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Prevalence and Associated Factors of Postpartum Care Uptake Among Mothers Who Gave Birth in The Last Six Months in Yilmana Densa District, Northwest Ethiopia, Amhara Ethiopia 2022

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BAHIR DAR UNIVERSITY

COLLEGE OF MEDICINE AND HEALTH SCIENCES
SCHOOL OF MEDICINE, DEPARTMENT OF INTEGRATED
EMERGENCY SURGERY AND OBSTETRIC

PREVALENCE AND ASSOCIATED FACTORS OF POSTPARTUM CARE
UPTAKE AMONG MOTHERS WHO GAVE BIRTH IN THE LAST SIX
MONTHS IN YILMANA DENSA DISTRICT, NORTHWEST ETHIOPIA,
AMHARA ETHIOPIA 2022

BY: BAYE WORKIE [BSC]

A THESIS REPORT SUBMITTED TO DEPARTMENT OF INTEGRATED
EMERGENCY SURGERY AND OBSTETRICS, SCHOOL OF MEDICINE, IN
THE PARTIAL FULFILLMENT OF REQUIREMENTS FOR THE DEGREE OF
MASTER OF INTEGRATED EMERGENCY SURGERY AND OBSTETRICS

AUGUST, 2022

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I the under signed, declare that this is my original work, has never been presented in this or any other university ,and that all the resource and materials used for the research have been fully acknowledged.

Approval of principal investigator

_____	_____	_____
1. Principal investigator	Signature	Date
Approvals of advisors		

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Abstract

Introduction: Whether the mother give birth her baby at home or in a health facility; in the majority of cases, postpartum care is not given adequately and are highly limited in Ethiopia in terms of coverage and schedule by which the service should be provided.

Objective: The aim of the study was to assess prevalence and predictors of postpartum care uptake among mothers who gave birth in the last six months in Yilmana Densa District, Northwest Ethiopia.

Method and Materials: Community based cross sectional study design was carried out by multistage sampling method with total sample size of 372 from April 1 to May 30, 2022. Structured interviewer administered pre-tested questionnaire was used to collect data. The collected data was entered into Epi data version 4.2 and then exported into SPSS window version 23. Bivariate and multivariate analysis were undertaken and information was presented by using simple frequency tables, graphs and pie charts.

Result: The prevalence of postpartum care uptake was found 19 % (95% CI: 12.2, 20.8). Good knowledge about postpartum care (AOR=6.35, 95% CI: 3.41, 11.82), having four or more antenatal care (AOR=8.59, 95% CI: 4.56, 14.58), experiencing last delivery complication (AOR=4.89, 95% CI: 2.52, 9.49) and health information after delivery (AOR=3.57, 95% CI: 1.69, 7.53) were found to be statistically associated with postpartum care uptake.

Conclusion and recommendations: Postpartum care had low uptake and it was identified inadequate by schedule in the district. Frequency of ANC visit, knowledge, postpartum complication and health information were associated factors for PPC uptake. This is an important message for the district health office, service providers and researchers.

Key words: Postpartum, Postpartum care, postpartum care uptake, Yilmana Densa District

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ABBREVIATIONS

ANC	Antenatal Care
EDHS	Ethiopian Demographic Health Survey
FDRE	Federal Democratic Republic of Ethiopia
FGD	Focus Group Discussion
FMoH	Federal Ministry of Health Ethiopia
IDI	In depth Interview
KDHS	Kenyan Demographic Health Survey
MCH	Maternal and Child Health
NDHS	Nigerian Demographic Health Survey
PNC	Postnatal Care
PPC	Postpartum Care
SDGs	Sustainable Development Goals
SPSS	Statistical Package for Social Science
HEWs	Health Extension Workers
WDA	Women Development Army
WHO	World Health Organization

1. INTRODUCTION

1.1. BACKGROUND

Postpartum care (PPC): is the care given to the mother immediately after the birth and for the first six weeks of life which is the postpartum period. It is the time when most maternal deaths occur compared to the antenatal and intra natal period. This period marks the establishment of a new phase of family life for women, their partners and the beginning of the lifelong health for the newborns. A significant proportion of maternal and neonatal death occur during the first 48 hours after giving birth so that postnatal care is important to both the mothers and the neonates to manage complications arising after childbirth as well as to provide the mother with crucial health information how to care herself and her child(1, 2).

For the best outcomes, individualized, woman- and family-focused postpartum care must begin in the antepartum period. By collaborating with several health care professionals, the needs of a woman and her family can be fulfilled holistically(3).

Maternal deaths are a subset of female deaths and are associated with pregnancy and childbirth. Considerable progress has been made globally in improving maternal health. Worldwide, the maternal mortality ratio has decreased from 385 to 216 per 100,000 live births in 1990 and 2015 respectively. However, maternal mortality in developing and sub-Saharan African countries was 239 and 546 per 100,000 live births respectively (1, 2, 4)

Maternal mortality in Ethiopia has decreased from 678 per 100,000 to 412 per 100,000 according to EDHS 2011 and EDHS 2016 respectively. Yet, many women did not report their physical, psychological problems to the health professionals or even to their family members which indicates that more and improved care is needed during postnatal period (5, 6). Maternal and neonatal deaths occur during the first 24 hours after delivery. Postnatal care is important in treating complications that arise from delivery. In Ethiopia, 34% of women age 15-49 who gave birth in the 2 years before the survey had a postnatal check and the remaining 64% did not receive a postnatal check(7). There is no studies conducted on postpartum care uptake among mothers who gave birth in the last six months in yilmana densa district; hence the aim of this study is to assess the prevalence and factors associated with postpartum care among mothers who gave birth in the last six months in yilmana densa district , northwest ethiopia,2022.

1.2. STATEMENT OF THE PROBLEM

The PNC utilization coverage is low in middle- and low-income countries. Globally, an estimated more than half a million women died in developing countries from complication associated with pregnancy or child birth(8, 9).

Almost all 99% of maternal mortality accounted in low resource settings where 66% of them have occurred in sub-Saharan African countries. In another way, life time risk of maternal mortality was estimated at 1 in 36 in sub-Saharan African countries which strongly contrasting with approximately 1 in 4900 in developed countries (1, 4).

According to community based cross sectional study in China among 1601 women postnatal care utilization in China was 56 % and only 24% of rural Hebei province in China got postnatal care uptake within 42 days (8). Similarly, community based cross sectional study conducted in Nepal among 150 women the prevalence of PNC uptake within 42 days was 34% in which only 19% women got PNC within 48 hours (9).

Postnatal coverage is low in middle- and low-income countries. An analysis of demographic and health survey data from 23 sub-Saharan Africa countries found that only 13% of women who gave birth at home received postnatal care within 2 days of birth (6).

Large proportion of maternal and neonatal deaths occur during the first 48 hours after giving birth. Hence, prompt postnatal care for both the mother and the newborn is important to treat any complication arising from childbirth as well as to provide the mother the important information on how to care for herself and her child(5).

In Africa, community based cross sectional study conducted in Uganda among 357 women, the prevalence of postnatal care uptake was 53.5%. In similar study design the study made in 2011, the four postnatal care utilization in Tanzania was 10.4% (10).

According to EDHS 2016, the proportion of mothers received PNC checkup within 2 days of birth was 17% in which PNC coverage is higher in urban area than rural areas, educational status, and wealth level increases its utilization (6).

Similarly, the identified predictors for PNC uptake as the study conducted in at Hadiya southern Ethiopia were antenatal care attendance, place of delivery and distance of health facility from their house (11).

In Ethiopia, the postnatal care uptake according to 2016 EDHS was 45.2%, and 12.6% within the first two hours which was lower than ANC which accounted 90% and 58% in urban and rural respectively. And birth by the skilled providers was 80% and 21% urban and rural respectively. On the other hand, PNC coverage in Ethiopia was 17% within the first 2 days of birth where as in Amhara region 76.9% given birth mothers did not receive any PNC service and 2.9% utilized within the first 4 to 23 hours after birth(4).

All these studies indicated that there was low postpartum care uptake in the world and the problem is so serious in sub-Saharan African countries. These figures showed that there are hidden factors that hinder women from postpartum care uptake. Researchers have not been asking the reason for failure to use PNC after having ANC and giving birth in health institution. Previous studies in Ethiopia have tried to reveal that there is unmet need of postnatal care uptake (12-14) yet, there is no clear and conclusive responses for these questions. Therefore, this study will identify those predictors of postpartum care uptake to achieve the SDG target 3.1 by 2030 to reduce the global maternal mortality ratio to less than 70 per 100,000 live births as maternal mortality is one of the indicators of SDGs. In addition, this study will give emphasis on maternal care uptake other than both maternal and neonatal care for those mothers who gave birth in line with the newly recommended postnatal care guideline (15, 16)

1.3. SIGNIFICANCE OF THE STUDY

The findings of this study will provide inevitable support for the Yilmana Densa District health Office for making strategy according to the national health policy, nongovernmental organization working on maternal health to formulate various programs for the enhancement of maternal health as well as to tackle the problems in scientific way. It also will provide a paramount importance for the district health extension workers and the women who seek services of postpartum as the study findings made the institutions and health professionals aware to the factors for utilization of the service. In addition, the study findings will be used as reference and basic framework for future study.

2. LITERATURE REVIEW

2.1 . PREVALENCE OF POSTPARTUM CARE UPTAKE

The various cross-sectional studies conducted globally showed that the prevalence of postnatal care uptake was low. The study conducted in India among 15782 mothers (16) China among 1442 mothers (8), and Nepal among 150 mothers (8) showed that the prevalence of postnatal care uptake was 37.4%, 24%, and 34%, respectively.

In Africa, according to cross sectional studies conducted in Tanzania among 889 mothers (10), Nigeria survey among 19418 mothers (17), Kenya survey among 3973 (18), Uganda early postnatal utilization within 2 days duration among 357 mothers (19) showed that the prevalence of the postnatal care uptake was 10.4%, 37%, 47% and 15.4% respectively.

In Ethiopia, the postnatal care utilization in Southern region at Hadiya zone among 710 mothers and at Tigray region in Abi Adi town was 22.7% and 11.9% within the critical two days after giving birth, respectively (5, 20).

The community based cross sectional studies conducted in Amhara region Ethiopia at Jabitenan (n=594) and Debre Markos (n=527), Demebecha (n=788), and North Gondar (n=836) districts indicated that Postnatal care uptake was 20.2%, 33.5%, 34.8% and 66.83% respectively (13, 21-23).

Similarly, according to the EDHS 2016, the prevalence of postnatal care uptake prior to five years the survey was 18.4% in Amhara region and 55.4% in Addis Ababa which was the highest in the survey (4).

2.2. ASSOCIATED FACTORS OF POSTPARTUM CARE UPTAKE

2.2.1. Sociodemographic characteristics

Various literatures have been reviewed on the postnatal care uptake in various countries globally as much as possible by which socio demographic characteristics such as age, marital status, occupation, educational status and residency were predictors for postnatal care utilization. The population based cross sectional study conducted in Los Angeles in USA and in Kenya showed the maternal age group from (30-39) was 66%, and 54% more likely to utilize postnatal care services compared with age group (19-29) respectively(18, 24). The survey in Nigeria (25) indicated that 50% of women with age group 25-29 utilized the postnatal care and the rest age groups utilization were below this finding.

A study conducted in Rwanda showed that those mothers who were living separated or divorced and never married were two times more likely to lack a postpartum care visit compared to married mothers (AOR 2.39, 95% CI (1.28-4.49)).(26).

