Skilled Delivery Care Service Uptake Among Socially Marginalized Women in Kambata-Tembaro Zone, Southern Ethiopia

Abebe Alemu (aalemu72@yahoo.com)
Wachemo University
https://orcid.org/0000-0002-3697-7468

Biruk Assefa
Wachemo University

Ritbano Ahmed
Wachemo University

Hasen Mossa
Wachemo University

Negesso Gebeyehu
Madda Walabu University

Research

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Abstract

Background: Globally, 358,000 women die during pregnancy and childbirth every year. Poor skilled delivery health care uptake remains a significant problem in developing countries. In Ethiopia, skilled delivery care service uptake was low. Marginalized women are vulnerable for poor delivery care uptake and addressing women’s social marginalization could play an important role in increasing uptake of skilled delivery care service among minorities in the study area. Thus, the study was aimed to access the utilization of delivery care uptake and associated factors among women from socially marginalized minorities in the Kambeta-Temabaro, Zone Southern Ethiopia.

Methods: Community based cross-sectional study was conducted from April 01 to March 30, 2019. Multistage sampling procedure was employed to enroll 521 study participants. An interviewer administered questionnaire was used to collect the data. Data was entered using EPI-INFO and exported to Statistical Package for Social Science (SPSS)-21 for analysis. The degree of association was assessed using odds ratio with 95% confidence interval and the variable with p-value <0.05 were declared as statistically significant. The model fitness was checked using Pearson's Chi-square with the value of 3.45 and significance 0.026

Result: The magnitude of skilled delivery care service uptake among socially marginalized minorities was 19% in the study area. Maternal education, occupation, and awareness on delivery care, pregnancy plan, and number of birth, mothers’ life-style, and social discrimination were significantly associated with the delivery care service uptake among women from socially marginalized minorities.

Conclusion: The prevalence of the delivery service utilization among marginalized mothers was found to be low [19%]. Mothers’ education, occupation, life-style, awareness, number of birth and social discrimination was significantly associated with delivery service uptake from health facilities in Kambata-Tembaro zone, Southern Ethiopia. Thus, intervention on social discrimination in the community to breakthrough core barriers; improving women awareness though health education and promotion; and accessing education and employment for women are highly recommended.

Background

Globally, maternal mortality ratios (MMRs) recent estimate suggests a substantial decline in latest years(1). Worldwide, 358 000 women die during pregnancy and childbirth every year. Poor maternal health care remains a significant problem in developing countries (2).

Skilled delivery care service is a key element of the safe motherhood service that aimed to improve maternal health. Proving focused antenatal care visit during pregnancy improve the maternal and newborn wellbeing(3)(4)(5). In developing countries, maternal health care utilization is varying due to different factors, the most findings showing the differences between affluent and poor women, and between women living in urban and rural areas(6).
Study conducted in Ghana on accessibility to and utilization of skilled delivery care services shown that large gradients of inequities exist between geographic regions, urban and rural areas, and different socio-demographic, religious and ethnic groupings(7).

According to Ethiopian Demographic Health Survey 2011, the killed maternal health service utilization was low and associated with women education, household wealth, autonomy and residence(8). Studies revealed that socioeconomic and cultural factors; like women age, ethnicity, education, culture, need for care and decision making power are account for variation in maternity health care utilization in large (9) (10)(11).

In Ethiopia, study conducted previously revealed that parity, literacy status of women, average monthly family income, media exposure, decision where to give birth, perception of distance to health institutions and antenatal care visiting were found to be meaningfully associated with skilled delivery service utilizations(12).

Studies conducted shown that women from socially disadvantaged minorities are less likely to access skilled maternal health service dues their social status in the community(13)(14).

Skilled maternity care service utilization inequities persist among vulnerable minorities due to the services do not socially and culturally sensitive; in contrast to the every woman, everywhere has the right to have good quality care before, during pregnancy and child birth(14) (15).

