Individual, socio-cultural, and health facility factors affecting men's involvement in facility-based childbirth in Southwest, Ethiopia: A mixed method study

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Abstract

Introduction: Traditionally, men are not supposed to take part in maternal health issues in many cultures. Nevertheless, pregnancy care and childbirth are the most crucial matters of reproductive health influenced by men. Hence, the aim of this study was to identify individual, sociocultural, and health facility factors affecting men's involvement in facility-based childbirth in Southwest, Ethiopia.

Objectives: The aim of this study was to identify individual, sociocultural, and health facility factors affecting men's involvement in facility-based childbirth in Southwest, Ethiopia.

Methods: A community-based cross-sectional study accompanied with a qualitative method was carried out from 1 July to 30 August 2019. A multistage cluster sampling technique was employed to recruit study participants. Descriptive statistics, frequencies, proportions, and mean were calculated, and the results of the analysis were presented in text, tables, and graphs. A multivariate logistic regression model was fitted to investigate the independent effect of each explanatory variable on the likelihood of men's involvement in facility-based childbirth. Qualitative data were analyzed thematically using OpenCode 4.0 software.

Results: Out of 800 men, only 36.5% (95% confidence interval: 33.3%–39.6%) were found to have involved in facility-based childbirth. Several factors were associated with men's involvement in facility-based childbirth of this, being in the age group of 40–49 (adjusted odds ratio 5.04, 95% confidence interval: 2.49–10.20), attaining secondary education and above (adjusted odds ratio 2.14, 95% confidence interval: 1.53–5.60), and having sufficient knowledge of danger signs during pregnancy (adjusted odds ratio 5.65, 95% confidence interval: 3.25–7.46) associated with men's involvement in facility-based childbirth.

Conclusion: Relevant entities had better design-specific educational programs targeting younger age groups, those with lower schooling, and had previous bad obstetrics outcomes. Involving elders and religious leaders in the reproductive health program could also help in overcoming the existing cultural barriers. Moreover, creating a men-friendly facility environment and extensively engaging medias are suggested to improve men's involvement in the study area.

Keywords
Facility-based, childbirth, men's involvement, Southwest, Ethiopia

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Introduction

Traditionally, men are not supposed to take part in maternal health issues in many cultures.¹ Nevertheless, pregnancy care and childbirth are the most crucial matters of reproductive health influenced by men.²–⁴ Reproductive health programs that target both partners are evidenced to be more effective than those targeted only one partner.⁵ Male

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partner’s perception, knowledge base, and behavior not only impact men’s health but also women’s reproductive health. A full partnership between man and woman is essential in both productive and reproductive health.\(^1,6\)

It was in the International Conference on Population and Development (ICPD) of 1994 held in Cairo, Egypt, and the Fourth World Conference on Women held in Beijing (FWCW) in 1995 that the role of men in the reproductive health issue of women was critically emphasized.\(^7,8\) Despite improved availability of health facilities, women in Sub-Saharan Africa (SSA) continue to encounter limited access to health services due to poor decision-making power to visit a health facility as their decision-making power regarding reproduction and sexuality under the will of men.\(^9\) In patriarchal societies like SSA, men have the privilege to control what their partners could do and often have control over reproductive health affairs of their spouse.\(^10\)

Skilled delivery care is the best strategy in mitigating maternal mortality and morbidity in the world, and it is among the best indicators to track global commitments toward safe motherhood.\(^11\) However, only 50% of pregnant women in SSA give birth in health facilities, and consequently, two million women have lost their lives during childbirth between 2012 and 2017.\(^12\) Ethiopia is also among the countries with the lowest margin in achieving skilled birth attendance in SSA.\(^13\) Enhancing the magnitude of facility-based childbirth is challenging, as it demands inclusive struggles to address sociocultural, economic, and infrastructural barriers to access institutional delivery care.\(^14,15\) Moreover, it needs a coordinated effort to increase both the coverage and the quality of service delivered to pregnant women at health institutions, as well as mother’s rights to dignified and humble care.\(^16,17\)

Several studies have tried to investigate the sociodemographic, economic, infrastructural, and facility barriers contributing to poor utilization of institutional delivery in Ethiopia. However, very few studies have investigated men’s involvement in facility-based childbirth. Although few studies considered men’s involvement in facility-based childbirth, they either employed qualitative or quantitative methods. Unlike the previous literature, this study employed both qualitative and quantitative approaches to assess men’s involvement in facility-based childbirth and its determinants in the Kaffa zone.