According to the study in Nepal, being housewife was seven times more likely to utilize PNC services than those who were farmers (AOR 7.25, CI (2.94-18.18));(9) and In Uganda, the cross-sectional study conducted on early postnatal care uptake(19) revealed that maternal formal employment was ten times more likely to utilize PNC services than those who were not formally employed with AOR 9.73, 95% CI (1.58-60.06).

Study conducted in Nepal, those mothers who had secondary education and of husband education secondary and above were six times more likely to utilize PNC compared with illiterate mothers (AOR 6.49, 95% CI (2.56-17.2)), (AOR 6.33, 95% CI (1.55-29.59))respectively(27).

The community-based household survey in Tanzania (10, 28) revealed that primary education and above was 37% and 38% more likely to utilize PNC service than those with no formal education (AOR 1.37 with 95% CI (1.04-1.82)) and (AOR 1.38,95% CI (0.38-0.85)) respectively.

In the other African country Nigeria, according to the Nigerian demographic health survey(29), primary and secondary maternal education was four and ten times more likely to utilize PNC services than those who had no formal education (AOR 4.43 with 95% CI (3.93-5.00)) and (AOR 10.48, 95% CI (9.44-11.63)) respectively.

In eastern African country Kenya, according to the KDHS 2014, no maternal formal education was 66 % less likely to utilize PNC services compared with those with secondary and above level of education (AOR 0.66, 95% CI (0.48-0.92)); (18).

In Uganda, the cross-sectional study conducted on early postnatal care uptake (18) revealed that maternal education about PNC schedule were four times more likely to uptake PNC at 95% CI with AOR 3.88 (1.08-13.93).

According to the survey done in Kenya (AOR 1.36, 95% CI (1.05-1.77)), and in Nigeria (AOR 0.23, 95% CI (0.21-0.25)) urban residency was 36% and 77% more likely to utilize postnatal care compared to rural residents(10, 29) respectively.

A Study conducted in Gondar in Ethiopia showed, those married mothers were three times more likely to utilize PNC services compared to single mothers (AOR 3.14, 95% CI (1.17-8.41)) (23).

In Ethiopia study conducted in Amhara region at Jabitenan District mothers with secondary and above education was three times more likely to utilize postnatal care compared with those with no formal education while the study in Tigray region at Abi Adi town, those with no formal education was 14% less likely to utilize PNC services compared with those with college and above; AOR 2.69 with 95% CI (1.45-5.97) and AOR 0.142 with 95% CI (0.21-0.97) respectively;(20, 23).

The cross-sectional study conducted in Ethiopia at Gondar *Zuria*(23) revealed that being urban resident at 95% CI, AOR 6.58 (2.09-20.75) was seven times more likely to utilize PNC services than those who was rural residents.

2.2.2. Knowledge and information factors of the mothers

According to the cross-sectional study done in Nepal (30), 62.76 % had good knowledge about PNC use in which the highest knowledge was on maternal and neonatal danger signs whereas the lowest was on family planning. On other study with similar methodology in Iran (31) among 500 mothers 12.8%, 79.2% and 8% had poor, moderate and high level of knowledge about the PNC services respectively.

Studies in Southern and North West Ethiopia, Mothers who had mentioned at least one of the potential Postpartum danger signs and symptoms were four times more likely to utilize PNC services than those who could not mention (AOR 3.7, 95% CI (1.09-12.7)) and (AOR 4.46, 95% CI (2.15-9.24)) ;) respectively(12, 22). In Northern Ethiopia at Gondar, the mothers who were knowledgeable about availability of PNC services were 72% more likely to utilize PNC than

those who did not know(AOR 1.72, 95% CI(1.03-2.86));(23) while the study conducted at Machekele District in Amhara region , more than half of the study participants were knowledgeable about overall danger signs of in obstetrics complications that occur during pregnancy, labor and postpartum period and only 46.4% of the respondents stated about postpartum danger signs whereas the 53.8% of them mentioned that vaginal bleeding was the danger sign in postpartum period (32).

The cross-sectional study in Nepal (30)indicated that 74.48% of women got information about PNC care availability from their friends and families. According to study in China among PNC care users 37% were counseled on infant feeding, 32 % about cord care, 24% about how to check jaundice and 18% about neonatal danger signs. In this study among nonusers, 65% of them did not know about PNC use and 24% thought that it was unnecessary to attend PNC.

According to studies in Ethiopia at Debre Markos mothers who had awareness about maternal complication were three times (AOR 2.72, 95% CI (1.71-4.34)) and at Gondar mothers who were aware about PNC services were four times (AOR 3.55, 95% CI (2.11-5.97)) more likely to utilize PNC compared with those who had not awareness (23) respectively.

Mothers who were not counseled about PNC services were 11% less likely to utilize PNC services than those who were counseled about the services (AOR 0.116, 95% CI (0.046-0.294)); (20).

2.2.3.Infrastructure and health facility related factors

The qualitative studies done in Indonesia (28) and in mixed study in China (8) showed that distance from the health facility and availability of transportation respectively were factor for utilization of the PNC care services.

According the household survey in India (33) indicated that distance from health facility, 5km and farther with AOR 1.73, 95% CI (1.03-2.89) was predictor for PNC utilization. The survey in Liberia (34) living in the farthest quartile were associated with lower odds of attending PNC from a health care worker with AOR 6.44, p value 0.009 for the uptake of the service.

According to study conducted at Gondar *Zuria* and at Hadiya Zone in Ethiopia mothers who were at a distance (1-2hrs) from health facility were two times (AOR 2.21 at 95% CI (1.39-3.51)) ;(23) and four times (AOR 3.6, 95% CI (1.2-12.66)) ; (5) more likely to utilize PNC services than those who were farther from health facilities.

The qualitative study in Indonesia(30) and reviewed publication in West African countries (31) showed that limited health facility availability by FGD (Limus Nuggal Sukarbuni District), and institutional or clinical factors were the predictor for PNC utilization respectively.

By the same study design in Tanzania (35) shortage of health care providers, equipment and supplies were claimed for not utilizing PNC by FGD and in-depth interview of women in Southern Tanzania.

The Nigerian demographic health survey(29) concluded that the improvement of ANC by making it available and accessible will have a multiplier effect of improving facility delivery which in turn leads to improved PNC care utilization. In the other hand, the household survey in India(33) concluded that the unavailability of labor, examination table and bed screen were associated with a reduction in the number of deliveries and PNC services.

The health facility based cross sectional study in Eastern Uganda (19) revealed that women attended at public facility were less likely to attended early PNC than they were attended at private facilities (AOR 0.03,95%CI (0.01-0.10)). By the mixed study design conducted at rural Hebei district in China(8), FGD of health care providers shortage of staffs, transportation problems, inadequate training of staffs and lack of time to reach out those newly delivered mothers' homes were the reason why the postnatal care utilization was low.

According to the study at Jabitenan district Ethiopia, mothers who perceived no long waiting time to get the services of PNC were four times more likely compared with those who perceived (AOR 3.91,95% CI (1.30-1.71));(22).

2.2.4. Maternal and child health service factors

Regarding maternal and child health services as predictors for PNC uptake, community based cross sectional study conducted in Nepal (8), demographic health survey in Kenya and in the three rural districts in Tanzania (9) showed that antenatal care utilization was predictor of PNC uptake with 95 % CI; eleven times (AOR 11.06(1.16-105.59), two times for those who had four ANC and above 1.84(1.40-2.42) and five times for those who had three and above ANC 4.5(1.55-3.11) were more likely to utilize PNC services respectively.

Regarding place of delivery, studies in Nepal (8), Kenya (17) and Tanzania (26) indicated that mothers who gave birth at hospital were ten times (AOR 10.12, 95% CI (3.40-30.07)) and at public health center were five times (AOR 4.78(4.02-7.70)) more likely to utilize PNC services where as 50% less (AOR 0.50,95% CI (0.33-0.76)) likely to utilize PNC in Tanzania.

In other studies, having antenatal follow up had significant association with PNC service utilization in Nigeria (27) based on the national demographic health analysis was five times (AOR 4.67, 95% CI (3.95-5.54)) and Loss Angeles (25) were three times (AOR 3.08, 95% CI (1.68-5.63)) more likely to utilize PNC services than those who had no ANC follow up whereas the qualitative study in Southern Tanzania (35) those women who had ANC visit had positive attitude towards PNC utilization.

According to the study at Gander *Zuria*(22) and Lemo District(10) in Ethiopia mothers who had ANC follow up were three times (AOR 2.82,95% CI(1.54-5.17)) and six times (AOR 6.34,95% CI(2.33-20.18)) more likely to utilize PNC services than those mothers who had no ANC follow up while mothers who gave birth in health institutions in the above two studies were eight times(AOR 8.09,(2.78-23.53)),(AOR 7.94(3.12-20.18)) more likely to utilize the PNC respectively whereas at Jabitenan District (21) four times (AOR 3.6,95% CI(1.79-2.32)) more likely to utilize the service.

2.2.5. Obstetric related factors

As the cross-sectional study done in Nepal (9) health problems after delivery was a predictor for PNC utilization with 95% CI; AOR17.3 (3.36-88.76) whereas qualitative study done in Indonesia(36)revealed that women considered PNC services only when they got complication after delivery according to the reports given by FGD at Limus Nunggal Sukarbuni District.

According to the household survey in Tanzania (28), women who gave birth by cesarean section or forceps sought PNC services three times (AOR 2.95,95% CI (1.80-4.81)) more likely to utilize PNC services than those who gave birth through spontaneous vaginal delivery.

In the three districts of Tanzania utilization of PNC was predicted by the mothers whose new born were sick by four times more likely to utilize the services than those whose newborn were not sick (AOR 3.52, 95% (2.12-5.86)) whereas women with unwanted pregnancy (AOR 0.57, CI (0.35 -0.94)) was 57% less likely to attend PNC by the study conducted(10) .

The cross-sectional study conducted at Debre Markos Northwest and at Lemo Southern Ethiopia (12, 13) mothers who had complication during delivery were three times (AOR 2.58, 95% CI (1.56-4.28)) and five times (AOR 4.52, 95% CI (1.65-12.54) more likely to utilize PNC services than those who had not in the recent birth respectively. Regarding to birth outcome related to PNC utilization at Debre Markos, those mothers who had alive birth was three times more likely to utilize PNC services than those who had stillbirth (AOR 2.71, 95% CI (1.19-6.19)) whereas

mothers who gave birth through cesarean section were five times more likely to utilize the PNC services than those who gave birth through spontaneous vaginal delivery (AOR 4.82, 95% CI (1.86-12.54)) ;(14).

The study conducted at Jabitenan in North West Ethiopia, mothers who gave birth through instrumental assistance (AOR 12.5, 95% CI (1.98-79.60)) and those who had decided for their PNC were thirteen times (AOR 12.7, 95% CI (1.35-4.5)) more likely to utilize PNC services than those mothers who gave birth through spontaneous vaginal delivery and those mothers whose PNC had decided by others respectively while mothers with four and above child were four times less likely to utilize PNC than those mothers who had one child (AOR 3.68,95% CI(0.04-0.08));(24). The study conducted in Tigray at Abi Adi town in Ethiopia showed that mothers who did not decide for their PNC were 27% less likely to utilize PNC than those who decided and by the study in Gondar Ethiopia, mothers who decided for their PNC were two times more likely to utilize PNC services than who didn't decide (AOR 0.274, 95% CI (0.105-0.7114));(37) and (AOR 1.86,95%CI (1.31-2.65)) ;(25) respectively.