Unless the health care service does not take into account necessary beliefs, attitude or cultural of all pregnant women, even the best and most physically accessible may remain underused(16).

Social discrimination with in health care system is directly contributing to the process of marginalization through perpetuating negative stereotypes and social isolation(17).

In general, marginalized women are vulnerable for poor health care and negative stereotyping of poverty, social status, parenting styles, preferences and unsupportive feedback from the care givers. Marginalized women consistently report constraints in access to skilled delivery care which range from physical and psycho-social barriers to economic constraints(18).

According to Ethiopian Demographic health Survey (2016), maternal mortality ration remains high 412per 100,000 live births. And also, there is discrepancy in skilled delivery care utilization among different social groups and areas in the county(19).

While it is not yet frequently articulated, addressing social marginalization could play an important role in increasing access to and uptake of skilled delivery care service among minorities in the study area.

Thu, the study was aimed to access the utilization of skilled delivery care utilization and associated factors among women from socially marginalized minorities in the Kambeta-Temabaro, Zone Southern Ethiopia.
Method And Materials

Study area, design and period

The Kembata-Tembaro zone is located in the Southern Nations, Nationalities and People Republic (SNNPR) region and one of the most densely populated areas in Ethiopia. The Zone Eight districts and one town three administrations (26). The community based cross-sectional study was conducted from April 01 to March 30, 2019.

Source population: All postnatal women in the Kambeta-Tembaro Zone, Southern Ethiopia

Study Population: Selected postnatal care women during data collection in the study area.

Sample size determination

Single population formula was used to determine the sample size. The computation was made with the inputs of 95% confidence level \((Z\alpha/2=1.96)\), the margin of error \((d=5\%)\), prevalence of skilled care \((P=29\%)\) (27), and design effect of \((DE)\) of 1.5. Finally, 10% of non-response rate was considered to determine the total sample size \((N=521)\).

Sampling procedures

To enroll the study population multistage sampling technique was used. Sample size was proportionally allocated to the selected three rural districts and then to each selected six kebeles. Systematic random sampling was used to enroll study units.

Inclusion and exclusion criteria

All married women who gave birth with in last six weeks were included in the study population. But, those who were critically ill during data collection will be excluded.

Data Collection tools and procedures

Data were collected using interviewer administered questionnaire. The questionnaire included socio-demographic characteristics of participants, maternal health care service utilization during prenatal, intrapartum and postpartum. The tool was adapted from the demographic health science and other previous different studies.

Data management and analyses

The data was entered using the Epi-Info version 3.6 software and exported to Statistical Package for Social Science (SPSS)-21 for analysis. Descriptive statistics were and presented in tables with frequency and percentages. Both bivariate and multiple variable logistic regression analysis were used to determine association of independent variable with outcome variable. The degree of association between independent and outcome variables were assessed using odds ratio with 95% confidence interval and the
variable with p-value <0.05 was declared as statistically significant. The model fitness was checked using Pearson's Chi-square with the value of 3.45 and significance 0.026

Operational definition

**Marginalization**: defined as how the people are pushed to the edge of society through their perceived identities, place of residence, friendship association and daily activities.

**Social marginalized**: defined as social distances of an individual or group being excluded, discriminated against, or not have right to access doe services in the community.

**Skilled delivery care**: refers to the care provided to a women and newborn during childbirth by an accredited and competent health care provider at health facilities.

**Minority groups**: describe groups that are subordinated or lack of access in the society due to some their perceived identities, place of residence, their friendship association and their daily activities.

**Anticipated stigma**: Women may avoid seeking delivery care services as they have anticipated that they found to be from minorities group.

**Ethical considerations**: Research Ethical approval was received from College of Medicine and Health Science, Wachemo University and permission letter was obtained from corresponding health administration Offices. Written informed consent was obtained from each study participant during data collection and the issue of confidentiality was maintained.

