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Original Research

Dropout from maternity continuum of care and associated factors in Gida Ayana District, Western Ethiopia: Mixed method study

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Abstract

To find the proportion of mothers in the Gida Ayana area who discontinue their care during pregnancy, 370 randomly selected mothers took part in an institution-based cross-sectional study design that ran from January 15 to February 30, 2023. Pretested questionnaires and interviewers were used. The data were imported into Epi Data Version 4.6 and exported to SPSS Version 26.0. P-values less than 0.05 indicated the presence of significant relationships in the multivariable model, which were displayed as adjusted odds ratio accompanied by a 95% confidence interval. The qualitative data were transcribed, thematically processed, presented, and cross-checked and then evaluated. It was found that 78.38% of women left the maternal continuum of care (95% CI: 74.19, 82.57). The dropouts were associated with mothers living in a rural area (AOR = 3.68, 95% CI: 1.87, 7.25), rarely exposed to the media (AOR = 3.52, 95% CI: 1.69, 7.36), having no access to transportation (AOR = 2.82, 95% CI: 1.49, 5.34), distance from medical facility (AOR = 4.67, 95% CI: 1.55, 14.10), and internal displacement (AOR = 4.82, 95% CI: 1.35, 17.25). Health service delivery by focusing on the highlighted criteria helps improve the utilization and completion of the maternal continuum of care.

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INTRODUCTION

Maternity continuity of care refers to the ongoing provision of maternal health care to a woman throughout her pregnancy, childbirth, and postpartum period. This care encompasses both over place and overtime dimensions, ranging from home, community, and health facilities to adolescence and beyond (Kerber et al., 2007). A cost-effective way to lower morbidity and mortality in mothers, newborns, and children is to provide skilled care during pregnancy, labour, and the postnatal period (Zhao et al., 2009; Nyfløt & Sitras, 2015; Darmstadt et al., 2015; Goldie et al., 2011; Kikuchi et al., 2015). Nonetheless, in underdeveloped nations, dropout rates from the maternity continuum of care are frequent (Alem et al., 2022). Failure to use at least four antenatal cares, or skilled delivery services, and at least one postnatal care within six weeks of giving birth is known as a dropout from the maternity continuum of care (Mohan et al., 2017; Akinyemi et al.,

2016; Hamed et al., 2018; Boltena, 2016; Rammohan et al., 2021).

In developing nations, dropout rates from the maternity continuum of care present a public health problem. A significant percentage of mothers who left the maternal continuum of care occurred in South Asia and Sub-Saharan Africa (Tamang, 2017; Wang & Hong, 2013). According to Amare et al. (2019), there was a variation in the percentage of mothers in Ethiopia who did not utilise the entire maternity continuum of care. It ranged from 69.1% in Debre Berhan Town to 32.2 percent in Debre Markos Town. Sub-Saharan Africa was the only region with an extremely high maternal mortality ratio, according to the estimation of the ratio (2020). At 545 maternal deaths per 100,000 live births, the region's rate was 136 times higher than that of Australia and New Zealand (Bongaarts, 2016).

Numerous studies have found sociodemographic variables that have an impact on the likelihood of mothers dropping out of the maternity continuum of care, including occupation, partners' educational backgrounds, occupation, media exposure, and degree of autonomy in seeking medical attention (Hamed et al., 2019; Shitie et al., 2020). Mothers' reproductive histories, including parity, intention to become pregnant, and use of contraception before becoming pregnant, have also affected the incidence of mothers leaving the maternity continuum of care (Haile et al., 2020). 20. The incidence of women dropping out of the maternity continuum of care has been influenced by the mothers' place of residence, the accessibility of transportation to health facilities, and the distance to health facilities (Khan et al., 2021; Sertsewold et al., 2021; Enos et al., 2021).

One of the suggested methods to achieve the aim for the maternal death ratio by 2030 is to provide high coverage and high-quality healthcare to expectant mothers and their babies during pregnancy, childbirth, and the postnatal period (Bongaarts, 2016). In order to boost the use of maternal health services, the Ethiopian government has been promoting payment-free services to expectant mothers and their postpartum care providers, providing free obstetric emergency transport, growing the number of primary healthcare facilities, and setting up community-based health insurance (EFMoH, 2016). A postnatal check-up, competent support during birth, and any antenatal care were received by 74% and 34% of women, respectively, according to the 2019 Ethiopian Mini Demographic and Health Survey (EPHI, 2019). There are no obvious explanations for why the Gida Ayana Woreda Health Office report on maternal health services lagged behind the 2019 EMDHS report (Gida Ayana Woreda Health Office report, 2022). In order to estimate the extent of maternal dropout from the maternity continuum of care and related determinants in Gida Ayana District, this study was carried out.