2.2.6.Barriers of PNC Utilization

Study at Loss Angeles in USA (26) identified that the reason why they did not utilize PNC were as they felt fine, were too busy with the baby, had other things going on, and they thought that no need for PNC. The cross-sectional study conducted in Gondar *Zuria* in Northern Ethiopia (23), the reason for not using PNC were lack of time (30.47%), long distance (19.25%), lack of guardians (16.07%) and lack of service (8.60%).

2.3. CONCEPTUAL FRAMEWORK

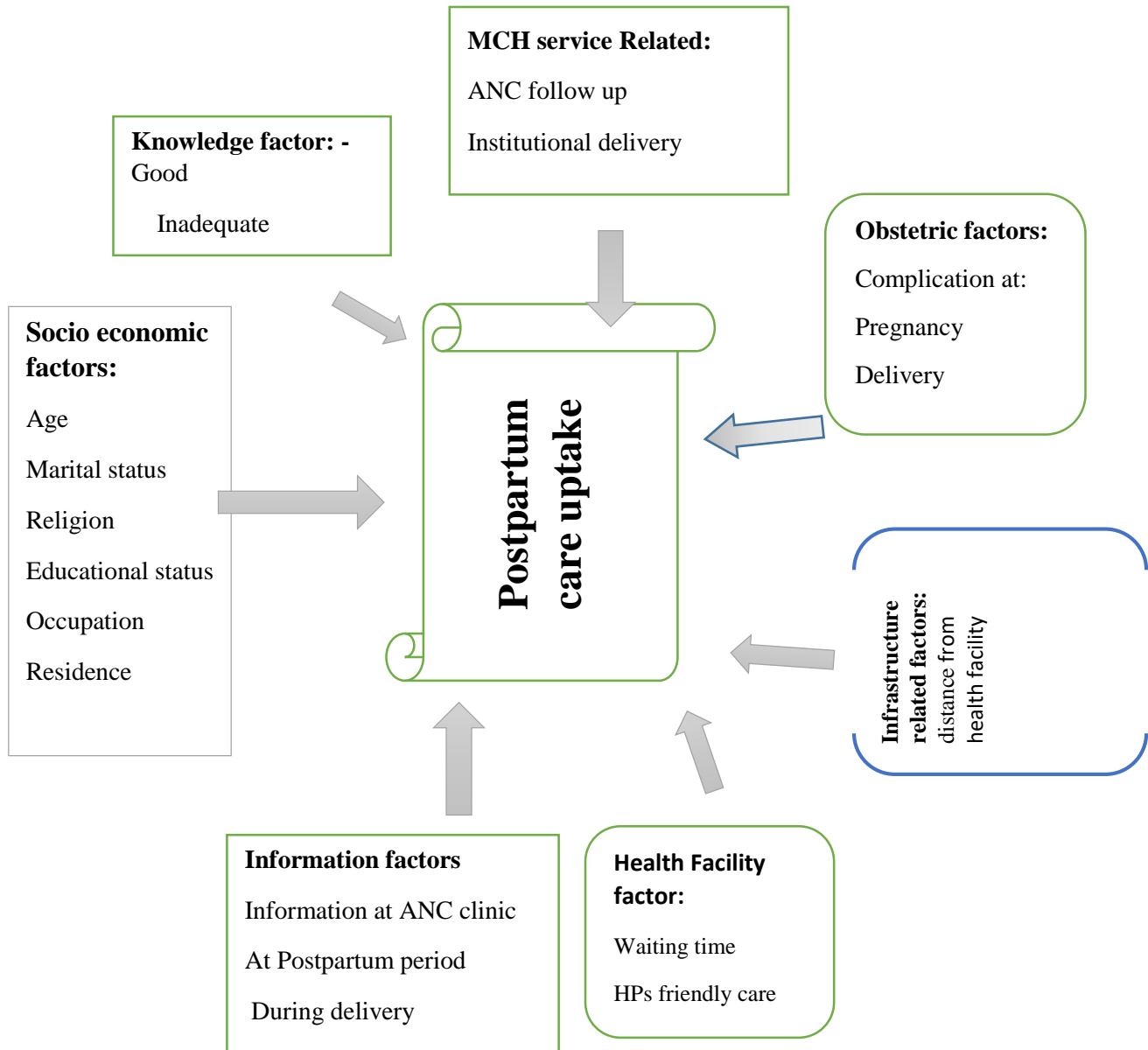


Figure 9. Conceptual framework developed by reviewing literatures for Associated factors of postpartum care uptake among mothers who gave birth in the last six months in Yilmana Densa District, Northwest Ethiopia, 2022 (8, 11, 16, 23, 24)

3. OBJECTIVES

3.1. General Objective

The main objective of this study is; to assess Prevalence and associated factors of postpartum care uptake among mothers who gave birth in the last six months in Yilmana Densa District, North west Ethiopia, 2022.

3.2. Specific objectives

- To assess prevalence of postpartum care uptake among mothers
- To identify associated factors of postpartum care uptake among mothers

4. METHODS AND MATERIALS

4.1. STUDY AREA AND PERIOD

This study was conducted in Yilmana Densa District from April 1, to May 30, 2022. Yilmana Densa District is one of the *Woreda* in West Gojjam Zone, Amhara Regional State of Ethiopia and it is located 464 Km from Addis Ababa, the capital city of Ethiopia, 42 Km South East of Bahir Dar, the regional town of Amhara region

. Adet is the town in the district which consists of 5 *kebeles* (the smallest administrative unit). The district is bordered on the East by Gonj kolela *woreda*, on the West by North Mecha, on the North by Bahir Dar Zuria, and on the South by Quarit *woreda*.

According to the District Annual report in 2020, the district has 40 *kebeles* (5 urban and 35 rural) which has a total population of 292037 in which (male 141930 and female 150107). The number of households in this district was 67916 and number of surviving infants under 12 months was 39902. An estimated woman with child bearing age was 68862 where as new pregnant in fertile age group (15-49) was 9699 until at the end of 2020. The district has 1 district hospital, 11 health centers, 40 health posts, 13 private clinic and 7 drug vendors. Annual report from the district health office report in 2020 indicated that the health coverage of institutional delivery, ANC coverage and PNC coverage was 30.4%, 40% and 40% respectively. Meanwhile immunization coverage was 74.1%. There were 96 health extension workers those who were distributed proportional to size and number of *kebeles* in each cluster by which health care delivery system taking place. (12)

4.2. STUDY DESIGN

Community based cross sectional study design was conducted in Yilmana Densa District from April 1, to May 30; 2022.

4.3. POPULATION

4.3.1. Source Population

All mothers who completed postpartum period in the last six months irrespective of their birth place and delivery outcome in Yilmana Densa District, Northwest Ethiopia.

4.3.2. Study Population

All mothers who completed postpartum period in the last six months irrespective of their birth place and delivery outcome at selected *Kebeles* during the study period in Yilmana Densa District, Northwest Ethiopia.

4.3.3. Sampling Unit

The sampling unit for this study was households in the selected *Kebeles* of Yilmana Densa district.

4.3.4. Study Unit

The study unit for this study was mothers in the selected households who completed postpartum period in the last six months in the district.

4.4. ELIGIBILITY CRITERIA

4.4.1. Inclusion Criteria

All mothers who gave birth in the last six months and who completed postpartum period irrespective of place of birth and birth outcome prior to the study period in the district.

4.4.2. Exclusion Criteria

Those mothers who gave birth in the last six months who were unable to respond, those who were not permanent resident.

4.5. SAMPLE SIZE DETERMINATION

Single population proportion formula was used for sample size determination with the following assumptions: 95% confidence interval, 5% margin of error and the prevalence of postnatal care utilization was found to be 34% from community based cross sectional study conducted in Gondar *Zuria* (22). Using the formula:

$$N = \frac{(Z \alpha/2)^2 P (1-P)}{d^2}$$

Where:

N= minimum sample size required for the study

Z= standard normal distribution ($Z=1.96$) with confidence interval of 95%

P= proportion of mothers who used Postnatal care (0.34)

d=is a tolerable margin of error ($d=0.05$), using the above general formula for single proportion calculation,

Hence, by substituting the figures in the above formula,

$$N = \frac{(1.96)^2 * 0.34 (1-0.34)}{(0.05)^2} = 345$$

$$(0.05)^2$$

Contingency of the above sample size consider 10% is be 35 and the total sample size is $345+35=380$

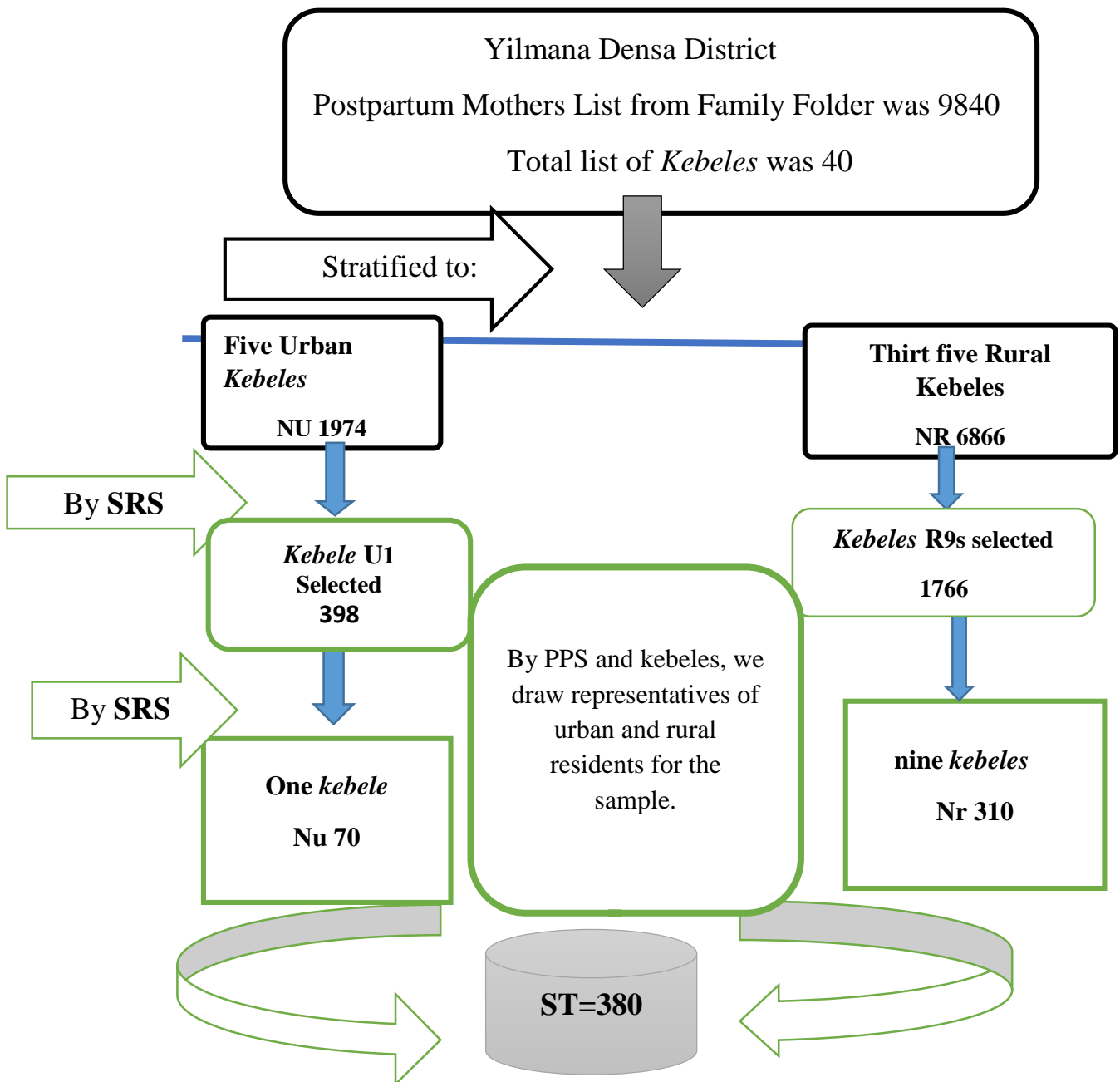
P= Prevalence, **CI**= Confidence Interval, **d**= Margin of error, **N**=Sample size

4.5.1 SAMPLING PROCEDURE

Multistage sampling technique was employed to get the desired sample size 380 in this study.