**Methods**

**Study setting**

The study was undertaken in the Kaffa zone, Southwest Ethiopia, from 1 July to 30 August 2019. Kaffa is located in the southwestern part of Ethiopia in between 60° 24’ to 70° 70’ N and 350 69’ to 360 78’ E, some 460 km Southwest of Ethiopia. Administratively, the zone is under the Southern Nation Nationality People Region (SNNPR) and it comprised 10 districts. The total land area of the zone is 10,602.7 sq.km.\(^18\) In this study, five districts were included, namely Chena, Decha, Gimbo, Gewata, and Menjiwob, based on the 2007 census of the central statistical agency of Ethiopia (CSA); the total population of the zone for the year 2017 was estimated to be 1,171,133, of whom 578,151 (49.4%) were males. The zone has one teaching hospital, one primary hospital, and 43 government health centers.\(^19\)

**Study design and population**

A cross-sectional, mixed study was undertaken. The quantitative component was a community-based cross-sectional study carried out among men whose wife gave birth in the last 12 months. However, the qualitative component was carried out among village elders, mothers who were members of the health developmental army (HDA), and health extension workers (HEWs).

**Sample size determination and sampling technique**

For the quantitative component, the sample size was calculated by employing single population proportion formula taking: 5% marginal error, 95% confidence level, and assuming 44.1% men’s involvement in facility-based childbirth,\(^20\) the design effect of 2 was considered as the study employed cluster sampling technique and 10% none-response rate, which result in 834

\[
n = \left( \frac{Z_{\alpha/2}}{d} \right)^2 \frac{p(1-p)}{\text{None responser ate}} \n = \left( \frac{1.96}{0.05} \right)^2 \frac{0.5(1-0.441)}{0.05} \n = 379 (379 \times 2 \text{ design effect})
\]

+ None – response rate (10%) = 834

A multistage cluster sampling technique was used to select five districts among the 10 districts of the Kaffa zone. First, three rural districts and two urban districts were selected randomly, then two Kebles were selected from respective districts. Finally, all households within the selected Kebles, having a male partner whose wife gave birth in the last 12 months were invited into the study.

For the qualitative component, 10 FGDs (two per district) and 15 in-depth interviews (three per district) were conducted. A purposive sampling procedure was employed to identify HDAs and village elders from each district. In each district, two FGDs were made one group comprising members of HDAs, and the other group comprising village elders. HDAs and village elders were chosen for FGD discussion as they are among the most influencers in the lives of the community. Besides, HDAs are usually engaged in promoting community participation and empowerment regarding health issues. Again, the purposive sampling procedure was
employed to identify 15 HEWs for IDI. HEWs were chosen for the fact that they are believed to have frequent contacts with the head of the households (male partners), in their routine visits to households.

Data collection tools and procedure

For the quantitative component, an interviewer-administered structured questionnaire was developed from related studies and contextualized to the local context.\textsuperscript{19,20} The tool consists of three sections: sociodemographic characteristics, men’s knowledge of maternal health care, and men’s involvement in facility-based childbirth. The data were collected by 12 trained diploma midwives having previous experience in survey data collection, and three BSc nurses supervised the overall data collection process on a daily basis.

For the qualitative component, 10 focused group discussions (FGDs) were conducted among 82 village elders and 85 mothers who are members of HDA as well. Self-developed FGD guides were used as an instrument for undertaking FGD discussions with two population groups, members of HDA, and village elders. Before the opening of each FGD session, the purpose of the study was explained, and upon ensuring all FGD participants’ agreement, the session was formally commenced; the FGD discussion sites were carefully selected taking privacy, and silence into consideration. FGD sessions were carried out by the principal investigator (PI), as a moderator, and one research assistant as a rapporteur lasting about 70–90 min. All FGD sessions were tape-recorded and a note was taken to guarantee the accuracy of the data. The 15 in-depth interviews were undertaken with HEWs using an interview guide. The interview guide was self-developed and served as a data collection instrument. The interview sessions lasted 30–40 min and all interview sessions were tape-recorded. For detailed information, see the supplementary data/supporting information.