Methods and Materials

Study Setting, Design, and Period

Gida Ayana district public health facilities hosted an institution-based cross-sectional study from January 15 to February 30, 2023. One of the districts in the Oromia region, located in western Ethiopia's East Wollega Zone, is Gida Ayana district. It is situated 113 kilometres from Nekemte Town, the capital of East Wollega Zone, and 441 kilometres from Addis Ababa, the capital of Ethiopia, to the west. An estimated 158,296 people live in the district as a whole. The district consists of 28 kebeles in total: 21 rural and 7 urban. The district is home to four public health

centres and one public general hospital (Gida Ayana Woreda Health Office, Report 2022).

Population of Source: The source population in the Gida Ayana district consisted of all moms who gave birth within the previous 12 months.

Study population: During the data collection period, mothers who were six weeks to twelve months postpartum and utilising maternity and child health services at Gida Ayana district public health facilities were included in the study.

Mothers who have resided in the Gida Ayana District for six months or longer met the study's inclusion criteria.

Qualitative data were gathered from moms who had recently given birth, religious and community leaders, and the women's development army.

Calculating the Sample Size for a Quantitative Study

For the first objective, a single population proportion calculation was applied, resulting in a 95% confidence interval with a 5% margin of error for 32.2% of the women dropped from the maternity continuum of care in Debre Markos, Ethiopia (Amare et al., 2019).

$n = ((Z\alpha/2)2P\ (1–P)) / d^2$ (Daniel. WW,2013)

Where: n = sample size, Zα/2 = level of significance, P = proportion of dropouts from the maternity continuum of care, d = margin of error

n = ((1.96)2 (0.322) (0.678)) /(0.05)2 = ((3.8416) (0.218316)) /0.0025 = 0.838683 / 0.0025 = 336

For the second objective, three factors (lack of mass media exposure, unplanned pregnancy, and having less than 4 ANC) were considered to determine the sample size (Amare et al., 2019) with a 95% confidence interval, 80% power, and a ratio of unexposed to exposed using Statcalc of Epi Info version 7.1.

The sample size determined for the first objective was larger, so it was used to conduct the study by adding 10% non-response rates, the required sample size for a quantitative study was 370.

Sample Size for a Qualitative Study

Enough Samples for a Qualitative Research. Up until the point of information saturation, qualitative data was gathered. Following four focus group sessions and four key informant interviews, redundant material was found, and the gathering of qualitative data was discontinued.

Methodology of Sampling in a Quantitative Research

The Gida Ayana district's four health centres and one general hospital were the only public health facilities chosen to participate in the study. The average monthly attendance of newly delivered women for maternity and child health services at each health facility was used to determine the sample size, which was distributed proportionately for each facility.

Methodology of Sampling in a Qualitative Research

Maximum-variation sampling strategies were employed in order to obtain a more comprehensive viewpoint from different stakeholder groups. Based on their contingency, Gida Ayana district's three kebeles—the lowest administrative unit—were chosen. Health extension workers helped recruit research volunteers from each kebele based on predetermined selection criteria, such as being a community leader, a woman who had given birth within the previous year, or a member of the women's development army.

Examine the variables

The dependent variable is Abandonment from the maternal-care continuum

Separate factors

Age, education, and occupation of women; monthly income of households; head of household; partner's education and occupation; exposure to mass media; autonomy in seeking health care; having a companion; using pre-pregnancy contraception; planning a pregnancy; having a child; being aware of pregnancy warning signs; place of residence; being internally displaced; accessibility to health care; distance to health care facilities; and community-based health insurance membership

Definitions for Operations

In this study, a woman is considered to be a dropout from the maternity continuum of care if she does not enrol in it and does not fully receive all the advised maternal health services from the beginning of her pregnancy through the postpartum phase. That is, if the women in the continuum of care failed to receive at least one of the following maternal health services: A skilled attendant during childbirth; four prenatal visits from a qualified practitioner at least; and one postnatal visit within six weeks after giving birth (Akinyemi et al., 2016). According to Sarder et al. (2021) an intended pregnancy occurs when a woman intends to become pregnant at the time of her conception. According to Haile et al. (2020), women were considered informed about pregnancy danger indicators if they could name at least two of the four main symptoms: vaginal bleeding, severe headaches, blurred vision, and facial swelling.