The district has 40 *kebeles* (the smallest administrative unit) in 2 clusters. The district has stratified as urban which consists of 1974 postpartum mothers out of 9840 in five *kebeles* and 6866 in 35 *kebeles* out of 9840 postpartum mothers in rural residents. Each stratum based on residency is homogenous in terms of maternal child health service facility.

Survey was conducted in order to identify households in which there was mothers who gave birth in the last six months and completed their postpartum period. Based on these strata, the contribution of urban and rural residents for sampling was drawn by using probability proportional to size which is 70 and 310 to get the sample size respectively. Those mothers who have not completed their postpartum period was not included in the sampling procedures. Then after, by using simple random sampling technique, *Kebeles* was selected in relation to the calculated proportion to size for each urban and rural cluster.



PPS- Probability Proportional to Size

NU- Postpartum Mothers in Urban

U1-One urban *kebele*

SRS- simple random sampling

NR- Postpartum Mothers in Rural

R9s-nine rural kebeles

Figure 10. Schematic presentation of sampling procedure for PNC uptake and its predictors among mothers who gave birth in the last six months in Yilmana Densa District, Northwest Ethiopia, 2022

4.6. DATA COLLECTION METHODS AND TOOLS

4.6.1. Data Collection Tools

Structured interviewer administered questionnaire was used. The questionnaire was adapted by reviewing different literatures and it contains six main parts: mothers' socio demographic characteristics, information, knowledge of mother about PNC, prevalence of PNC, health care system and health related factors.

The interviewees were collected pieces of information throughout the working day including the weekend by going to a selected house to house and they were revisiting three times those houses in which mother was not there during the data collection time. The selected participants were informed by the data facilitator as she was selected to participate in the study. If the selected participant was interested, the consent will be obtained and the data was collected.

4.6.2. Data facilitators and Data Collection Procedures

The data collection was facilitated by 10 diploma nurses/midwifery and supervised by 2 BSc holder Nurses/Midwives who are fluent in Amharic language. Before data collection, both the data facilitators and supervisors were trained by principal investigator for one day.

The data facilitators were collected the information by face-to-face interview of mothers after going in to household level.

Before interviewing the mother, data facilitators were informed about the aim of the study, purposes, risks and possible benefits, the right and refusal to participate in the study and after information was collected the confidentiality issues.

After stating all, those mothers who were willing and who signed in the voluntary consent was interviewed. The interview was done for consecutive of 10 days by data facilitators.

4.7. STUDY VARIABLES

4.7.1. Dependent variable

Postpartum care uptake

4.7.2. Independent Variables

Socio-demographic characteristics: age of the mother, marital status, educational status of mother and husband, religion, occupation of mother and husband and place of residence.

Knowledge of the mother about PPC: classified as Poor and good knowledge level by result of asking 8 questions of postpartum care uptake related.

Maternal and Child Health services: uptake of ANC and place of delivery.

Health Facility Factors: availability of health services and distance to health facility

Information Factors: exposure to media (radio, television and other media) and health care providers about postpartum care schedule, postpartum dangerousness and the importance of having care.

Obstetric Factors: Mode of delivery, complication during giving birth, during pregnancy or postpartum period.

4.8. OPERATIONAL DEFINITION

Postpartum period: The word ‘postpartum period’ and ‘postnatal period’ are sometimes used interchangeably. In this thesis, we used postpartum which implies the time duration of 6 weeks after giving birth (37).

Postpartum care: The maternal care services provided in postpartum period within six weeks (1)

Postpartum care uptake: When a mother had at least three health facility contacts after giving birth within 42 days at 6-24 hours, 3 days, 7 days or at 6 weeks in addition to labor and delivery care (11, 37)

Knowledge of mother about PPC uptake Those mothers scored greater or equal to 5 out of 8 knowledge related questions about PPC (≥ 5 out of 8) correctly were ranked to have good knowledge whereas poor knowledge for those mothers scored less than 5 out of 8(37).

Barriers: Refers to what prevents to women from utilizing postpartum care services (8).

4.9. DATA QUALITY CONTROL

To ensure quality, questionnaire was initially drafted in English language and then translated in to Amharic language by experts and finally before data entry again re-translated back to English. Trained BSc Nurses/Midwives were involved for coordination of data collection process and supervision. Training was given for data facilitators and supervisors for one day regarding the objective of the study, data collection tool, and ways of data collection, checking the completeness of data collection tool and how to maintain confidentiality. Questionnaires was pre-tested in a local area with population having similar socio-demographic status. After pre-test was conducted, there was a correction of questionnaires that were not clear and discussion was held with data facilitators and supervisors on the problems they have encountered in filling the questionnaires form and take valuable suggestions and comments to be considered for improving the quality. Data was checked for completeness before data entry in to software. Proper coding and categorization of data are maintained for the quality of the data to be analyzed.

All data was checked for completeness, accuracy, clarity and consistency by principal investigator and by supervisors on the day of data is collected. Double data entry was done for its validity and compare to the original data. Simple frequencies and cross tabulation were done for missing, outlier and improvable values and variables.

4.9.1. Pre-test

The pre-test was carried out on 5% of study participants in one of the *kebeles* in Mecha district and modifications were taken according to the findings.

4.10. DATA PROCESSING AND ANALYSIS

The data was coded, cleaning, editing and entry into Epi data version 4.2 to minimize logical errors and design skipping patterns. Then, the data was exported to SPSS window version 23 for analysis. Descriptive analysis was done by computing proportions and summary statistics. Then the information was presented by using simple frequencies, summary measures, tables and figures. Missing values was analyzed by using multiple imputation technique. Bi-variant analysis was be used to see the association between each independent variable and the outcome variable by using binary logistic regression. All variables with $P \leq 0.25$ in the bi variate analysis was included in the final model of multivariate analysis in order to control all possible confounders and the variables was selected by forward stepwise technique. In addition, variables which are

significant in previous study and from context point of view can be included in the final model even if the above criteria are not met. Multi co-linearity test was carried out to see the correlation between independent variables using standard error and one of the independent variables was dropped for those with standard error of > 2 . The direction and strength of statistical association was measured by odds ratio with 95 % CI. Adjusted odds ratio along with 95% CI was estimated to identify associated factors for postpartum care uptake by using multivariate analysis in the binary logistic regression. In this study P-value < 0.05 was considered to declare a result as statistically significant association.

4.11. ETHICAL CONSIDERATIONS

Ethical clearance was obtained from Bahir Dar University, College of Health and Medical Sciences, Institutional Health Research Ethics Review Committee (IHRERC). A formal letter for permission and support was written to regional health bureau of Amhara from Bahir Dar University, then to zonal health department of West Gojjam and finally to Yilmana Densa *Woreda* health office.

The *Woreda* health office was writing a letter to *kebele* leaders in which the study was conducted. All the study participants were informed about the purpose of the study, their right to refuse and written and signed voluntary consent was obtained from all study participants prior to the interview. The respondents were also be told that the information obtained from them were treated with complete confidentiality and do not cause any harm on them.

5. RESULT

5.1. Socio-demographic characteristics

The result was driven from 372 mothers who gave birth in the last six months from one urban and nine rural *kebeles* proportionately allocated 67 (18%) and 305 (82%) respectively. The overall response rate of the study was 98%.

The mean age of the respondents was 31 with (SD of ± 5.6) years. Sixty three percent of the respondents were in the age group 25-34. Regarding marital status, most of the respondents 350 (94%) were married. Nearly all respondents were belonging to Orthodox religion and were Amhara by ethnicity which were found 358(96%) and 369(99%) respectively.

Regarding educational status, 330 (88.7%) of mothers and 188(50.53%) of husbands had no formal education level. Most of the respondents and their husbands' occupation was farming which was found 298 (80.2%) and 278 (74%) respectively.

Table 1 Socio demographic characteristics of Postpartum care uptake among women who gave birth in the last six months in Yilmana Densa District, Northwest Ethiopia, 2022.

Variable	Frequency (%)
Age of mothers (mean, SD: 31 ± 5.6)		
15-24	46	12
25-34	234	63
≥ 35	92	25
Religion		
Orthodox	358	96.30
Others*	14	3.70
Ethnicity		
Amhara	369	99.30
Others**	3	0.70
Marital status		
Married	350	94.30
Married and separated	9	2.3
Others ***	13	3.4
Educational status of mother		
No formal education	330	88.7
Primary level	35	9.4
Secondary and above level	7	1.88
Educational status of husband (n=370)		
No formal education	188	50.53
Primary level	130	35
Secondary and above level	52	13.9
Maternal occupation		
Farming	298	80.2
Housewife	25	6.7
Daily laborer	19	5
Others ****	30	8.1
Husband occupation (n=372)		
Farming	278	74.37
Daily laborer	39	10.44
Merchant	36	9.7
Employee	19	5.13
Residency		
Urban	67	18
Rural	305	82

Other*: ‘Qibat’, Protestant; **Others****: Oromo, Tigray; **Others *****: widowed, Divorced, single, **others******: merchants, employee

5.2. Maternal and child health service

Regarding the maternal and child health service, 15(4%) of the respondents had no ANC for the last birth whereas 62(17%) had four or more ANC visits. Most of the respondents 242 (67.77%) had ANC at health center.

Regarding health information about postpartum care during any ANC visit, 17(4.70%) of the respondents had health information among which most of them got health information from health professionals 8(31%). Most 281(75.6%) and 238(82.40%) of them had health institution delivery and hospital stay after delivery from 6 hours to 24 hours respectively.

Table 2: Maternal and child health factors for Postpartum care uptake among mothers who gave birth in the last six months in Yilman Densa District, Northwest Ethiopia, 2022.

Variables	Frequency	(%)
ANC visit		
Yes	357	96
No	15	4
Frequency of ANC visits (n=357)		
< 4 visits	295	83
≥ 4 visits	62	17
Place where ANC taken (n=357)		
Health post	75	21
Health center	242	67.77
Hospital	40	11.2
Health information about PPC during ANC visit (n=357)		
Had information	17	4.7
Had no information	340	95.2
Source of information about PPC (n=17)		
From HEWs	2	12
From WDA leaders	3	17.6
From health personnel	6	35
From HEW and Health personnel	3	17.6
From health personnel and WDA leaders	3	17
Place of delivery (n=372)		
Health institution	281	75.6
Home	91	24.4
Hospital stays after giving birth (n=281)		
Less than 6 hrs	31	11
6hrs-24 hrs	232	82.5
Greater than 24 hrs	18	6.5

WDA: women development army leader, **HEW:** health extension workers, **Hospital stays:** length of time stayed in health facility

5.3. Obstetric and pregnancy characteristics

The most 129 (34.6%) and the least 40 (10.7%) of respondents had 4 or more and 1 child respectively.

