study between Ethiopia and Nigeria**. *PloS one* 2018, **13**(5):1-11.
35. Story WT, Burgard SA, Lori JR, Taleb F, Ali NA, Hoque DE: **Husbands' involvement in delivery care utilization in rural Bangladesh: A qualitative study**. *BMC pregnancy and childbirth* 2012, **12**(1):28.
36. Spangler SA, Bloom SS: **Use of biomedical obstetric care in rural Tanzania: the role of social and material inequalities**. *Social science & medicine* 2010, **71**(4):760-768.

37. Annette C, Wung B, Ivo K, Atanga S, Fon N: **Facility-Based Delivery Service Utilisation Among Women of Childbearing Age in Nguti Health District, Cameroon: Prevalence and Predictors**. *Gynecol Obstet (Sunnyvale)* 2016, **6**(12):416

38. Tarekegn SM, Lieberman LS, Giedraitis V: **Determinants of maternal health service utilization in Ethiopia : analysis of the 2011 Ethiopian Demographic and Health Survey**. *BMC Pregnancy and Childbirth 2014* 2014, **14**(161):1- 13.

39. Bohren MA, Vogel JP, Hunter EC, Lutsiv O, Makh SK, Souza JP, Aguiar C, Coneglian FS, Diniz ALA, Tunçalp Ö: **The mistreatment of women during childbirth in health facilities globally: a mixed-methods systematic review**. *PLoS medicine* 2015, **12**(6):e1001847.

40. Ishola F, Owolabi O, Filippi V: **Disrespect and abuse of women during childbirth in Nigeria: a systematic review**. *PloS one* 2017, **12**(3):1 -17.

ANNEXE 1: IN-DEPTH INTERVIEW SCHEDULE (ENGLISH VERSION)

Participant Information and Informed Consent Form

Thank you for making time to take part in this interview. My name is ***Endalew*** **Gemechu** ***Sendo*** and I would like to talk to you about your reasons for attending FANC, which promotes skilled attendance at birth, but decided to deliver your baby at home and not at the health care facility.

Please remember that you are under no obligation to participate in this interview. You can withdraw from the study at this point or end the interview at any point during the interview without explanation or consequences. You do not have to answer any question that makes you uncomfortable. Should we come to any question that you do not want to answer, just let me know and we will go to the next question.

I promise to treat all information collected from this interview as highly confidential and it shall not be reported in a manner that identifies or links you with the results of the study. The interview should take about fifty (50) minutes. I will do the interview and take some notes; my research assistant will be recording this interview because I do not want to miss any of your comments. Because we are on tape, please make sure that you speak up so that we do not miss your important responses.

Do you have any questions regarding what I have just explained to you?

Informed consent

I, the under signed, acknowledge that *Endalew Gemechu Sendo*, the researcher has explained the research study purpose and activities. I understand the nature of the study and the means by which my identity will be protected and that the information I give will be kept confidential. I have had the opportunity to ask questions and they were answered to my satisfaction. My signature on this form also indicates that I am 18 years old or older and that I give permission to voluntarily participate in this study. My signature here also grants permission for the interview to be recorded.

Name of participant _____

Signature of the participant_____

Date_____

In-depth Interview questions

Personal information

Please tell me about yourself (age, marital status, your children, highest level of education, your religion and your current employment)

Questions about focused antenatal care (FANC): facility-based and home deliveries.

1. Would you please tell me your reasons for attending FANC (which promotes the use of skilled attendance at birth) but decided to deliver your baby at home and not at the health facility?

Additional questions included

1. What prompted you to attend antenatal care?
2. How many times did you receive ANC during this pregnancy?
3. What were the benefits of attending antenatal care?
4. What information did you receive from the health care providers about preparing for giving birth at health facilities?
5. Why did you choose to deliver your current baby at home?
6. What are your views regarding the advantages of home delivery?
7. What is your opinion regarding delivering a baby in the health facility?
   - Would you recommend health facility delivery to your friends? Why not? What are the barriers? What are the benefits of going for institutional delivery?
8. What is your opinion about delivering a baby at home?
   - Would you recommend home delivery to your friends? Why? What are the benefits of delivering a baby at home?

Thank you very much for taking part in this study.

ANNEXE 2: ማኪይቅ (In-depth Interview Schedule) – Amharic Version

በውይይቱ ላይ ለመሳተፍ ፍቃደኛ ስለሆኑ አመሰግናለሁ።በዛሬው እለት ውይይታችንን የምመራው እኔ **እንዳለው ገመቹ ሰንዶ** ነኝ። ውይይታችን የሚያተኩረው የጤና አገልግሎት በጤና ማእከል ወይንም በቤቱ ውስጥ ስለሚሰጥበት ሁኔታ ያላችሁን የግል አስተያየት ነው። በዚህ ጥናት ላይ የሚኖሮትን ተሳትፎ በማንኛውም ጊዜ ለእርስዎ ምቾት የማይሰጥ ሆኖ ሲያገኙት ማቋረጥ ይችላሉ። እኔም የግል ሚስጢርዎን ለመጠበቅ ቃል እገባለሁ። ውይይቱ በግምት 50 ደቂቃ ይወስዳል። ምንም እንኳን ማስታወሻ ብይዝም ድምጽዎን ግን በመቅረጫ እቀርጻለሁ። ምክንያቱም የሚሰጡኝን የትኛውንም መረጃ ማጣት ስለማልፈልግ ነው።

ከላይ በተደረገው ገለጻ ላይ ጥያቄ አለዎት?