Measurements

The dependent variable of this study was men’s involvement in facility-based childbirth; the measurement was adopted from similar studies.\textsuperscript{20–23} Five items were used to measure the outcome variable, namely: (1) accompanied his spouse during antenatal care (ANC) visits; (2) engaged in birth preparedness and complication readiness plan; (3) made a decision that his spouse should give birth at a health facility; (4) discussed with health professionals on his spouse’s place of delivery; and (5) discussed with friends/relatives on his spouse’s place of delivery. One point score was allotted for each activity, and the construct was dichotomized into “involved” and “not involved” depending on the total sum. Men who claimed to have involved in at least three of the listed activities were designated as “involved”; otherwise, “not involved.”

Men’s knowledge of danger signs during pregnancy. This construct was measured by a list of nine danger signs specified by WHO (childbirth, postpartum, and newborn).\textsuperscript{24} These danger signs comprised the following: (1) severe vaginal bleeding; (2) convulsions; (3) severe headache with blurred vision; (4) severe abdominal pain; (5) too weak to get out of bed; (6) fast or difficulty in breathing; (7) reduced fetal movement; (8) fever; and (9) swelling of the fingers, face, and legs. Men were regarded to have “sufficient knowledge,” if they were able to spontaneously mention at least four of the nine danger signs, “low knowledge,” if they were able to spontaneously mention one to three of the nine danger signs, and men mentioning no danger signs were regarded to “have no knowledge.”\textsuperscript{25}

Data processing and analysis

For the quantitative component, quantitative data were checked for completeness, cleaned, edited, coded, and entered into EpiData version 3.1 and analyzed using SPSS version 20. Descriptive statistics were computed to assess the magnitude of men’s involvement in facility-based childbirth. Univariate analysis, proportion, frequencies, and mean were calculated, and the finding of the analysis was described in tables and figures. The unadjusted logistic regression model was fitted to detect whether there was any association between the outcome variable (men’s involvement in facility-based childbirth) and the sociodemographic characteristics, and Men’s knowledge of danger signs during pregnancy. Then, variables having \( p < 0.25 \) on the unadjusted logistic regression model were considered candidates for the multivariate logistic regression. Finally, the multivariate logistic regression model was fitted to investigate the independent effect of each explanatory variable on the likelihood of men’s involvement in facility-based childbirth. Odds ratio (OR) and their 95% confidence interval (CI) were computed. Explanatory variables with \( p \) value \( \leq 0.05 \) were regarded as statistically associated with the dependent variable.

For the qualitative component, the data collected from FGDs and IDI were analyzed thematically using OpenCode 4.0 software. All audio records and notes, which were in the local language (Amharic and Kafi noono), were translated and transcribed into English. All transcripts were carefully read, comprehended, and assigned codes. Similar codes were combined to form umbrella themes based on the research objective as well as themes that emanated from the data itself. In presenting the finding, individual quotes were used to underpin the umbrella theme being discussed.

Data quality assurance

The questionnaire prepared in English was translated into Amharic, and then translated back into English to ensure consistency. The tool was pretested on 5% of the actual sample size in the Bench-Sheko zone, Mizan-Aman town, which is out of the study area; an amendment was made accordingly. Three days of training was given for both data collectors and supervisors. There was supervision on a daily basis, and checking on
10% of the collected questionnaire. Finally, the error report was checked after entry to EpiData using each case code.

**Ethical consideration**

Ethical clearance was obtained from the internal ethical review board of Mizan-Tepi University, reference number Ref HSE/00104/2019. An official permission letter was also obtained from the Bench-Sheko zone administration health office. After explaining the purpose of the study, written consent was obtained from each of the study participants. Written parental/guardian consent was obtained from study participants who were minors.