Experience of complication during pregnancy and delivery were reported by 28 (7.5%) and 58(15.6%) respectively. Among 372 respondents, most of them had spontaneous vaginal delivery which was found 335 (90%). The most 363 (97.5%) of respondents had alive birth.

Table 3: Obstetric and pregnancy factors for Postpartum care uptake among mothers who gave birth in the last six months in Yilmana Densa District, Northwest Ethiopia, 2022.

Variables	Frequency	%
Number of children		
One	40	10.7
Two	108	29
Three	95	25.5
Four and more	129	34.6
Total	372	100
Complication during pregnancy		
Yes	28	7.5
No	344	92.5
Total	372	100
Complication during delivery		
Yes	60	15.6
No	312	84.4
Total	372	100
Mode of delivery (n=372)		
Spontaneous vaginal	335	90
Others*	37	10
Outcome of delivery		
Alive	363	97.5
Not alive	9	2.5

Others*: C/S, Instrumental aided; **Complication:** illness

Most of the respondents have up taken 6 hrs-24 hrs and 42 days or more which was found 209 (56%) regarding the schedule of postpartum care uptake (**Figure 3**).

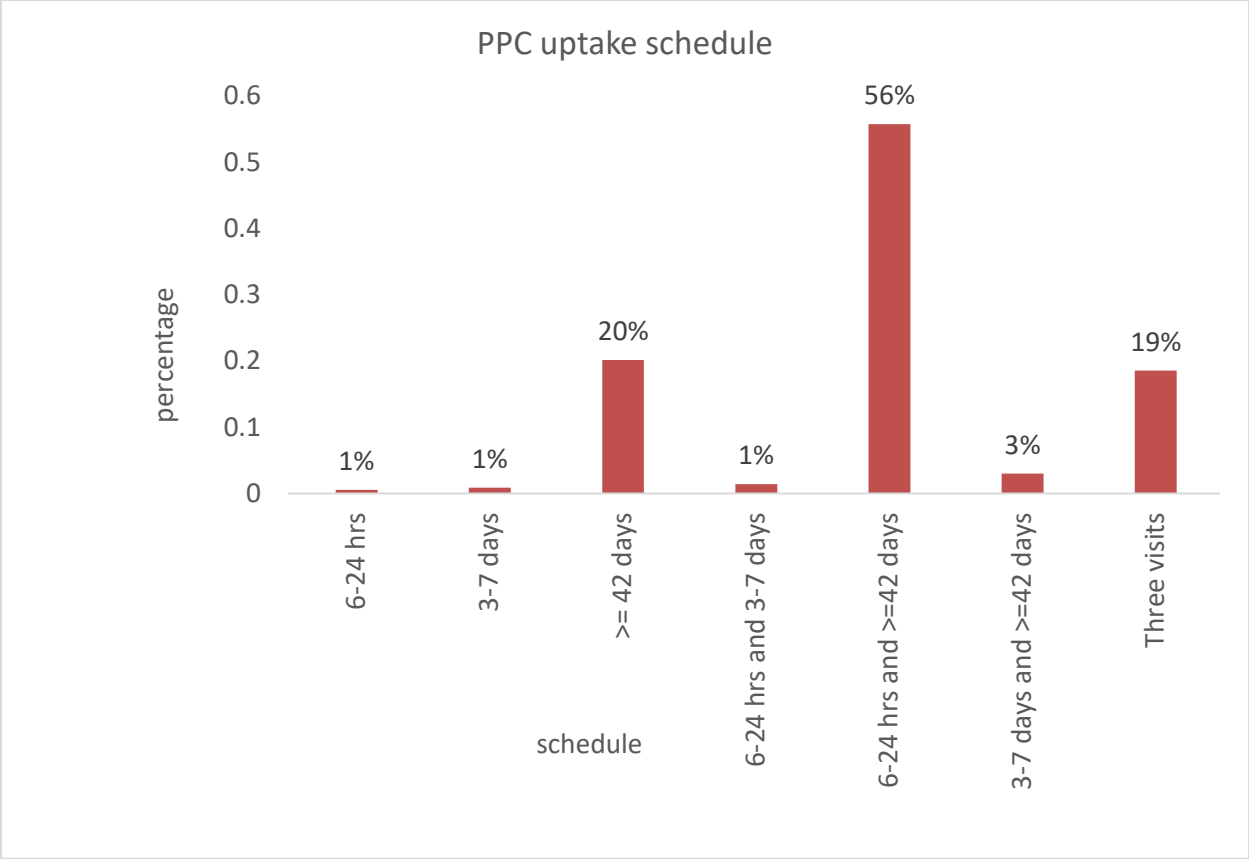


Figure 11: Postpartum care uptake on recommended schedule among mothers who gave birth in the last six months in Yilmana Densa District, Northwest Ethiopia, 2022.

Regarding the care provided, most of mothers 152 (41%) got health information about maternal feeding followed by Physical examination, feeding, family planning and maternal hygiene which was found 119 (32%) (**Figur 4**)

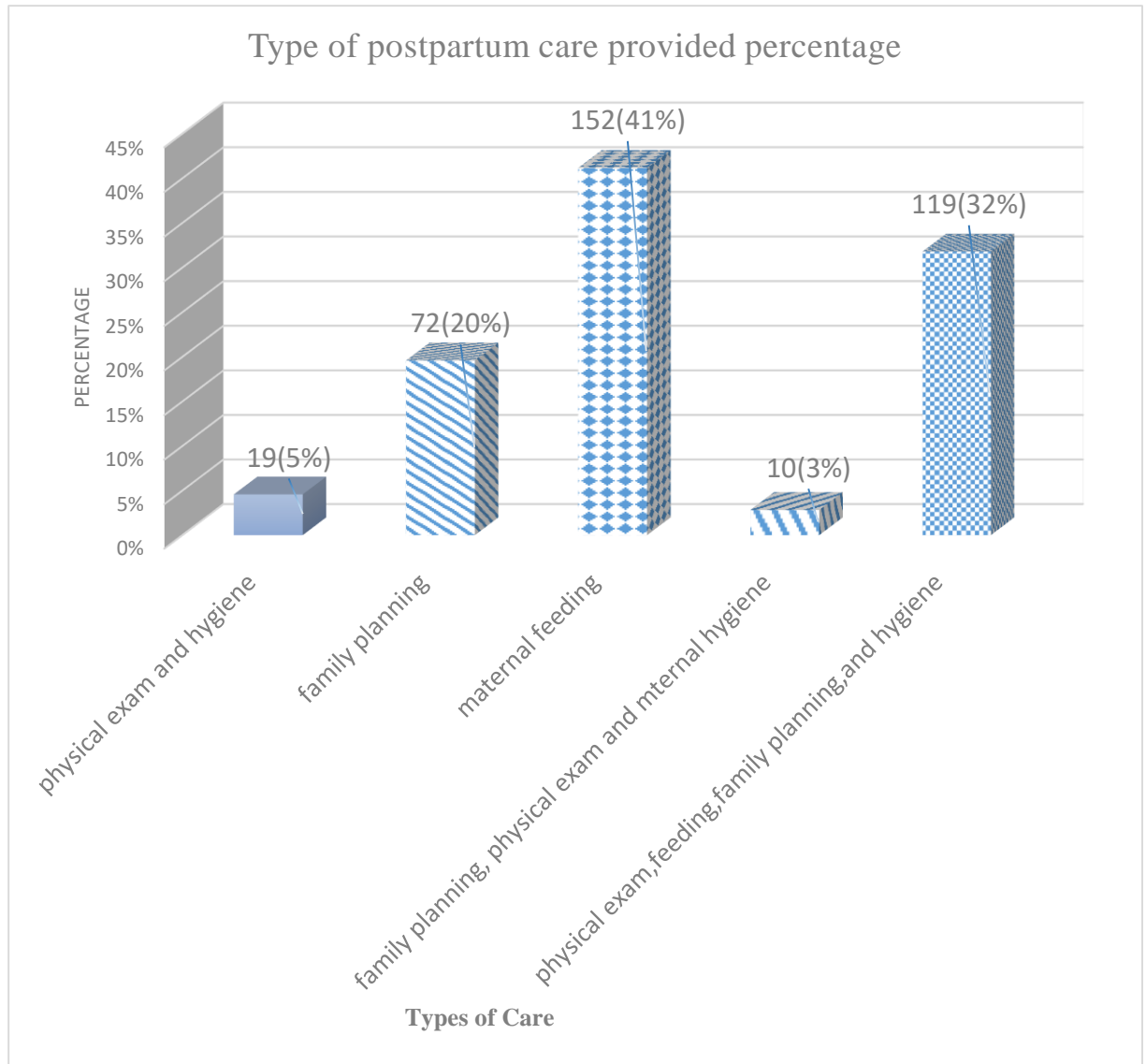


Figure 12: Types of postpartum care provided among mothers who gave birth in the last six months in Yilmana Densa District, Northwest Ethiopia, 2022.

The most 223 (60%) mothers have up taken PPC two times. The prevalence of postpartum care uptake (three or more visits) was 19 % (**Figure 5**)