**Result**

From the total of 521 study participants, five hundred ten (510) were responded the questionnaire completely and which make the response rate of 97.8% [CI: 3.2–9.5]. The mean age of respondents was 27.8 (± 3.4) years. Four hundred eighty-five (59.4%) of respondents were can’t read and write, and six hundred thirty-six (76.3%) were non-employed [Table_1].

Table_1: Respondents socio-demographic characteristics in Kembata-Temabaro Zone, Southern Ethiopia, 2019 [n = 510].
| Variables                                      | Categories                      | Frequency | Percentage(%) |
|-----------------------------------------------|---------------------------------|-----------|---------------|
| Respondents’ age (mean = 28.6 ± 4.8)          | ≤ 19 years                      | 106       | 20.78         |
|                                               | 20–34 years                     | 308       | 60.39         |
|                                               | ≥ 35                            | 96        | 18.82         |
| Respondents religion                          | Protestant                      | 311       | 60.98         |
|                                               | Muslim                          | 50        | 9.8           |
|                                               | Catholic                        | 16        | 3.13          |
|                                               | Orthodox                        | 13        | 2.54          |
|                                               | No religion                     | 120       | 23.52         |
| Respondents’ educational level                | Can’t read and write            | 453       | 88.8          |
|                                               | Primary and secondary education | 50        | 9.8           |
|                                               | Diploma and above               | 7         | 1.37          |
| Respondents’ occupation                       | House wife                      | 485       | 95.09         |
|                                               | Employed                        | 25        | 4.9           |
| Husbands occupation                           | Farmer                          | 439       | 86.07         |
|                                               | Merchant                        | 53        | 10.39         |
|                                               | Employed                        | 18        | 3.5           |
| Average monthly income in Ethiopian birr     | < 1000                          | 326       | 63.92         |
|                                               | 1001–2000                       | 123       | 24.1          |
|                                               | 2001–3000                       | 40        | 7.8           |
|                                               | > 3000                          | 21        | 4.1           |
| Family size                                   | ≤ 5                             | 198       | 38.8          |
|                                               | > 5                             | 312       | 61.17         |
| Residence                                     | Rural                           | 463       | 90.78         |
|                                               | Urban                           | 47        | 9.2           |

**Respondents’ Antenatal care service utilization**
From the total respondents (n = 510), one hundred fifteen (22.5%) of women had antenatal care service during pregnancy and only thirty (26.1%) were booked for antenatal care before sixteen (16) weeks of gestational age. Fifty (12.6%) of respondent mentioned that the cultural barrier was one of the reason for not using antenatal care utilization during pregnancy [Table_2].

Table_2: Respondents antenatal care service utilization in Kembata-Temabaro Zone, Southern Ethiopia, 2019 [n = 510].

| Variables                                | Categories                        | Frequency | Percentage (%) |
|------------------------------------------|-----------------------------------|-----------|----------------|
| Pregnancy planned                        | Yes                               | 95        | 18.6           |
|                                          | No                                | 415       | 81.37          |
| Unplanned pregnancy due to:              | Not used the methods at all       | 355       | 85.5           |
|                                          | Missed the methods                | 55        | 13.25          |
|                                          | Failed the methods                | 5         | 1.2            |
| Antenatal care visit                     | Yes                               | 115       | 22.5           |
|                                          | No                                | 395       | 77.5           |
| First antenatal care booking            | < 16 weeks                        | 30        | 26.1           |
|                                          | ≥ 16 weeks                        | 85        | 73.9           |
| Number of antenatal care visits         | < 4 visits                        | 25        | 21.7           |
|                                          | ≥ 4 visits                        | 90        | 78.3           |
| Reason for not antenatal care visit      | Lack of awareness                 | 174       | 44.05          |
|                                          | Lack of access to service         | 86        | 21.7           |
|                                          | Service related problem           | 85        | 21.5           |
|                                          | Cultural barriers                 | 50        | 12.6           |
| Unique life-style/culture                | Yes                               | 192       | 37.6           |
|                                          | No                                | 318       | 62.4           |
| Insecticide-Treated-Nets used during pregnancy? | Yes                          | 80        | 15.7           |
|                                          | No                                | 430       | 84.3           |
| Intimate partner violence during pregnancy | Yes                      | 202       | 39.6           |
|                                          | No                                | 308       | 60.4           |
Skilled delivery care service utilization