If a woman reads a newspaper, watches television, or listens to the radio at least once a week, she is considered to be often exposed to mass media (Mohan et al., 2017; Akinyemi et al., 2016; Amare et al., 2016). If a woman chooses to seek medical attention on her own or in conjunction with her spouse, she is considered to have decision-making authority (Haile et al., 2020). Women who have been compelled to flee their homes or regular residences due to armed conflict are considered conflict-induced displaced women. These women live in any type of settlement after being forced to do so. District of Gida Ayana (Akinwande et al., 2015).

Personnel, Tools, and Methods for Data Collection

Five trained data collectors—two BSc Nurse Health Personnel and three clinical nurses—collected quantitative data using a semi-structured questionnaire that was pretested and allocated based on interviews. The researcher and one research assistant used interview and focus-group discussion guidelines to gather qualitative data. Following participant informed consent, field notes and a tape recorder were utilised to gather the qualitative data.

Management of Data Quality

To maintain uniformity in the translation process, the questionnaire was first developed in English after studying relevant literature, then translated into the regional language, Afan Oromo, and then back into English by language experts. 5% of people outside the research area took the pretest. Supervisors and data collectors received two days of training on the goals and methods of the project. Before entering any data, the investigator reviewed the gathered information each day to make sure it was accurate and full. Throughout

the data collection phase, feedback from supervisors and data collectors was also taken into account to enhance the quality of the questionnaires. The investigator used Epi Data Version 4.6 software to perform double data entry and validation. Prior to analysis, the data was cleaned using SPSS version 26 software by comparing frequencies and sorting the data in both ascending and descending order to find outliers that were inadvertently included.

Data Analysis and Processing

The data was coded, loaded into the Epi Data software (4.6), and then sent to SPSS (26) for further analysis. With the use of descriptive statistics, the scope of the study variables was evaluated. To investigate unadjusted relationships between independent factors and mothers' abandonment from the maternal continuum of care, a chi-square test was used. The multivariable logistic regression model contained variables with a p-value <0.25 at the bivariable level. An adjusted odds ratio with a 95% confidence interval (CI) was used to report a statistically significant connection in multivariable logistic regression, which was determined by a p-value less than 0.05. Texts, tables, and charts were used to present the study's findings. To verify the model's goodness of fit for logistic regression, Hosmer and Lemeshow goodness of fit tests were performed. With a cut-off point VIF >10 as a multicollinearity concern, the variance inflation factor was used to assess multicollinearity amongst explanatory variables (Akinwande et al., 2016). For qualitative data, a thematic analysis approach was used, entailing familiarization, data coding and categorization, theme identification, and phases of interpretation.

Moral Thoughts

The Ethical Review Board at Wollega University's Institute of Health Sciences granted the project ethical clearance. Each respondent had their signed informed permission obtained after being fully informed about the study's design and methodology. Respect for autonomy, beneficence, nonmaleficence, and justice—all fundamental tenets of human research ethics—has been upheld.

RESULTS AND DISCUSSION

Results

Participant sociodemographic characteristics

The study had 370 participants in all, or a 100% response rate. The participants' average age was 27.35 + 5.87 years. 288 (77.8%) of the population identified as protestants, 343 (92.7%) as Oromo by ethnicity, and 246 (66.5%) as rural dwellers. In terms of marital status, 214 people (57.8%) had completed primary school, and 365 people (98.6%) were married. 193 (52.2%) of the participants worked as farmers. With an IQR ranging from 700 to 3400, the respondents' median monthly household income in Ethiopian birr was 1900. Out of all the participants, 171 (46.2%) said they were exposed to the media on a regular basis. 299 (80.8%) of the women were independent when it came to obtaining medical care, and 256 (69.2%) of them had companions when they were in medical facilities. Table 1 shows that of the participants' partners, the majority were farmers: 191 (51.6%) had completed elementary school, and 252 (68.1%) were partners in farming.