**Result**

**Sociodemographic profile of the respondents**

Information was obtained from 800 men making a response rate of 95.9%. The mean age of the participants was 34.52 years, ranging from 20 to 49. Four hundred and seventy-nine (59.87%) participants were rural residents; participants following the Orthodox Christian faith were 445 (55.6%), while 242 (30.2%) were protestant faith followers. Regarding participants' literacy status, 509 (63.6%) have no formal education, 213 (26.6%) attended primary education, and 78 (9.8%) attended secondary education and above. The overall sociodemographic profile is depicted in Table 1.

| Variables               | Categories                      | Frequency | Percentage (%) |
|-------------------------|---------------------------------|-----------|----------------|
| Age, years              | 20–29                           | 117       | 14.6           |
|                         | 30–39                           | 170       | 21.2           |
|                         | 40–49                           | 513       | 64.1           |
| Residence               | Urban                           | 321       | 40.12          |
|                         | Rural                           | 479       | 59.87          |
| Religion                | Orthodox Christians             | 445       | 55.6           |
|                         | Protestant                      | 242       | 30.2           |
|                         | Muslim                          | 84        | 10.5           |
|                         | Catholic                        | 29        | 3.62           |
| Educational status      | No formal education             | 509       | 63.6           |
|                         | Primary education               | 213       | 26.6           |
|                         | Secondary education and above   | 78        | 9.8            |
| Ethnicity               | Kaffa                           | 540       | 67.5           |
|                         | Amahara                         | 106       | 13.25          |
|                         | Bench                           | 82        | 10.2           |
|                         | Oromo                           | 19        | 2.4            |
|                         | Others*                         | 53        | 6.6            |
| Occupational status     | Government worker               | 93        | 11.6           |
|                         | Nongovernment worker            | 64        | 8.0            |
|                         | Farmer                          | 371       | 46.4           |
|                         | Merchant                        | 202       | 25.2           |
|                         | Daily laborer                   | 31        | 3.9            |
|                         | Have no job                     | 39        | 4.9            |
| Number of children      | 1–2                             | 190       | 23.8           |
|                         | 3–4                             | 531       | 66.4           |
|                         | 5 and above                     | 79        | 9.9            |
| Number of wives         | One                             | 772       | 96.5           |
|                         | More than one                   | 28        | 3.5            |

*Sheka, Gurage, and Tigre.

**Men's knowledge of danger sign during pregnancy**

Men were asked to spontaneously mention the danger signs during pregnancy, and more than half (483 [60.37%]) of the respondents were able to mention one to three danger signs, 219 (27.37%) of the respondents, mentioned four and more danger signs, and 98 (12.25%) were unable to mention any of the danger signs. Vaginal bleeding (80.9%) was the most frequently mentioned danger sign followed by headache (45.4%) and reduced fetal movement (41.4%).

**Men's involvement in facility-based childbirth**

Men’s overall involvement in facility-based childbirth for the recent pregnancy was 292 (36.5%). Five hundred
thirty-three (66.2%) of men engaged in birth preparedness and complication readiness plan, 319 (39.87%) discussed with friends/relatives on place of delivery, 259 (32.37%) discussed with health professionals on place of delivery, 263 (32.87%) made a decision that their spouses’ should give at health facility, and 133 (24.8%) accompanied their spouses’ during ANC visits. Among men, who claimed to have engaged in birth preparedness and complication readiness plan (n = 533), 467 (87.61%) saved money for delivery, 234 (43.9%) arranged for transport, and 345 (64.72%) planned ahead for a place of delivery (Figure 1).

Factors influencing men's involvement in facility-based childbirth

Bivariate logistic regression was used to identify the discrete effect of sociodemographic characteristics, and men's knowledge of danger signs, on the likelihood of men's involvement in facility-based childbirth. Seven variables were singly entered in to bivariate logistic regression; finally, five variables became candidates for multivariate logistic regression, yielding a p value ≤ 0.25. In the final multivariate logistic regression, after adjusting for men’s occupational status and number of children, three variables remain significant with men's involvement in facility-based childbirth. Men within the age group of 40–49 and 30–39 were five and three times more likely to be involved in facility-based childbirth than those male partners within the age group of 20–29 (adjusted odds ratio [AOR] 5.04, 95% CI: 2.49–10.20[, and [AOR 3.26, 95% CI: 1.54–6.89], respectively. Similarly, the study also establishes a positive relationship between men’s educational attainment and the likelihood of being involved in facility-based childbirth; men attaining primary and secondary education and above were 1.4 and 2 times more likely to be involved in facility-based childbirth than men attaining no formal education [AOR 1.42, 95% CI: 1.26–3.19] and [AOR 2.14, 95% CI: 1.53–5.60], respectively. Furthermore, men’s likelihood of being involved in facility-based childbirth was influenced by their knowledge of danger signs during pregnancy; men whose knowledge of danger signs during pregnancy, designated as “having sufficient knowledge” and “having low knowledge,” were 5.6 and 1.4 times more likely to be involved in facility-based childbirth than those men whose knowledge designated as “having no knowledge” [AOR 5.65, 95% CI: 3.25–7.46] and [AOR 1.43, 95% CI: 1.21–2.46], respectively. The final multivariate logistic regression output is summarized in Table 2.