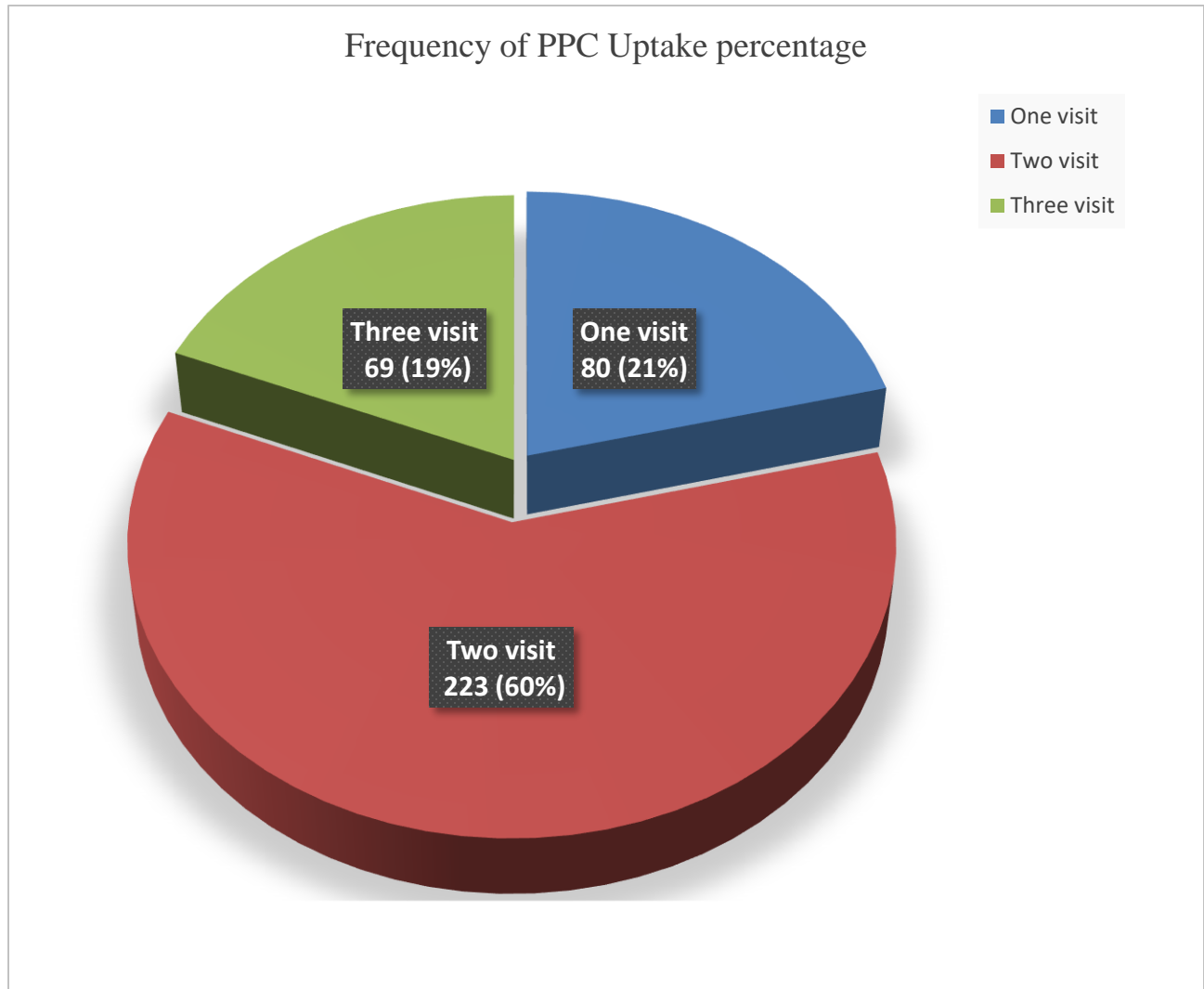
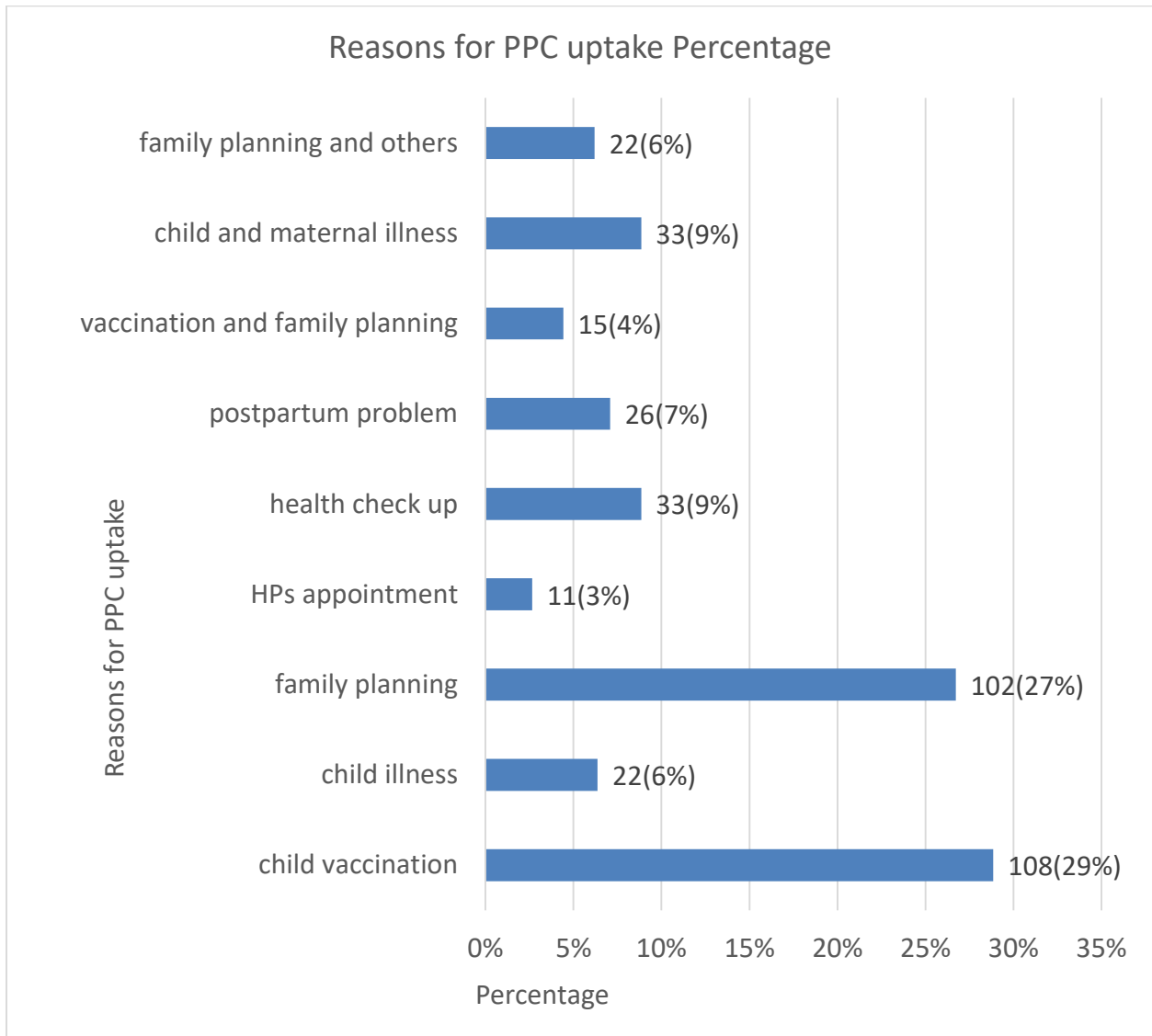


Figure 13: Postpartum care visit among mothers who gave birth in the last six months in Yilmana Densa District, Northwest Ethiopia, 2022.

Most of them 108 (29%) had mentioned to have their child vaccinated regarding the reason for postpartum care uptake followed by family planning which accounted 102 (27%) (**Figure 6**)



Hps*: health professionals

Figure 14: The reasons for utilizing PPC among mothers who gave birth in the last six months in Yilmana Densa District, Northwest Ethiopia, 2022.

Regarding barriers to postpartum care uptake, most 190 (51%) of respondents mentioned that they had no health problem followed by cultural belief (faith) 71 (19%). **(Figure 7)**

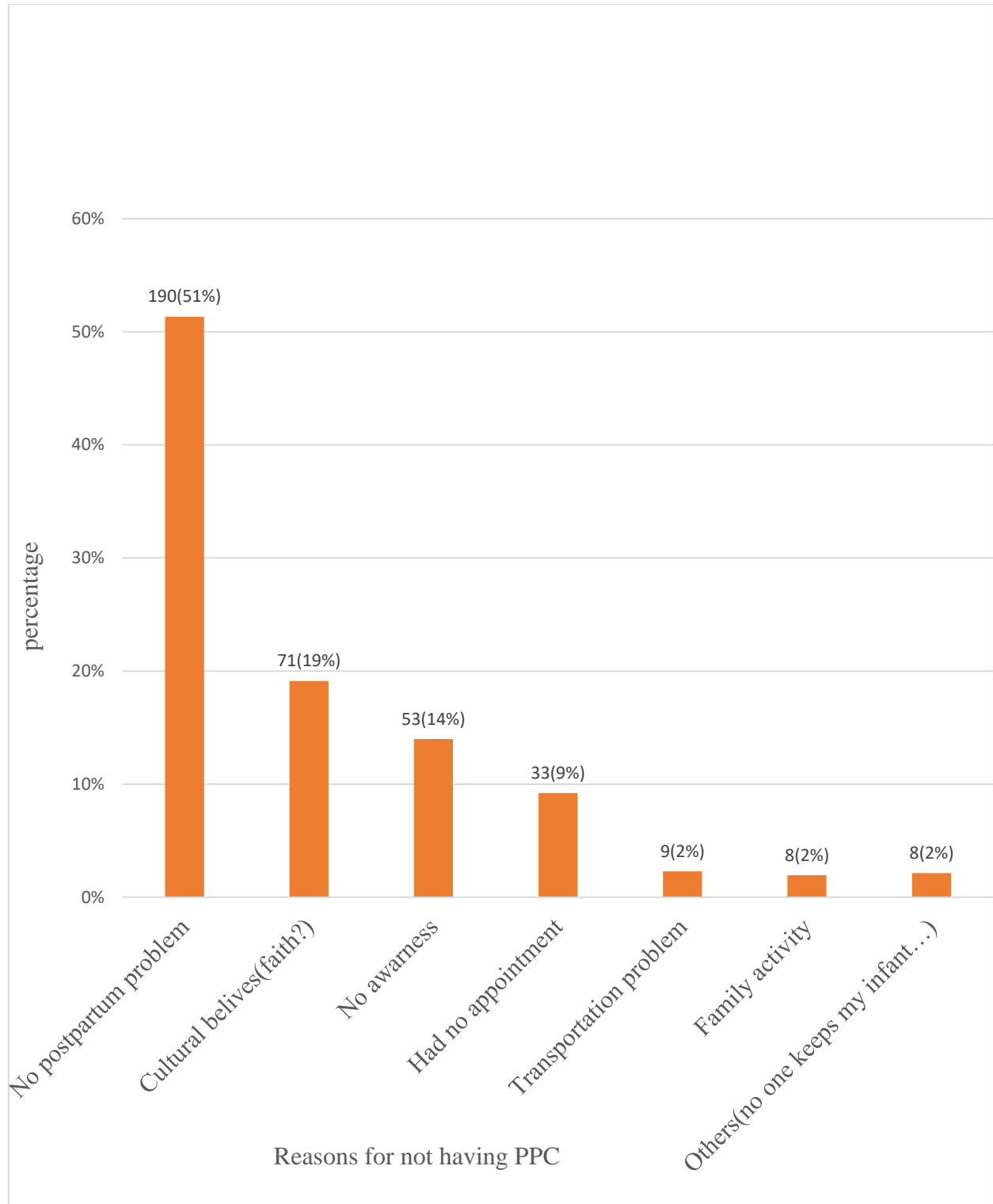


Figure 15: The reasons for not having PPC uptake among mothers who gave birth in the last six months in Yilmana Densa District, Northwest Ethiopia, 2022.

5.4. Postpartum care health information

Regarding postpartum care health information, 59 (15.8%) of them got health information and majority of the health information provided was about postpartum care need and its availability which was found 36(61%). Postpartum care information providers were health professionals in majority 29 (50%).

Table 4: Health information on postpartum care uptake among mothers who gave birth in the last six months in Yilmana Densa District, Northwest Ethiopia, 2022.

Variables	Frequency	%
Health information about PPC		
Yes	49	15.8
No	323	84.2
Total	372	100
Types of health information (n=59)		
About need of the care	15	25.5
About availability and need of care	36	61
Availability of the care	3	5
Need and schedule	2	3.5
Others*	3	5
Total	59	100
Source of information (n=57)		
Health professionals	29	50
Health Extension Workers (HEWs) and health professional	7	12
Media and health professional	7	12
HEW, HPs and WDA leader	7	13
Others **	7	12
Total	57	100

Others *: appointment and availability; **others**:** family, neighbor

Among 372 mothers, 259 (69.60%) and 113 (30.40%) had poor knowledge (scored < 5 out of 8 questions) and good knowledge (scored ≥ 5 out of 8 questions) about PPC respectively (**figure 8**).

