

Abstract

Back ground: Ethiopia still suffers high levels of neonatal and maternal mortality so maternity continuum of care is a continuous framework for the delivery of maternal care from pregnancy to postnatal period. Skilled care during pregnancy, childbirth and the postpartum period are important interventions in reducing maternal and neonatal morbidity and mortality.

Objective:

The World Health Organization recommends a minimum of four antenatal care visits [9]. However, global estimates indicate that only half of all pregnant women receive this recommended amount of care. In Ethiopia, Only 32% of Ethiopian women with live birth received at least four visits during the length of their pregnancy [7], which is below the global average (54%). The predominant underlying factors for the low coverage of antenatal care services include: socio-cultural and economic barriers, poor access to health services and poor quality of antenatal care services [10]. Many mothers who attend the recommended number of antenatal care visits fail to use facility delivery and postnatal care services. The most common service women received is at least one ANC visit which is 43%. Utilizations

Out of the total 651 study participants, 621 of them were included in the final analysis giving a response rate of 95.4%. The mean age of women was 30.85 (SD±6.56) years. Majority 352(56.7%) of the respondents were between 25-35 years old, followed by age group >35, 159(25.6%). Two hundred twenty seven (36.6%) were housewife, and 225(36.2%) were farmers.

The largest portion of the participants were Orthodox in religion 473 (76.2%), 513(82.6) were currently married and 455(73.3%) were rural residents constitutes (Table 1).

The findings highlight that around 46.1% of women had access to mass media, (77.1%) had autonomy in health-care decision-making

and 79.4% of women their pregnancy was wanted. Concerning women husband educational status majority 27.7% had no formal education but they can read and write and regarding women husband occupation majority were farmer 56.8% (Table 2).

Among women who received antenatal care 61.1% started care in the first Trimester, and 22.8% in the second trimester. Among women who received antenatal care, 98.5% were got advice about danger sign during pregnancy. 96.3% of women were there blood pressure measured during their antenatal care visit. From a total of women under the study, 15% were delivered by caesarean section. Among women who received postnatal care, 99.1, 97romrom a

In this study around 56.5% of women gave birth in the health institution and 43.5% of the study participant gave birth at home (Figure 1).

Around 61% of women received antenatal care, 13.7% did not continue on the pathway to receive skilled birth attendance. Only 47.2% who received Antenatal care were attended by a skilled health provider at delivery. After delivery, 2.2% women did not go on to receive postnatal care (Figure 3).

Around 85% of women in this study delivered virginally and 15% delivered with caesarean section (Figure 2).

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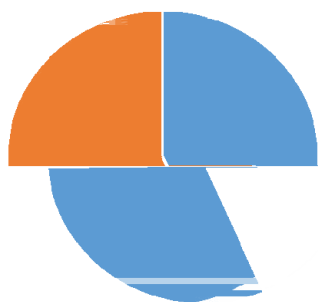


Figure 1: Place of delivery among women who gave birth in the last one year in Enemay district, northwest, Ethiopia, 2019.

Completion of maternity continuum of care was better observed on those women with wanted pregnancy which is similar with study done in Ghana [18]. The possible reason might be women with wanted pregnancy are careful to their pregnancy, likely hood of developing better motivation and prepared emotionally and financially for the demand of pregnancy and childbearing compared to women with unwanted pregnancy.

Parave and above women were higher odds of completing the continuum of care compared to para1-2 women. This study is in contrary to study done in Pakistan [13]. The possible reason for this discrepancy might be women with higher parity might have better information about the advantage of receiving maternal health service and also women with higher parity may face different complication before and have better awareness about the importance of utilizing all the maternal health service. Another possible reason might be women with higher parity might have frequent contact with health providers in their previous pregnancy and might get educational messages and counselling from health workers before.

Exposure to media was also associated with completion of maternity continuum of care. This study is in agreement with study conducted in Nepal, Egypt and Pakistan [3, 13, 15]. This might be that media is as one of the means of access to resources for awareness and knowledge so women who had exposure to media might have got information about the importance of receiving maternal health services and also they might get different educational message regarding maternal health service.

Women whose occupation was farming were less likely to complete the continuum of care compared to that of housewives. This might be due to that farmers might have lack of time to go to health institution and most of farmers live in rural area they might face problem of accessing health service. The other possible reason might be farmers might have less information about the advantage of utilizing maternal health service. Husband employment status was also significantly associated with completion of maternity continuum of care. This study is in line with study done in Egypt [15]. The possible reason might be women with employed husband might not have any financial problems and employed husband might have better information about maternal health service and they might encourage their wife to use the service.

Inferring casual association is difficult due to the cross sectional nature of the study. It is also difficult to measure the quality of service that women got during their antenatal, delivery and postnatal period. In addition information in the survey is based on self-reports there may be social desirable bias and recall bias

Conclusion

Less than half of the study participant's complete maternity continuum of care. Mother's educational level and mother's occupation, autonomy to health care decision making, wantedness of pregnancy, and exposure to media, parity/number of children and husband occupation were significantly associated with completion of maternity continuum of care.

Declaration

Ethical Clearance: Ethical clearance was got from Haramaya University Institutional Health Research Ethics Review Committee

(IHRERC). Participation was voluntary and information was collected anonymously after obtaining voluntary, written, signed informed consent from each respondent by assuring confidentiality throughout data collection period. Participants were told the objective of the study and their right to refuse or answer the questionnaires and were given the right to stop or withdraw at any time of data collection. Confidentiality was maintained by omitting their name and personal identification.

Availability of data and materials: Full data for this research is available through the corresponding author up on request.

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

All authors (AS, NA, MD and TD) contributed to the design of the study and the interpretation of data.

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References

1. Kerber K, Johnson J, Bhutta Z, Okong P, Starrs A, et al (2007) Continuum of care for maternal, newborn, and child health: From slogan to service delivery. *The Lancet* 370: 1358-1369.
2. Wang W, Hong R (2015) Levels and determinants of continuum of care for maternal and newborn health in Cambodia- evidence from a population-based survey. *BMC Pregnancy Childbirth* 15:62.
3. Tamang TM (2017) Factors associated with completion of continuum of care for maternal health in Nepal. 1-23.
4. Vogel J, Habib NA, Souza J, Gülmezoglu A, Dowswell T (2013) Ante natal care packages with reduced visits and perinatal mortality, A secondary analysis of WHO ante natal trial. *Reprod Health* 10: 19.
5. WHO. (2015) World Health Statistics. 2015. <http://www.who.int/mediacentre/factsheets/fs104/en/>

15. Hamed AF, Roshdy E MS (2018) Egyptian status of continuum of care for maternal, newborn, and child health: Sohag governorate as an example. *Int J Med Sci Public Health* 7: 417-426.
16. Kikuchi K, Yasuok J, Nanishi K, A A, Nohara Y, Nishikitani M, et al. (2018) Postnatal care could be the key to improving the continuum of care in maternal and child health in Ratanakiri, Cambodia. *Plos One* 13.
17. Akinyemi JO, Afolabi RF, Awolude OA (2016) Patterns and determinants of dropout from maternity care continuum in Nigeria. *BMC Pregnancy Childbirth* 16: 282.
18. Yeji F, Shibanuma A, Oduro A, Debpuur C, Kikuchi K, et al. (2015) Continuum of care in a maternal, newborn and child health program in Ghana: Low completion rate and multiple obstacle factors. *Plos One* 10: e0142849.