Qualitative finding

Two main themes and six subthemes were emanated from the FGDs and IDIs data analysis; the two main themes were facilitators of men's involvement and barriers to men's involvement.

Barriers to men's Involvement

Barriers to men's involvement indicate the factors that prevent men from getting involved in facility-based childbirth. Three barriers were identified as factor preventing men's involvement in facility-based childbirth, namely, Health facility factors, Economic factors, and Cultural factors.
Health facility factors. Village elders from FGD argued that distance from health facility is the most important challenge that makes men not to involve facility-based childbirth. They mentioned that it would be tough for laboring mother to promptly reach the health facility if her home is far away from the health facility. A village elder mentioned that

I would rather let my wife to delivery at home by traditional birth attendant than traveling long-distance to reach the health facility. Who knows, unfortunately, birth might occur in the middle of the road, and that was very problematic for both the newborn and the mother. I have encountered a person with a similar tragedy. So, I advise pregnant women whose home far away from health facility to either stay in a nearby home until childbirth or seek a well-experienced traditional birth attendant. (59-year-old village elder, FGD)

The other health facility barrier mentioned by FGD discussants was the unpleasant behavior that healthcare providers demonstrate against laboring mothers. A village elder from FGD argued that

It is really irritating to see your wife get disrespected and insulted by the health care providers for not complying with his order. I doubt that this kind of health care provider cares about the well-being of my wife. So, I don’t want to risk my wife’s life by allowing such vulgar health care provider to attend her. Moreover, in our culture, you would be regarded as a woman (ሴታሴት), if you failed to physically defend your wife when someone disgraces her in front of you. (59-year-old village elder, FGD)

Economic factor. Both IDI and the FGD discussants revealed financial barrier as one of the main reasons why men do not involve in facility-based childbirth. A village elder in FGD mentioned that

Table 2. Multivariate logistic regression between sociodemographic characteristics, knowledge of danger signs during pregnancy by likelihood of being involved in facility-based childbirth in Ethiopia, August 2019.

| Variables                      | Men involvement | Unadjusted OR at 95% CI | Adjusted OR at 95% CI |
|--------------------------------|-----------------|-------------------------|-----------------------|
|                                | No [%]          | Yes [%]                 |                       |
| Age, years                     |                 |                         |                       |
| 20–29                          | 104 (88.9)      | 13 (11.1)               | 1                     |
| 30–39                          | 113 (66.5)      | 57 (33.5)               | 4.04 (2.70, 6.41)     | 3.26 (1.54, 6.89) |
| 40–49                          | 291 (56.7)      | 222 (43.3)              | 6.10 (4.09, 11.57)    | 5.04 (2.49, 10.20) |
| Educational status             |                 |                         |                       |
| No formal education            | 354 (69.5)      | 155 (30.5)              | 1                     |
| Primary education              | 117 (54.9)      | 96 (45.1)               | 1.87 (1.30–3.91)      | 1.42 (1.26, 3.19) |
| Secondary education and above  | 37 (47.4)       | 41 (52.6)               | 2.53 (1.84–4.07)      | 2.14 (1.53, 5.60) |
| Occupational status            |                 |                         |                       |
| Government worker              | 32 (38.6)       | 51 (61.4)               | 4.06 (2.31, 6.89)     | 2.56 (0.11, 17.89) |
| Nongovernment worker           | 49 (67.1)       | 24 (32.9)               | 1.25 (1.30–3.87)      | 0.25 (0.10–8.11) |
| Farmer                         | 267 (71.8)      | 105 (28.2)              | 1.00 (0.20–2.09)      | 1.2 (0.01–22.01) |
| Merchant                       | 119 (58.9)      | 83 (41.1)               | 1.77 (1.30–3.91)      | 1.77 (0.190–6.51) |
| Daily laborer                  | 13 (41.9)       | 18 (58.1)               | 3.52 (0.70, 18.41)    | 2.52 (0.66, 11.03) |
| Have no job                    | 28 (71.8)       | 11 (28.2)               | 1                     | 1                     |
| Number of children             |                 |                         |                       |
| 1–2                           | 156 (82.1)      | 34 (17.9)               | 1                     | 1                     |
| 3–4                           | 299 (56.3)      | 232 (43.7)              | 3.56 (1.32–6.77)      | 1.56 (0.92–8.11) |
| 5 and above                    | 53 (67.1)       | 26 (32.9)               | 2.25 (1.09–12.09)     | 1.25 (0.18–2.09) |
| Knowledge of danger signs during pregnancy | | | |
| Have no knowledge              | 79 (80.6)       | 19 (19.4)               | 1                     | 1                     |
| Have low knowledge             | 340 (70.4)      | 143 (29.6)              | 1.75 (1.51, 3.06)     | 1.43 (1.21, 2.46) |
| Have sufficient knowledge      | 89 (40.64)      | 130 (59.36)             | 6.07 (4.55, 9.28)     | 5.65 (3.25, 7.46) |