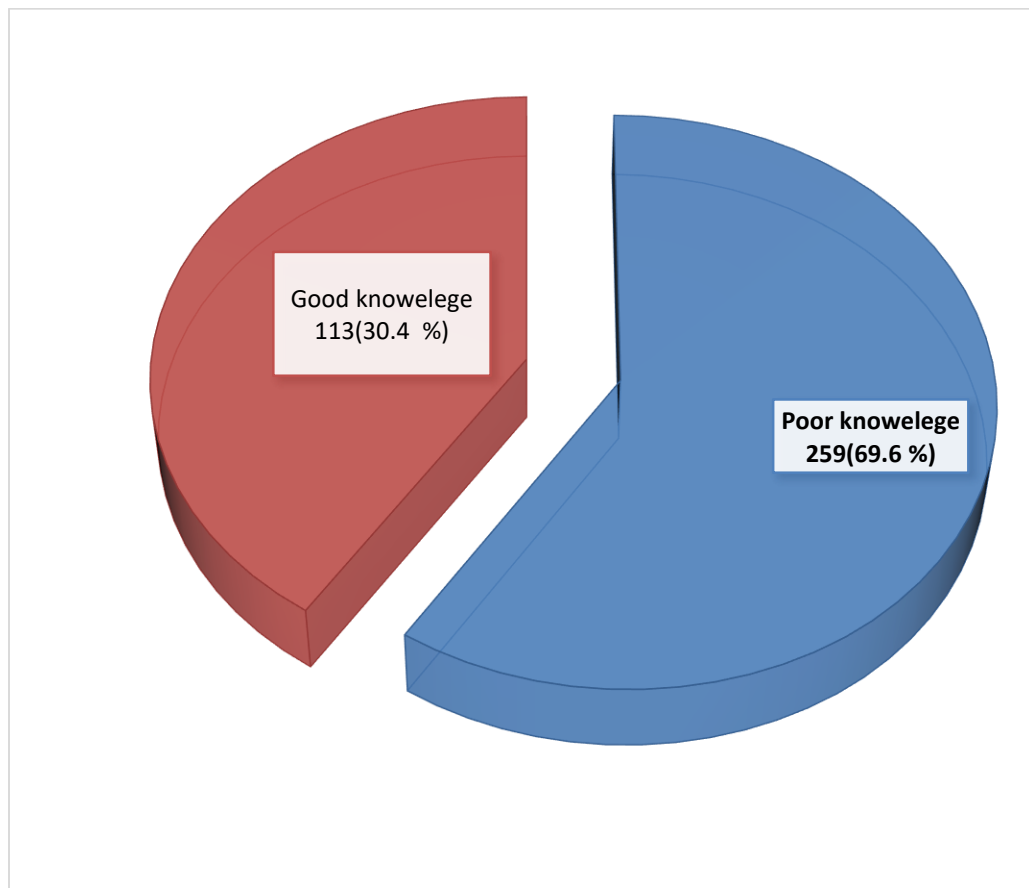


Figure 16: Knowledge level for Postpartum care Uptake among mothers who gave birth in the last six months in Yilmana Densa District, Northwest Ethiopia, 2022.

5.5. Health facility characteristics

The most accessible health institution reported by the majority of respondents 271 (74%) was health center. The nearest distance to health institution 163 (45%) was assumed from 5km - 15km/30min-1hr walking distance and the majority of the respondents 279(75%) verbalized that transportation was not accessible (**Table 5**).

Table 5: Health facility factors for postpartum care uptake among mothers who gave birth in the last six months in Yilmana Densa District, Northwest Ethiopia, 2022.

Variables	Frequency (%)
Accessibility of health institutions (n=367)	
Hospital	30 (8)
Health center	271(74)
Health Post	66(18)
Total	367(100)
Nearest distance to health institution (n=363)	
Less than 30 minutes/5 km	68(19)
30-1hrs /5-15 km	163(45)
Greater than 1 hr./15 km	132(36)
Total	363(100)
Accessibility of transport	
Yes	93(25)
No	279(75)
Total	372(100)
Decision maker for postpartum care visit (n=358)	
Herself	137(38)
Husband	89(25)
Both of them	125(35)
Others*	7(2)
Total	358(100)

Others*: family, friend

5.6. Associated factors for postpartum care uptake

Bivariable and multiple logistic regression has been used to identify associated factors. There was no marked variation by age, maternal educational level, husband educational level and maternal illness even though it appeared associated factors of postpartum care uptake by bivariate analysis.

Frequency of ANC visit, experiencing complication during delivery, health information during postpartum period before discharge from health facility and knowledge level about PPC were associated factors of postpartum care uptake (p value <0.05).

Mothers with four or more (≥ 4) ANC visits were more than 8 times (AOR 8.59, 95 CI (4.56, 14.58)) more likely to uptake PPC than those mothers with three or less (< 4) ANC visits.

Mothers with Good knowledge level about postpartum care uptake were all most 6 times (AOR 6.35, 95 CI (3.41, 11.82)) more likely to uptake PPC than those with poor level of knowledge.

Having postpartum health information has made the mothers more than 3 times (AOR 3.57, 95 CI (1.69, 7.57)) more likely to uptake PPC than those with no postpartum health information

Mothers who had delivery complication were nearly 5 times (AOR 4.89, 95 CI (2.52, 9.49)) more likely to uptake PPC than those mothers with no complication (This is shown in **Table 6**).

Table 6: Associated factors of Postpartum care uptake among mothers who gave birth in the last six months in Yilmana Densa District, Northwest Ethiopia, 2022. (n=372).

Variables	Uptake of PPC		95% Confidence Interval	
	Yes	No	COR	AOR
Age in years				
15-24	11(15.23%)	35(11.52%)	1	1
25-34	52(75.23%)	182(60%)	1.05 (0.57, 1.94)	0.43 (0.17, 1.07)
≥ 35	7(9.54%)	85(28.48%)	3.95 (1.68, 9.27)	1.21 (0.36, 4.08)
Maternal educational level				
No formal education	48(68.57%)	282(93.26%)	1	1
Primary	19(26.60%)	10(5.20%)	0.13 (0.07, 0.25)	2.08 (0.83, 5.23)
Secondary and above	3(4.83%)	4(1.54%)	0.22 (0.08, 1.02)	0.98 (0.20, 4.71)
Husband educational level				
No formal education	25(35.23%)	163(54.42%)	1	1
Primary	27(38.09%)	103(34.46%)	0.58 (0.35, 0.95)	1.41 (0.72, 2.74)
Secondary and above	19(26.68%)	33(11.12%)	0.27 (0.15, 0.48)	1.59 (0.59, 4.26)
Frequency of ANC visit				
< 4	28(42.5%)	267(91.6%)	1	1
≥ 4	38(57.5%)	24(8.4%)	14.80(8.81,24.85)	8.59(4.56,14.58) **
Health information after delivery				
Yes	21(30%)	11(9%)	4.36 (2.58, 7.35)	3.57 (1.69, 7.53) *
No	48(70%)	275(91%)	1	1
The last delivery complication				
Yes	30(44%)	30(10%)	7.01 (4.29, 11.46)	4.89 (2.52, 9.49) **
No	40(56%)	272(90%)	1	1
Maternal illness				
Yes	5(7%)	54(18%)	0.32 (0.14, 0.72)	0.45 (0.13, 1.60)
No	65(93%)	248(82%)	1	1
Knowledge level				
Good	18(68.6%)	95(21.7%)	7.85 (4.92, 12.54)	6.35(3.41,11.82) **
Poor	22(31.4%)	237(78.3%)	1	1

* Significant with P=0.001, ** Significant with P=0.000

6. DISCUSSION

6.1. Prevalence of postpartum care uptake

In this study, the prevalence of postpartum care uptake was found low. Only less than one fifth 19% (95% CI: 15.2, 21.9) of mothers have up taken PPC. In Ethiopia, 17% women reported to have postnatal care within the first two days after their last child birth(4) . This confirms that PNC is poorly utilized and it is the weakest in maternal health care continuum compared to at least one ANC (62%) and skilled delivery care (27%).

This is much lower result from recommended universal access of maternal care services advocated by WHO (2013). Poor rates of PNC utilization have also reported in Africa and Nepal previously. In Uganda, it has reported that 15.4% of women utilized PNC within a week(19) .

Mothers who have delivered at health facility would have more access to postpartum care. However, this study found that only one fourth mothers with health facility delivery utilized postpartum care.

This finding is comparable with the study done at Hadya southern Ethiopia and Jabitenan northwest Ethiopia (4, 20) by which the prevalence was 22.7% and 20.2% respectively. However, the finding of this study slightly differs from other studies in Nepal and Ethiopia. Studies in Nepal, Debre Markos, Dembecha and Lemo by which the prevalence was 34%, 33.5%, 36.5% and 51.4% respectively.

The variation might be attributed to methodological and study area variations. These studies have used one postpartum visit as postnatal care had up taken but, in this study, at least three postpartum visits required to say postpartum care has up taken so that the variation might be due to this methodological difference (9, 21).

The finding of this study is higher than the national (17%) and Amhara region (2.9) postnatal care coverage within four to twenty-three hours respectively(4) . This difference might be due to difference of the study setting in which EDHS study included much higher sample size and larger geographical areas which in turn includes wider variations of residences societal variations related to health care services.

6.2. Associated factors of postpartum care uptake

Knowledge about postpartum care was found to be strong associated factor for postpartum care uptake. Mothers who have good knowledge were all most 6 times more likely to utilize postpartum care uptake than those who have poor knowledge.

This finding is comparable with the study at Jabitenan district in Northwest Ethiopia which revealed that mothers who had knowledge about postpartum complication were 4.5 times more likely to utilize postnatal care services compared with those who had not knowledge. In another study in Northern Ethiopia, knowledgeable mothers about availability of postnatal care were 72% more likely to utilize postnatal care than those who were not knowledgeable which is consistent with this study (23, 38). The possible explanation to this might be due to the fact that good knowledge about postpartum care enhances positive health belief and perception which in turn increases health seeking behavior.

Antenatal visit was another strong obstetric factor found significantly predictor for postpartum care uptake. Mothers who had four or more (≥ 4) ANC visits were more than 8 times more likely to uptake postpartum care than those mothers who had three or less (< 4) visits.

This implies that those mothers who had all four ANC visits would be assumed that they were in enhanced health seeking behavior. Hence, more mothers getting ANC care might have positive influence on the uptake of PPC due the increased likelihood of getting health information about PPC.

A study, in Southern and Northern Ethiopia which revealed that mothers who had ANC visits were six and three times more likely to utilize postnatal care than those who had not (27)and (23) respectively.

This difference might be brought about due to the difference in methodology and study settings of the studies.

Health information during postpartum period before discharge were significantly associated with postpartum care uptake. Mothers who had postpartum health information before discharge were more than 3 times more likely to uptake postpartum care than those who had not.

The possible explanation might be due to health information makes mothers to be concerned for their health.

This finding is comparable with study in Nepal (9) and northern Ethiopia (23) which revealed that mothers who had no postnatal service availability awareness were 65% less likely to utilize postnatal care than those who had awareness and mothers who had awareness about postnatal care service were four times more likely to utilize postnatal care than those who had not awareness.

The other major associated factor postpartum uptake was the last delivery complication. Mothers with delivery complication were nearly 5 times more likely to uptake PPC than those with complication.

However, the present study is in agreement with studies in Debre Markos Northwest and Lemo Southern Ethiopia by which reported that mothers with postpartum complication were three and five times more likely to utilize postnatal care than those who had no postpartum complication (27) respectively.

The possible justification in this study, postpartum complications, generates the need to health care services. Health problem is the most immediate cause of health service uptake.

7. Strength and limitation of the study

7.1. Strength of the study

The strength of this study is that it considered the maternal aspect of postnatal care.

It assessed the postpartum care in line with the postnatal care uptake recommendation by FMOH for health centers, clinics and hospitals but previous studies did not.

It was community-based study which consists of urban and rural communities to come up with generalization to the district.