Table 1

Socio-demographic characteristics of the participants and their partners, Gida Ayana district, Oromia Region, Ethiopia, 2023 (n=370)

Characteristics	Frequency	Percentage
Age		
15-19	48	13.0
20-34	265	71.6
35-49	57	15.4
Head of the household		
Husband of the woman	363	98.1
Women herself	7	1.9
Residence		
Urban	124	33.5
Rural	246	66.5
Religion		
Orthodox	56	15.1
Protestant	288	77.8
Muslim	26	7.0
Ethnicity		
Oromo	343	92.7
Amhara	23	6.2
Tigre	4	1.1
Marital status		
Single	5	1.4
Married	365	98.6
Educational status		
No formal education	34	9.2
Primary	214	57.8
Secondary	69	18.6
College and above	53	14.3
Partners' educational status		
No formal education	31	8.4
Primary	191	51.6
Secondary	98	26.5
College and above	50	13.5
Occupation		
Housewife	66	17.8
Employed	45	12.2
Farmer	193	52.2
Merchant	29	7.8
Daily laborer	18	4.9
Student	19	5.1
Partners' occupation		
Employed	52	14.1

Table continued

Farmer	252	68.1
Merchant	54	14.6
Daily laborer	12	3.2
Households' monthly income in Ethiopian birr		
≤500	65	17.6
501-1500	112	30.3
>1500	193	52.2
Exposed to mass media		
Yes	171	46.2
No	199	53.8
Autonomous in health care seeking		
Yes	299	80.8
No	71	19.2
Having companion		
Yes	256	69.2
No	114	30.8

There were 94 (25.4%) para-1, 70 (18.9%), 101 (27.3%) para-3, and 105 (28.4%) para-4 and more study participants out of the total. Of those who knew of pregnancy dander symptoms, 175 (47.3%) were informed. Of the study's participants, 242 (65.4%) had never used contraception before getting pregnant. 255 pregnancies, or 68.9%, were intentional pregnancies. Of the study participants, 204 (55.1%) had community-based health insurance, which covered more than half of them (Table 2).

Table 2

Reproductive history of the Participants, Gida Ayana district, Oromia Region, Ethiopia, 2023 (n=370)

Characteristics	Frequency	Percentage
Birth order		
1st	94	25.4
2nd	70	18.9
3rd	101	27.3
≥4th	105	28.4
Knowledgeable on pregnancy danger signs		
Yes	175	47.3
No	195	52.7
Pre-pregnancy contraception utilization		
Yes	128	34.6
No	242	65.4
Pregnancy intention		
Intended	255	68.9
Unintended	115	31.1
	204	55.1
CBHI Yes	166	44.9
No		

Of the study participants, 164 (44.3%) live fewer than 5 kilometers from a health facility; 70 (18.9%) of the women were relocated from their usual place of residence; and 272 (73.5%) of the women live in locations where there is no transportation to a health facility (Table 3).

Table 3

Residence areas of the Study participants, Gida Ayana district, Oromia Region, Ethiopia, 2023 (n=370).

Characteristics	Frequency	Percentage
Distance to health facility		
<5 kilometer	164	44.3
5-10 kilometer	147	39.7
>10 kilometer	59	15.9
Availability of transportation to health facility		
Yes	98	26.5
No	272	73.5
Displaced from place of residency		
Yes	70	18.9
No	300	81.1

There were 78.38% (95% CI: 74.19, 82.57) of moms dropped out of the maternity continuum of care at some point during their most recent pregnancy. 217 (74.83%) of the total number of moms eliminated from the maternal continuum of care were dropped at the prenatal care level, 46 (15.86%) at the skilled birth attendance level, and 27 (9.31%) at the postnatal care level (Figure 1).

Multivariable analysis results

Multivariable logistic regression analysis results indicate that compared to urban people, rural individuals had a 3.68-fold higher probability (AOR = 3.68, 95% CI: 1.87, 7.25) of leaving the continuum of care. Mothers who live more than ten kilometers away from health facilities are 4.67 times more likely to drop out of the continuum of care than those who are exposed to the media infrequently (AOR = 3.52, 95% CI: 1.69, 7.36). Mothers without access to transportation to the hospital are 2.82 times more likely to drop out of the system (AOR = 2.82, 95% CI: 1.49, 5.34). Mothers were 4.82 times more likely to leave the continuum of care if they were internally moved from their typical residential locations. Maternal dropout from the maternity continuum of care was significantly correlated with being moved (AOR = 4.82, 95% CI: 1.35, 17.25) (Table 4).