Bold denotes significant variables. The model was fit as shown by the Hosmer and Lameshow test of significance ($p = 0.325$).
Although delivery service is meant to be cost-free, sometimes the materials needed for the service might not be available; in this case the client is required to buy the items from outside. Given clients’ inability to afford, paying for medication, glove and other necessary items predispose them for unexpected financial cost; and this make them not to be involved in facility-based childbirth for the subsequent pregnancies. (25-year-old HEW, IDI)

I was told that delivery service is totally cost-free, but, practically, I would say it isn’t. My cousin, having heard that it is cost free, went to health facility with his spouse, but after he arrived at the health center, the health professionals told him that there is no medication in the facility, and he needs to buy by himself. That was very difficult for him to afford the medication as he didn’t prepare for it, expecting that it would be totally free. (60-year-old village elder, FGD)

**Cultural factors.** Both FGD groups argued that maternal health issues are regarded as women’s affairs by their community; hence, men refuse to involve in facility-based childbirth for fear of stigmatization by their associates. A village elder from FGD mentioned,

> Even though, you believe in accompanying your wife to clinic could provide psychological support for her, you may not do it, thinking of what the community probably says about it. You know, in our culture, it is not customary to see men having engaged in such women issues. (61-year-old village elder, FGD)

Village elders from FGD also mentioned that labor and delivery are traditionally regarded as a natural phenomenon that everything happens by the will of God, there is no need for male partners to take their spouses to clinic as far as everything could be handled by the God-chosen TBAs. Another village elder from FGD stated that

> Labor and delivery is natural phenomenon and doesn’t demand a modern trained health care professional to care for; TBAs can easily handle the situation. Besides, I would argue that comparing with the health care provider, there will be no care that the TBAs are not capable of. Moreover, unlike health care providers, traditional birth attendants are compliant with the local culture and custom. (68-year-old village elder, FGD)

IDI with HEW strengthens the notion that same community cultures are unwelcoming for men to involve in childbirth. HEWs argued that there is a strongly held belief that husband’s presence during childbirth could prolong the delivery process and eventually result in neonatal loss. HEW from IDI said,

> In our house to house visit, we usually advise men to accompany their spouses to clinic, when their spouses became in labour, however, very few are willing to do so, mentioning the fact that men’s who show up around delivery room are culturally being told to untie their belts (ቀበቶህን ፍታ) so that the childbirth process eases. (25-year-old HEW, IDI)

**Facilitators of men’s involvement**

A facilitator of men’s involvement indicates the factors that impose a positive influence on men to be involved in facility-based childbirth. Three factors were identified as facilitators of men’s involvement in facility-based childbirth, namely: media advocacy, relationship commitment, and bad previous experience.