One hundred Eighty (35.3%) of study participants were heard about skilled delivery care service and three hundred (58.8%) of mothers had number of birth or parity five and above. Regarding skilled delivery care utilization, only Ninety-Five (18.7%) of respondents utilized skilled delivery service at health facilities’ [Figure_1].

Concerning discrimination during service, 198 (38.8%) of the participants claimed that disrespect or discrimination during delivery service is the major problem of skilled delivery care utilization in the health facilities [Table_3].

Table_3: Respondents skilled delivery care service utilization in Kembata-Temabaro Zone, Southern Ethiopia, 2019 [n = 510].
| Variable                                      | Categories  | Frequency | Percentage(%) |
|----------------------------------------------|-------------|-----------|---------------|
| Heard about delivery care service            | Yes         | 180       | 35.3          |
|                                              | No          | 330       | 64.7          |
| Number of birth or party                     | 1–4         | 210       | 41.2          |
|                                              | > 5         | 300       | 58.8          |
| Skilled delivery care service used           | Yes         | 95        | 18.7          |
|                                              | No          | 415       | 81.3          |
| The reason for home delivery                 | Personal factor | 115    | 27.7          |
|                                              | Social factors | 149    | 35.9          |
|                                              | Health system factor | 151    | 36.38         |
| Postnatal care service used                  | Yes         | 76        | 15            |
|                                              | No          | 434       | 85            |
| Maternal and or neonatal complication during last birth at home delivery | Yes | 100 | 24.1 |
|                                              | No          | 315       | 75.9          |
| Maternal and or neonatal complication during last birth at facility delivery | Yes | 4 | 4.2 |
|                                              | No          | 91        | 95.8          |
| The delivery service was respectful          | Yes         | 50        | 52.6          |
|                                              | No          | 45        | 47.4          |
| Discrimination in delivery care services     | Yes         | 52        | 54.7          |
|                                              | No          | 43        | 45.3          |
| Discriminations hinders delivery care service | Yes       | 198       | 38.8          |
|                                              | No          | 312       | 61.2          |

**Predictors of delivery care service utilization**

Multivariable logistic regression analysis shown that, delivery care service utilization among socially marginalized women was significantly associated with maternal education, occupation, and awareness on delivery care, pregnancy plan, and number of birth, mothers’ life-style, and social discrimination.
Mothers who educated diploma and above had odds 3.8 times higher to utilize the delivery care service as compared to the mothers who cannot read and write [Adjusted OR = 3.8; 95%CI: 1.79–2.03]. Regarding occupation, mothers who had employed had odds 2.5 times higher to have delivery care service from health facilities as compared to non-employed mothers [adjusted OR = 2.5; 95%CI:1.50–6.51]

Regarding pregnancy plan, mothers who with unplanned pregnancy had odds 0.43 times less to uptake delivery care service from health facilities as compared with mothers who had planned pregnancy [adjusted OR = 0.43; 95%CI: 2.29–3.89].

Mothers who had awareness on skilled delivery care services had odds 4.4 times higher to utilize the skilled delivery care services in the health facilities as compared with mothers who didn’t have awareness [adjusted OR = 4.36; 95%CI: 4.02–7.02]. Mothers how had number of births one to four had odds 3.2 times higher to use skilled delivery care services from health facilities as compared with mothers who had number of birth five and above [adjusted OR = 3.23; 95%CI: 2.03–5.65].