Table 4

Multivariable analysis of factors associated with dropout from maternity continuum of care, Gida Ayana district, Oromia Region, Ethiopia, 2023 (n=370)

Variables	Dropout from maternity continuum of care		COR (95% CI)	AOR (95% CI)
	Yes (n =290)	No (n =80)		
Urban	65	59	1	1
Rural	225	21	9.72 (5.50, 17.18)	3.68 (1.87, 7.25) ***
Exposed to mass media				
Yes	105	66	1	1
No	185	14	8.30 (4.44, 15.50)	3.52 (1.69, 7.36) **
Availability of transportation to health facility				
Yes	51	47	1	1
No	239	33	6.67 (3.89, 11.43)	2.82 (1.49, 5.34) **
Distance to Health Facility				
<5 kilometer	115	49	1	1
5-10 kilometer	121	26	1.98 (1.15, 3.40)	2.19 (1.13, 4.22) *
>10 kilometer	54	5	4.60 (1.73, 12.20)	4.67 (1.55, 14.10) **
Displaced from place of residency				
Yes	67	3	7.71 (2.35, 25.23)	4.82 (1.35, 17.25) *
No	223	77	1	1

Findings from a qualitative investigation

Four key informant interviews (KIIs) with community and religious leaders and two KIIs with the women's development army were done in addition to four focus groups with thirty-two recently delivered moms. Mothers ranged in age from 18 to 39 years old, with a mean age of 28. Fewer moms completed a higher level of education than the majority who only completed the primary level.

The maternal health care during pregnancy and the postpartum period were not consistently offered in various public health facilities in the Gida Ayana district, according to participants in the qualitative study. Maternal dropout from the maternity continuum of care is thus significantly rising. The reasons given for maternal dropout revealed two key themes: full use of maternal health services during pregnancy, labour, and the postnatal period. There were two main themes: providing side barriers and demanding side barriers.

Demand-side obstacles:

The responder asserts that women cannot comprehend the significance of receiving professional maternal health services during pregnancy and the postpartum period unless they have completed formal education. Because they understood the necessity of these treatments, educated women could get all recommended maternal health services across the continuum of care. "If women were empowered primarily by education, they could receive maternal health services properly for themselves and they could also

encourage others to receive such services," said a community leader (Community Leader, KII), lending support to this.

Some respondents claim that despite widespread advocacy for the benefits of receiving maternal health services throughout pregnancy, childbirth, and the postpartum period, some women continue to wait for pregnancy-related issues or complications as a signal to seek care from medical facilities. Furthermore, because they don't seek medical attention until issues force them to, these women won't receive all the required maternal health treatments during their pregnancies and the postpartum period. "When I was pregnant, I didn't receive any services for health facilities because I had no problem, and I thought that those women only need services when problems arise," said one of the FGD participants, sharing her personal experiences. I didn't know I was mistaken till lately. (lately delivered mother, FGD)

In addition, the respondent indicated that the woman needs a carer at home who supports her in accessing maternal health care services throughout the maternity continuum of care. The respondent further stated that the woman needs someone to watch their children while they leave the house to seek out health facilities for receiving maternal health care during pregnancy, childbirth, and the postnatal period.

Women require support and encouragement, primarily from their families, as they are often scared to visit health facilities on their own. If they receive this kind of encouragement, they are more likely to visit a health facility for all maternity care services, including maternal health services (Religious Leader, KII).

The majority of participants in the qualitative study stated that women are busy and accountable for taking care of their children at home, which may restrict their ability to freely leave the house in order to seek out maternal health care during pregnancy, childbirth, and the postpartum period, particularly if they have multiple children at home.

I was not obtaining complete antenatal services during the pregnancy of my newest child since I was caring for my three under-five children and giving them a lot of my time. (A newly delivered mother, FGD participant)

According to a second woman, women who worked on daily home duties might not have had enough time to visit clinics and obtain postpartum care and maternal health services. (Women Development Army, KII)

The speakers claimed that due of the conflict's effects on essential social services, limited mobility, and lack of resources, internally displaced women have less opportunities to access health care.