**Media advocacy.** Media advocacy appeared to be one of the factors facilitating men’s involvement in facility-based childbirth. Both the informants from FGD and IDI claimed that the information disseminated in medias (TV and radio) have a positive influence on encouraging men’s engagement in facility-based childbirth. Village elders also mentioned that the deeply rooted belief that men should not take part in women’s reproductive health affairs is now being challenged by the message from TV and radio. One pregnant mother from FGD said,

> let me share you my experience. . . . . a year before, my husband was not interested to talk about pregnancy and childbirth, let alone get involve in facility-based childbirth; because, he thought such issues are not men’s concerns; however, thanks to the Medias, he is now changed; now, he accompanies me, when I go to health center, and plan with me where to give birth, and what to prepare in advance for delivery. (34-year-old women, FGD)

**Relationship commitment.** Men’s affection toward their partners has an important role in influencing their engagement in their partner’s facility-based childbirth. Mothers in the FGD argued that men maintaining their relationship commitments in marriage, feel responsible for their partner’s health status, and prefer to engage in every situation demanding their presence like facility-based childbirth. One mother from FGD explained,

> My interaction with my husband is amazing, my relative, and friends always wonder about our love. During the course of my recent pregnancy, he has helped me a lot with performing household activities like cleaning, cooking, and washing clothes, which are meant to be female activities by the community; when I became in labour, he took me to the nearest health center and spent 3 days with me there. My point is as far as your husband cares and loves you, it doesn’t matter what the community says about it. (29-year-old women, FGD)

From the in-depth interviews, the HEWs also substantiated the idea that men, who are devoted to their marriage, are in a better position to participate in their spouse’s reproductive health affairs, and more importantly in facility-based childbirth which demands more men’s collaboration. One HEW from IDI mentioned,
In my house to house visit as a health extension worker, I have noticed that men having a strong affection for their partners, are interested to sit and listen to my consultations on birth preparedness and complication readiness plan, together with their partners; they usually ask me questions on what would be expected from them as a husband. I argue that this feelings of responsibility arises from the strong affection that men have towards their partners. (27-year-old HEW,IDI)

**Bad previous experience.** The other facilitators of men’s involvement in facility-based childbirth were their previous experiences, and FGD participants of both groups (village elders and mothers) stated that men whose partners had bad experiences such as stillbirth, severe bleeding, retained placenta, prolonged labor, and so on with home delivery would be frustrated and be eager to actively engage in facility-based childbirth for the subsequent pregnancy. One mother from FGD stated,

Let me tell you my neighbor’s experience when my neighbor was in labour, her husband did nothing, other than suggesting to call for the local TBA to take care of her. Even though, the TBA arrived early, she was unable to handle the situation and the neonate was born dead. Ever since that event occurred, her husband regrets not taking her to health facility. (39-year-old women, FGD)

**Discussion**

This study was intended to depict men’s involvement in facility-based childbirth of their spouses and its influencing factors among men whose wife gave birth in the past 12 months before the study in Kaffa zone, Southwest Ethiopia. In this study, only [36.5%, 95% CI: 33.3%–39.6%] of men were involved in facility-based childbirth of their spouses; this finding is in agreement with similar studies conducted in the Hadiza zone (38.2%) and in India (32.5%). However, the proportion of men involved in facility-based childbirth in this study is lower than the studies undertaken in Ambo, Town Ethiopia (41.9%), Mereka Woreda, Southern Ethiopia (44.1%), and Uganda (43%).

This difference might be attributable to cultural variations, where some cultures being supportive when it comes to men’s involvement in spouses’ health service utilization. The alternative explanation for this difference could be a disparity in access to information on maternal health services.

According to the multivariative logistic regression output, the likelihood of men getting involved in facility-based childbirth was increased as age increases, and this claim is substantiated by the study carried out in Mediterranean Orientale. This could be explained as older male partners might previously encounter complications following home delivery; hence, they are more likely to promote and get involved in facility-based childbirth for the subsequent pregnancy. However, other studies carried out in the Hadiza zone, Mareka Woreda, Southern Ethiopia, and Northern Nigerian claimed the inverse relationship between men’s age and the likelihood of men getting involved in facility-based childbirth, in which younger men were more likely to get involved in facility-based childbirth than older men.7,29,32

In this study, it turned out that more educated men were more likely to get involved in the facility-based childbirth of their spouses; similar claims were reported by previous studies carried out in the Busia district of Kenya, Omoro County district of Uganda, and Nigeria. This implies that education enables men to realize the significance of their involvement in maternal healthcare service utilization, particularly in facility-based childbirth. Moreover, unlike less educated people, more educated people are in a better position to resist socially prescribed gender role and responsibility that potentially hinders men not to engage in their spouses’ sexual and reproductive health affairs.