Regarding the life style/ culture, the mothers who claimed that they have unique life style had odds 0.83 times less to utilize the skilled delivery care service from the health facilities as compared to the mothers who didn’t appeal they have unique life style [adjusted OR = 0.83; 95%CI: 2.47–3.16]. Regarding social discrimination, mothers who claimed that there was social discrimination in the society had Odds 0.6 times less to use the skilled delivery care service utilization as compared to the mothers who didn’t claimed that there was no social discrimination [adjusted OR = 0.56; 95%CI: 3.06–4.70].

Table 4: Factors associated with skilled delivery care service among socially marginalized women, Kambata-Tembaro Zone Southern, Ethiopia 2019
| Variables                          | Delivery care utilized | COR                | aOR                |
|-----------------------------------|------------------------|--------------------|--------------------|
|                                   | Yes                    | No                 |                    |
| **Education level of mother**     |                        |                    |                    |
| Can't read and write              | 253(55.8)              | 200(44.2)          | 1                  | 1                  |
| Primary & secondary               | 50(62.5)               | 30(37.5)           | 1.8(2.82–4.33)     | 1.2(2.2–5.02)      |
| Diploma and above                 | 4(57.1)                | 3(42.9)            | 2.4(0.79–2.03)     | 3.8(1.79–2.03)     |
| **Occupation**                    |                        |                    |                    |
| Housewife                         | 100(20.6)              | 385(79.4)          | 1                  | 1                  |
| Employed                          | 20(80)                 | 5(20)              | 1.28(1.40–2.09)    | 2.49(1.50–6.5)     |
| **Pregnancy planned**             |                        |                    |                    |
| Yes                               | 55(57.9)               | 40(42.1)           | 1                  | 1                  |
| No                                | 105 (25.3)             | 310(74.7)          | 0.86 (1.35–2.39)   | 0.43(2.59–3.89)    |
| **Antenatal care visit**          |                        |                    |                    |
| Yes                               | 65(56.5)               | 50(43.5)           | 1                  |                    |
| No                                | 115(29.1)              | 280(78.9)          | 0.321 (2.36–4.83)  | 0.75(1.6–3.03)     |
| **Unique life-style/culture**     |                        |                    |                    |
| Yes                               | 88(45.8)               | 104(54.1)          | 0.54(2.52–3.25)    | 0.83(2.47–3.16)    |
| No                                | 118 (37.1)             | 200(62.9)          | 1                  | 1                  |
| **Awareness on delivery care**    |                        |                    |                    |
| Yes                               | 102(56.6)              | 78(43.3)           | 1.41(1.14–2.39)    | 4.36(4.02–7.02)    |
| No                                | 95(28.8)               | 235(71.2)          | 1                  | 1                  |
| **Number of birth**               |                        |                    |                    |
| 1–4                               | 104(49.5)              | 106(50.5)          | 2.13(1.16–4.09)    | 3.23(2.03–5.65)    |
| ≥ 5                               | 186(62)                | 300                | 1                  |                    |
| **Respectful delivery care**      |                        |                    |                    |
| Variables                                      | Delivery care utilized | COR             | aOR             |
|-----------------------------------------------|-----------------------|-----------------|-----------------|
|                                               | Yes                   | No              |                 |
| Yes                                           | 35(70) 50             | 15(30)          | 2.12(6.23–8.09) | 5.05(2.36–6.89) |
| No                                            | 33(73.3)              | 12(26.7)        | 1               | 1               |

Social discrimination affect service uptake

| Yes                                           | 80(40.4)              | 118(59.6)       | 0.35(6.23–8.09) | 0.56(3.06–4.70) |
| No                                            | 150(48.1)             | 162(51.9)       | 1               | 1               |

Discussion

Government of Federal republic of Ethiopia, has included and implementing the health policy that provides free maternal health care services for all during pregnancy, during labor and post natal period in the governmental health facilities. However, the magnitude of skilled delivery care utilization among socially marginalized women from health facilities was 19% in Kambata_Tembaro Zone, Southern Ethiopia. The factors that significantly associated with low utilization of delivery care service were maternal education and Occupation, awareness on delivery care service, pregnancy intention weather planned or not, and number of giving birth, mothers’ peculiar life-style or culture, and social discrimination/subordination in the community.