Gida Ayana and the neighbouring districts had massive internal displacements brought on by violence, which had an impact on the availability and use of health services as well as other essential social services like education and transportation (KII Community Leader)

Women who live far from health facilities may not receive all recommended maternal health services, particularly skilled assistance during labour and delivery. One respondent claimed that these women need transportation to get to health facilities in

order to receive services because ambulance services and other forms of transportation were restricted in the district.

Because our home is far from a health facility and there is no transportation service to a health facility—even ambulance services are locked down—it is very difficult for women to get to a health facility for skilled assistance during childbirth unless they go there before labour starts using any possible means. (A recently delivered mother, in FGD)

Supply-side impediments:

The respondents highlighted that transportation to functional health facilities was unavailable in almost rural areas, which was forcing women to forgo receiving the recommended maternal health care services. With regard to supply barriers, they stated that there were frequent interruptions in health care service provision, mostly in rural settings, due to shortages of medical supplies and the closure of health facilities by the conflict.

The women were not able to receive all the recommended maternal health services during pregnancy, childbirth, and the postnatal period due to the frequent interruptions in service delivery; in addition, the lack of transport facilities, particularly in rural areas, made it impossible for the women to receive all the recommended. (Community Leader, KII)

The participants in the qualitative study reported that, prior to the interruption of this service, women were not receiving information about maternal health services. One of the Women Development Army members describes this problem as follows: health extension workers used to identify pregnant women, provide health education on maternal health services, and connect them to health centres that assisted pregnant women in getting maternal health services during pregnancy through the postnatal period.

It was crucial to encourage women to use maternal health care services that health extension workers and conferences of pregnant women offered health education about maternal health in the past. However, these days, most rural health posts have closed, and the dissemination of this information has completely stopped (Women Development Army).

DISCUSSION

In order to provide detailed answers to the research objectives, a mixed-methods study (institution-based cross-sectional study and phenomenology qualitative research method) was carried out in order to analyse mother dropout from the maternity continuum of care and factors associated with it.

This study reveals that 78.38% (95% CI: 74.19, 82.57) of the women in Gida Ayana District dropped out of the maternity continuum of care. Of these, 217 (74.83%) of the mothers dropped out at antenatal care, but after receiving skilled delivery care, the rate drops to 46 (15.86%) and 27 (9.31%), respectively. This could be because, once mothers start receiving maternal health services during pregnancy, they receive counselling on the importance of receiving each service during pregnancy, childbirth, and the postnatal period, as well as being scheduled for the next appointment, which

may encourage them to receive the recommended maternal health services during pregnancy through

The proportion of maternal dropout from the maternity continuum of care in this study is in agreement with a study conducted in North West Ethiopia (78.4%; Atnafu A. et al., 2020); however, it is higher than a study conducted in Debre Berhan Town (69.1%; Tadese M. et al., 2022), Debre Markos Town (32.2%; Amare et al., 2019), Egypt (49.6%; Hamed et al., 2019), and Nepal (54.3%; Tamang, 2017), respectively; however, it is lower than a study conducted in Uganda (89.3%; Mohan et al., 2017). The reason why the proportion of maternal dropout from the maternity continuum of care in this study is higher than the study conducted in Egypt and Nepal may be due to the high socio-economic status of both countries (middle-income countries) compared to Ethiopia (low-income country).

In this study, both urban and rural women were included. This may be the reason why a large proportion of maternal dropout is observed compared to the studies conducted in Debre Markos Town and Debre Berhan Town, because rural women may have had less opportunity in terms of getting the recommended maternal health services during pregnancy through the postnatal period (Ntoimo et al., 2019). The reason why the proportion of maternal dropout from the maternity continuum of care is lower than in the study conducted in Uganda and Tanzania might be due to socio-cultural barriers to utilising skilled maternal health services in Uganda (Anastasi et al., 2015) and the difference in literacy status of women in this study as compared to a study conducted in Tanzania (Mohan et al., 2017).

Living in a rural area, not being exposed to the media, not having access to transportation to medical facilities, relocating from their usual residence more than five kilometres away from a medical facility, and not having access to mass media were all found to be significantly linked to mothers dropping out of the maternity continuum of care.