እኔ ከታች ፊርማዬ የሰፈረው የጥናቱ አይነት፣ ጥቅም፣ መብቶቼን መረዳቴን እና በፈቃደኝነት ለመሳተፍ እንዲሁም ሚስጢራዊነቱን በመገንዘብ እና ያለምንም አሉታዊ ውጤት ከጥናቱ መውጣት እንደምችል መረዳቴን እገልፃለሁ። ጥያቄዎችን ለመጠየቅ እድል ተሰጥቶኝ የነበረ ከመሆኑም ባሻገር በበቂ ሁኔታ ምላሽ ተሰጥቶኛል።

በዚህ ጥናት ላይ ለመሳተፍ ስምምነቴን እገልፃለሁ።

የተሳታፊ ስም፡ .....

የተሳታፊ ፊርማ፡ .....

ቀን፡ .....

የመጠይቅ ጥያቄዎች (INTERVIEW QUESTIONS)

የግል መረጃ

እባክዎ ስለ ራስዎ ያብራሩ(ዕድሜ፣ የጋብቻ ሁኔታ፣ ልጆች፣ የትምህርት ደረጃ፣ ሃይማኖት እና የቅጥር ሁኔታ)

የቅድመ ወሊድ እንክብካቤ ጥያቄዎች(FANC): በጤና ማእከል ወይንም በቤት ውስጥ መውለድ

1. የቅድመ ወሊድ ክትትል በጤና ማእከል ካደረጉ በኋላ ልጅዎን በቤት መውለድ ለምን ወሰኑ?

ተጨማሪ ጥያቄዎች:

- የቅድመ ወሊድ ክትትል ለማረግ ያነሳሳዎ ምንድነው?
- በመጨረሻው እርግዝናዎ ወቅት ሥንት ጊዜ የቅድመ ወሊድ የጤና ክትትል አደረጉ?
- የቅድመ ወሊድ የጤና ክትትል ጠቀሜታዎች ምንድን ናቸው?
- በቅድመ ወሊድ የጤና ክትትል ወቅት በጤና ማእከል እንዲወልዱ ከጤና ባለሙያዎች ያገኙት መረጃ ምን ነበር?
- ልጅዎን በቤት መውለድ ለምን መረጡ? ጥቅሙስ?
- በቤት መውለድ ጋር ተያይዞ ያለዎት አስተያየት ምንድነው?
- በጤና ማእከል ውስጥ ከመውለድ ጋር ተያይዞ ያለዎት አስተያየት ምንድነው?
    - ሴቶች በጤና ማእከላት ልጅ እንዲወልዱ ያረታታሉ? ለምን?
    - ሴቶች በጤና ማእከል ልጆቻቸውን እንዲገላገሉ የሚከለክል ባህል ነክ ልማድ አለ? ካለ ያብራሩት።

ለተሳትፎዎ እጅግ አመሰግናለሁ

COREQ (COnsolidated criteria for REporting Qualitative research) Checklist

A checklist of items that should be included in reports of qualitative research. You must report the page number in your manuscript where you consider each of the items listed in this checklist. If you have not included this information, either revise your manuscript accordingly before submitting or note N/A.

Topic	Item No.	Guide Questions/Description	Reported on Page No.
Domain 1: Research team and reflexivity			
Personal characteristics			
Interviewer/facilitator	1	Which author/s conducted the interview or focus group?	
Credentials	2	What were the researcher's credentials? E.g. PhD, MD	
Occupation	3	What was their occupation at the time of the study?	
Gender	4	Was the researcher male or female?	
Experience and training	5	What experience or training did the researcher have?	
Relationship with participants			
Relationship established	6	Was a relationship established prior to study commencement?	
Participant knowledge of the interviewer	7	What did the participants know about the researcher? e.g. personal goals, reasons for doing the research	
Interviewer characteristics	8	What characteristics were reported about the inter viewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	
Domain 2: Study design			
Theoretical framework			
Methodological orientation and Theory	9	What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	
Participant selection			
Sampling	10	How were participants selected? e.g. purposive, convenience, consecutive, snowball	
Method of approach	11	How were participants approached? e.g. face-to-face, telephone, mail, email	
Sample size	12	How many participants were in the study?	
Non-participation	13	How many people refused to participate or dropped out? Reasons?	
Setting			
Setting of data collection	14	Where was the data collected? e.g. home, clinic, workplace	
Presence of non-participants	15	Was anyone else present besides the participants and researchers?	
Description of sample	16	What are the important characteristics of the sample? e.g. demographic data, date	
Data collection			
Interview guide	17	Were questions, prompts, guides provided by the authors? Was it pilot tested?	
Repeat interviews	18	Were repeat inter views carried out? If yes, how many?	
Audio/visual recording	19	Did the research use audio or visual recording to collect the data?	
Field notes	20	Were field notes made during and/or after the inter view or focus group?	
Duration	21	What was the duration of the inter views or focus group?	
Data saturation	22	Was data saturation discussed?	
Transcripts returned	23	Were transcripts returned to participants for comment and/or	

Topic	Item No.	Guide Questions/Description	Reported on Page No.
		correction?	
Domain 3: analysis and findings			
Data analysis			
Number of data coders	24	How many data coders coded the data?	
Description of the coding tree	25	Did authors provide a description of the coding tree?	
Derivation of themes	26	Were themes identified in advance or derived from the data?	
Software	27	What software, if applicable, was used to manage the data?	
Participant checking	28	Did participants provide feedback on the findings?	
Reporting			
Quotations presented	29	Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number	
Data and findings consistent	30	Was there consistency between the data presented and the findings?	
Clarity of major themes	31	Were major themes clearly presented in the findings?	
Clarity of minor themes	32	Is there a description of diverse cases or discussion of minor themes?	

Developed from: Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*. 2007. Volume 19, Number 6: pp. 349 – 357

Once you have completed this checklist, please save a copy and upload it as part of your submission. DO NOT include this checklist as part of the main manuscript document. It must be uploaded as a separate file.