The other important factor influencing men’s involvement in facility-based childbirth in this study was men’s knowledge of danger signs during pregnancy. Men having sufficient knowledge of danger signs during pregnancy were more likely to get involved in facility-based childbirth than those men having low or no knowledge of danger signs during pregnancy, and previous studies also confirmed this claim.27,29,33 This could be explained as, when men appreciate the danger signs during pregnancy, they might urge their spouses to seek facility-based childbirth in an intention to avoid potential complications that may arise.

The study also attempted to qualitatively explore a number of factors that influence men’s involvement in facility-based childbirth of their spouses. The qualitative component established different barriers hindering men’s involvement in facility-based childbirth. Distance far from the health facility and unfavorable attitude of the healthcare provider were among the health facility factors that participants mentioned as a barrier to men’s involvement in facility-based childbirth. This finding is congruent with the study undertaken in the Busia district of Kenya, North Dayi district, Ghana, and Kanungu districts, Uganda, which stated that men’s home far from health facility and unfavorable attitudes of the healthcare providers adversely influence men’s involvement in facility-based childbirth of their spouses.

In Ethiopia, any maternal health services provided in public health facilities have been exempted from user fees since 1998. However, participants in this study mentioned financial issue as a barrier not to involve in facility-based childbirth, and similar claims were mentioned by previous studies, in which men prefer to stay home or let their wife to be delivered by TBA or relatives fearing of unexpected high service charges. Some participants mentioned that they knew government exemption of maternal health service including delivery service, but they also mentioned in practical they are expected to buy drugs and other items from outside.

In this study, cultural factor was found to be an important barrier hindering men’s involvement in facility-based
childbirth of their spouses. Community’s perceptions of maternal health service utilization as woman affairs put men aside from the maternal health issue. In this study, participants attributed poor men’s involvement in facility-based childbirth to fear community stigmatization against men engaging in maternal health service. Other studies also substantiated that the same specific cultural norms hinder men’s engagement in maternal health service.\textsuperscript{38,39}

The study also explored facilitating factors that enable men to get involved in facility-based childbirth. Participants mentioned that advocacy from medias is now motivating men’s engagement in maternal health issues; besides, they are playing an important role in challenging gender stereotyping and discrimination in the community, and this finding is supported by a similar study conducted in rural Central Malawi where men were positively influenced by the messages from media encouraging men’s involvement.\textsuperscript{40}

Relationship commitment was found to have a positive influence on men’s involvement in facility-based childbirth. A similar claim was evidenced by studies conducted in North Dayi District, Ghana, which stated men having strong relationship commitment better involve in facility-based childbirth.\textsuperscript{4}

Beside Media advocacy and relationship commitment, previous bad experience associated with home delivery was reported to have a positive influence on men’s engagement in facility-based childbirth. This could be explained that men whose partners had bad experiences such as stillbirth, severe bleeding, retained placenta, prolonged labor, and so on with home delivery would be frustrated and be eager to actively engage in facility-based childbirth for the subsequent pregnancy; this finding is incongruent with the study undertaken in rural Central Malawi.\textsuperscript{40}

\section*{Limitation of the study}
The finding of this study should be seen in light of the following limitation. First, as the outcome variable (men’s partner involvement in facility-based childbirth) was measured from the response of the husband, there might be a possibility of social desirability bias. Second, the finding may also be affected by recall bias since husbands were expected to recall their past 12-month experience.

\section*{Conclusion}
Compared with other similar studies, the current study establishes a relatively low proportion of men’s engagement in facility-based childbirth. The study also identified various determining factors, namely men’s age, educational status, and knowledge of danger signs during pregnancy, which were found to have statistically significant association with the likelihood of men’s involvement in facility-based childbirth. The qualitative component of this study identified different barriers to men’s involvement, which were related to health facility factors, economic factors, and cultural factors.

Likewise, the study explored different facilitating factors to men’s involvement that includes: media advocacy, relationship commitment, and previous bad experience.

Relevant entities had better design-specific educational programs targeting younger age groups, those with lower schooling, and had previous bad obstetrics outcomes. Involving elders and religious leaders in the reproductive health program could help in overcoming the existing cultural barriers. Furthermore, creating a men-friendly health facility environment and extensively engaging medias are suggested to improve men’s involvement in the study area.

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\section*{Data Availability}
The datasets collected and analyzed for the current study are available from the corresponding author and can be obtained upon reasonable request.

\section*{Declaration of conflicting interests}
The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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