This study demonstrates that women in rural areas were more likely than women in urban areas to drop out of the maternity care continuum. This finding is consistent with studies conducted in Legambo District (Cherie et al., 2021), Siyadebirena Wayu District (Akinyemi et al., 2016), and Nigeria (Akinyemi et al., 2016). Women living in rural areas may have fewer opportunities to access health care services due to transportation difficulties, long distances, closed health facilities, inadequate med

However, due to transportation issues and disruptions in health care services in rural areas, it is currently difficult for women living in rural areas to fully utilise maternal health services during pregnancy, childbirth, and the postnatal period. Participants in the qualitative study stated that using maternal health services during pregnancy, childbirth, and the postnatal period has many benefits for women.

The author acknowledges the significance of accessing maternal health services; however, due to living in a remote area far from a health facility and the lack of public transportation, fully utilising maternal health services from the time of conception to the

postpartum period is a challenge. (Recently delivered mother, FGD)

This study demonstrates that women who were not regularly exposed to information were more likely to discontinue their participation in the maternity continuum of care than women who were frequently exposed to mass media. These findings are corroborated by other research conducted in the districts of Legambo (Cherie et al.), Debre Markos town (Amare et al., 2019) 16, and Enemay (Shitie et al., 2020). This could be because mass media, including radio, television, and newspapers, are the most frequently used platforms by various private and government health organisations to disseminate health information to the public. This is necessary in order to improve the community's health literacy and improve their attitudes and practices regarding the use of maternal health services (Aboagye et al., 2022).

The qualitative study's participants reported that health extension workers served as their primary source of health information for the majority of their lives. These workers also identified pregnant women in the community and connected them to health facilities, which helped pregnant women access maternal health services during pregnancy, childbirth, and the postnatal period. However, these services have been discontinued, and pregnant women no longer have access to health education on maternal health in the community or at home, particularly in rural areas.

It was necessary to encourage women to use maternal health care services, so health extension workers and community health workers offered health education on maternal health at the household and community levels through conferences of pregnant women. However, these days, the majority of rural health posts have closed, and the provision of such services has been interrupted (Women Development Army, KII).

The results of this study are consistent with studies carried out in the Siyadebirena Wayu district (Sertsewold et al., 2021) and Northwest Ethiopia (Atnafu et al., 2020). This may be because the availability of transportation—either public transport or emergency obstetric transport—is essential for getting labouring mothers to medical facilities and for connecting them to other medical facilities when referrals are required (Solomon et al., 2020).

The results of this study are consistent with a study done in Ghana (Enos et al., 2021) and indicate that mothers who live far from health facilities (>5 km) were more likely to stop using all recommended maternal health services during pregnancy, childbirth, and the postnatal period.

The qualitative data also corroborates the finding that emergency obstetric transportation (ambulance service) used to be provided, connecting labouring women from the community to medical facilities as well as between them; however, that service has completely ceased these days. Participants stated that while it was necessary to give birth in a medical facility in order to receive professional assistance during the delivery process, there was no way to get to a medical facility when labour sudden

Because we live far from health facilities and there is no public transport to them, it is difficult for us to get to them for skilled assistance during childbirth unless we move

there before labour begins (recently delivered mother, FGD).

This research indicates that women who experience displacement due to conflict are more likely to discontinue the maternity continuum of care than women who live in their usual place of residence. This could be due to a number of factors, including disruptions to social services such as transport and health care, scarcity of resources for health care, fear and security concerns regarding mobility, and financial losses during internal displacements brought on by conflict.

Massive conflict-induced displacement occurred in Gida Ayana district and in the surrounding districts, which affected the provision as well as utilisation of basic social services like education, transport, and health services, according to the qualitative study. Participants' provision of basic social services, including health care services, was disrupted as a result of these displacements in various districts. (Community Leader, KII)

CONCLUSION

This study demonstrates that a high percentage of mothers dropped out of the maternity continuum of care. Residency in a rural area, lack of exposure to mass media, lack of access to transportation to medical facilities, distance from medical facilities, and internal displacement were found to be significant risk factors for mothers dropping out of the maternity continuum of care.

Thus, enhancing the availability of maternal health services in rural areas, utilising appropriate mass media to raise community awareness of these services, improving women's access to and from medical facilities, and paying particular attention to the health needs of internally displaced women all contribute to better utilisation of maternal health services during pregnancy and the postpartum period.

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DECLARATION

There is no conflict of interest in this study.

DATA AVAILABILITY STATEMENT

All data are available from the corresponding author upon request.

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