In this study, the prevalence of delivery care utilization among mothers from socially marginalized minorities at health facilities was found to be low [19%]. The finding in this was found to be lower as compared to previous studies conducted in Ethiopia, and Timor-Leste (17, 19, 20). This difference might be due to difference in study time, approach, demographic characteristics and social status of women in the marginalized community. This, also further indicates that the intervention of health care service for all not yet effective for socially marginalized minorities in the study area.

In this study, mothers’ educational level and occupation were found to be significantly associated with delivery care service utilization among study participant from health facilities. This finding was similar with others previous studies findings in Holata, Tigray region, Ethiopia(8)(21). These similarities of the study findings indicate that universal access for education was vital for all to use health care service. Thus, education and employment of women have been advancing the uptake of the health service in the different socioeconomic communities. This indicates that accessing education for women within the marginalized minorities might breakthrough the cultural taboo that hinders health care service uptake.

The study finding shown that, awareness on skilled delivery and number of birth were significantly associated with skilled delivery care utilization among the marginalized mothers in the study area. The
awareness of mothers about delivery care is comparable with findings of the previous study, but conversely, number of birth was not similar with previous findings (12, 22). This discrepancy of the findings might be due to difference in access to health service in different communities. However, health education and promotion on skilled maternity care crucial to improve the uptake of delivery care service among mothers from marginalized minorities.

In this study, social discrimination within the society was found to be negatively affecting factor to uptake delivery care service among marginalized women and it was consistent with the previous research findings in Ethiopia, India and China (9, 10, 12, 27). The similarity of the finds indicated that social marginalization has comparable negative effect on uptake of the health services in the different communities and women within the marginalized minorities were more disadvantaged from maternal care. In fact, Ethiopian health policy status that health for all; but conversely, mothers from marginalized minorities needs further interventions to overcome core barriers like distorted self-esteem, fear of stigma and subordination by health care providers and communities.

Conclusion

Even though, skilled delivery care service is key intervention to reduce maternal and child morbidity and mortality; the prevalence of the delivery service utilization among marginalized mothers was found to be low [19%] in Kambata-Tembaro zone, Southern Ethiopia. Mothers’ education, occupation, life-style, awareness, number of birth and social discrimination was significantly associated with delivery service uptake from health facilities. Thus, intervention on social discrimination in the community to breakthrough core barriers; improving women awareness though health education and promotion; and accessing education and employment for women are highly recommended.

Abbreviations

aOR: Adjusted Odds Ratio; COR: Crude Odds Ratio; EDHS: Ethiopia Demographic Health Survey; MMR: maternal mortality ratios; SNNPR: Southern nation’s nationalities People region; SPSS: Statistical Package for Social Science

Declarations

Author’s contributions:

AA- Conceptualized the research idea, carry out the analysis, interpret and write the result, drafting, revising, submit and approve the manuscript. BA&NG: Conceptualize the idea, methodology, review and approved the final manuscript. RA&HM- review and approved the final manuscript

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**Competing interests:**

All authors declare that no competing interests.

**Ethics approval and consent to participate:**

Ethical approval was obtained from Wachemo University, Research and review Committee. And the, permission letter from zonal health bureau was obtained before beginning the data collection. Finally, written informed consent obtained from each study participants.

**Availability of data and materials:**

all data will be within the manuscript and dataset used will be available by reasonable request to corresponding author.

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**Consent for publication:**

Not applicable

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**Figures**

**Figure 1**

The magnitude of skilled delivery care service utilization among women from socially marginalized minorities in the Kambata-Tembaro Zone, Southern Ethiopia 2019.