7.2. Limitation of the study

As it is cross sectional study design, it might not show cause and effect relationship. In spite of using six months by which postpartum period is completed, it might be subjected to recall bias. It also might be affected by self-selection bias due to cluster sampling technique.

8. Conclusion and Recommendations

8.1. Conclusion

In this study, the prevalence of postpartum care uptake in the last six months was found low. Less than one fifth of women have up taken postpartum care. Knowledge about PPC, four or more (≥ 4 ANC) visits, postpartum health information and experiencing the last delivery complication were independent associated factors that motivated the mothers to have postpartum care uptake.

8.2. Recommendations

Planning, monitoring and evaluating of postpartum care delivery system should be emphasized by the district MCH care division by preparing sustainable program with in MCH services.

Knowledge and awareness creation about PPC should be implemented district wide in accordance with the national health delivery system. It is important to launch action plan to all health facilities in the district aimed at knowledge raising and antenatal care coverage improvement.

Health information about postpartum care, including all components of care; should be provided in all mothers at the 4th ANC visit.

Knowledge of the women should be enhanced through regular health education about postpartum care on all components including the schedule, complication of postpartum period, availability and necessity of care.

Health education should focus on postpartum care is the care provided for prevention of disease and complication rather than treating disease and complication.

9. References

1. Organization WH. Trends in maternal mortality: 1990-2015: estimates from WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division: World Health Organization; 2015.
2. FDRE M. Postnatal Care Blended Learning Module for the Health Extension Programme. www.open.ac.uk/africa/heat. 2008. .
3. Walker KC, Arbour MW, Wika JC. Consolidation of guidelines of postpartum care recommendations to address maternal morbidity and mortality. *Nursing for women's health*. 2019;23(6):508-17.
4. Csa I. Central statistical agency (CSA)[Ethiopia] and ICF. Ethiopia demographic and health survey, Addis Ababa, Ethiopia and Calverton, Maryland, USA. 2016;1.
5. Abosse Z, Woldie M, Ololo S. Research Article Magnitude and Predictors of Postnatal Care Utilization in Southern Ethiopia: A Community Based study.
6. Organization WH. WHO recommendations on postnatal care of the mother and newborn: World Health Organization; 2014.
7. EPHI I. Ethiopia mini demographic and health survey 2019: key indicators. Rockville, Maryland, USA: EPHI and ICF. 2019.
8. Chen L, Qiong W, Van Velthoven MH, Yanfeng Z, Shuyi Z, Ye L, et al. Coverage, quality of and barriers to postnatal care in rural Hebei, China: a mixed method study. *BMC pregnancy and childbirth*. 2014;14(1):1-12.
9. Dhakal S, Chapman GN, Simkhada PP, Van Teijlingen ER, Stephens J, Raja AE. Utilisation of postnatal care among rural women in Nepal. *BMC pregnancy and childbirth*. 2007;7(1):1-9.
10. Kanté AM, Chung CE, Larsen AM, Exavery A, Tani K, Phillips JF. Factors associated with compliance with the recommended frequency of postnatal care services in three rural districts of Tanzania. *BMC pregnancy and childbirth*. 2015;15(1):1-10.
11. Langlois ÉV, Miszkurka M, Zunzunegui MV, Ghaffar A, Ziegler D, Karp I. Inequities in postnatal care in low-and middle-income countries: a systematic review and meta-analysis. *Bulletin of the World Health Organization*. 2015;93:259-70G.
12. Limenih MA, Endale ZM, Dachew BA. Postnatal care service utilization and associated factors among women who gave birth in the last 12 months prior to the study in Debre Markos town, northwestern Ethiopia: a community-based cross-sectional study. *International journal of reproductive medicine*. 2016;2016.
13. Office ADH. Annual report. 2020.
14. Organization WH. World health statistics 2016: monitoring health for the SDGs sustainable development goals: World Health Organization; 2016.
15. Mirkuzie AH, Sisay MM, Reta AT, Bedane MM. Current evidence on basic emergency obstetric and newborn care services in Addis Ababa, Ethiopia; a cross sectional study. *BMC pregnancy and childbirth*. 2014;14(1):1-8.
16. Jat TR, Ng N, San Sebastian M. Factors affecting the use of maternal health services in Madhya Pradesh state of India: a multilevel analysis. *International journal for equity in health*. 2011;10(1):1-11.
17. Somefun OD, Ibisomi L. Determinants of postnatal care non-utilization among women in Nigeria. *BMC research notes*. 2016;9(1):1-11.
18. Akunga D, Menya D, Kabue M. Determinants of postnatal care use in Kenya. *African Population Studies*. 2014;28(3):1447-59.
19. Izudi J, Amongin D. Use of early postnatal care among postpartum women in Eastern Uganda. *International Journal of Gynecology & Obstetrics*. 2015;129(2):161-4.
20. Alemayeh H, Assefa H, Adama Y. Prevalence and factors associated with post natal care utilization in Abi-Adi Town, Tigray, Ethiopia: a cross sectional study. *IJPBSF International Journal of Pharmaceutical and Biological Sciences Fundamentals*. 2014;8(01):23-35.

21. Hordofa MA, Almaw SS, Berhanu MG, Lemiso HB. Postnatal care service utilization and associated factors among women in Dembecha District, Northwest Ethiopia. *Science Journal of Public Health*. 2015;3(5):686-92.
22. Gebeyehu Workineh Y. Factors affecting utilization of postnatal care service in Amhara region, Jabitena district, Ethiopia. *Sci J Public Health*. 2014;23:169-76.
23. Tesfahun F, Worku W, Mazengiya F, Kifle M. Knowledge, perception and utilization of postnatal care of mothers in Gondar Zuria District, Ethiopia: a cross-sectional study. *Maternal and child health journal*. 2014;18(10):2341-51.
24. Babalola S, Fatusi A. Determinants of use of maternal health services in Nigeria-looking beyond individual and household factors. *BMC pregnancy and childbirth*. 2009;9(1):1-13.
25. Obonyo J. Kenya National Bureau Of Statistics (KNBS) And ICF Macro. Kenya Demographic And Health Survey 2008-09. 2010.
26. Rwabufigiri BN, Mukamurigo J, Thomson DR, Hedt-Gautier BL, Semasaka JPS. Factors associated with postnatal care utilisation in Rwanda: A secondary analysis of 2010 Demographic and Health Survey data. *BMC pregnancy and childbirth*. 2016;16(1):1-8.
27. Belachew T, Taye A, Belachew T. Postnatal care service utilization and associated factors among mothers in Lemo Woreda, Ethiopia. *J Women's Health Care*. 2016;5(10.4172):2167-0420.1000318.
28. Mohan D, Gupta S, LeFevre A, Bazant E, Killewo J, Baqui AH. Determinants of postnatal care use at health facilities in rural Tanzania: multilevel analysis of a household survey. *BMC pregnancy and childbirth*. 2015;15(1):1-10.
29. Dahiru T, Oche OM. Determinants of antenatal care, institutional delivery and postnatal care services utilization in Nigeria. *Pan African medical journal*. 2015;22(1).
30. Timilsina S, Dhakal R. Knowledge on postnatal care among postnatal mothers. *Saudi Journal of Medical and Pharmaceutical Sciences*. 2015;1(4):87-92.
31. Mirzaee K, Taghi Shakeri M. Maternal knowledge on postpartum care in healthcare centers of Mashhad, Iran in 2013. *Journal of Midwifery and Reproductive Health*. 2015;3(4):456-64.
32. Amenu G, Mulaw Z, Seyoum T, Bayu H. Knowledge about danger signs of obstetric complications and associated factors among postnatal mothers of Mechekel District Health Centers, East Gojjam Zone, Northwest Ethiopia, 2014. *Scientifica*. 2016;2016.
33. Singh A. Supply-side barriers to maternal health care utilization at health sub-centers in India. *PeerJ*. 2016;4:e2675.
34. Kenny A, Basu G, Ballard M, Griffiths T, Kentoffio K, Niyonzima JB, et al. Remoteness and maternal and child health service utilization in rural Liberia: A population-based survey. *Journal of global health*. 2015;5(2).
35. Mrisho M, Obrist B, Schellenberg JA, Haws RA, Mushi AK, Mshinda H, et al. The use of antenatal and postnatal care: perspectives and experiences of women and health care providers in rural southern Tanzania. *BMC pregnancy and childbirth*. 2009;9(1):1-12.
36. Titaley CR, Hunter CL, Heywood P, Dibley MJ. Why don't some women attend antenatal and postnatal care services?: a qualitative study of community members' perspectives in Garut, Sukabumi and Ciamis districts of West Java Province, Indonesia. *BMC pregnancy and childbirth*. 2010;10(1):1-12.
37. Organization WH. WHO technical consultation on postpartum and postnatal care. World Health Organization; 2010.
38. Workineh YG, Hailu DA. Factors affecting utilization of postnatal care service in Jabitena district, Amhara region, Ethiopia. *Sci J Public Health*. 2014;23(3):169-76.

10. ANNEXES

ANNEX I. ENGLISH VERSION PARTICIPANT INFORMATION SHEET AND VOLUNTARY CONSENT FORM

My name is..... (Name of the data collector/interviewer). I am working as a data facilitator for the study being conducted in this community by Baye Workie Tsega who has been studying for his Masters of degree at Bahir Dar University, College of Medicine and Health Sciences. I kindly request you to lend me your attention to explain you about the study and being selected as the study participant.

The study topic: Postpartum care uptake and its Associated factors among mother who gave birth in the last six months in Yilmana Densa District, Northwest Ethiopia, 2022.

Purpose of the study:

The findings of this study will give paramount importance for the district health office, different non-governmental organization and policy makers to plan intervention programs and to create awareness about the consequences about not utilizing postpartum care for the mothers. It will create awareness for health care institution about factors that make community not using health care institution and why do mothers not utilizing postpartum care practices in a way which was recommended by health extension workers and other health care providers. Moreover, the purpose of this study is to write a thesis as a partial requirement for the fulfillment of a Master ‘s Program in Integrated Emergency Surgery and Obstetrics for the principal investigator.

Procedure and duration

If you are willing to participate in this study, you need to understand and put the signature on the agreement form. Then after, I will be interviewing you using a questionnaire to provide me with pertinent data that is helpful for the study. There are **50** questions to answer where I will fill the questionnaire by interviewing you. The interview will take about a maximum of 30 minutes, so I kindly request you to spare me this time for the interview.

Risk/ Discomfort and Benefits

There is minimal risk in participating in this research project. But you are required to willingly spare time to respond to interviewed question from data facilitator.

If you participate in this research, **there may not be direct benefit** to you but your participation is likely to help us in postpartum care uptake. Ultimately, this will help us to identify the gap and take the appropriate intervention by the authorized stakeholder.

Confidentiality

The information collected from this research will be kept confidential and information about you that will be collected by this study will be stored in a file, without your name, but a code number assigned to it. In addition, it will not be revealed to anyone except the principal investigator and will be kept confidentially.

Right to refuse or withdraw

You have full right to refuse from participating in this research. You can choose not to respond to some or all questions if you do not want to give your response. You have also the full right to withdraw from this study at any time you wish, without losing any of your right.

Contact Address

If there are any questions or suggestions any time about the study or the procedures, please contact:

Baye Workie, *Cell Phone: +251910565955*

E-mail: bayeworkie91@gmail.com

Declaration of Informed Voluntary Consent

I have read/ she/ He were read for me the participant information sheet. I have clearly understood the purpose of the research, the procedures, the risks and benefits, issues of confidentiality, the rights of participating and the contact address for any queries. I have been given the opportunity to ask questions for things that may have been unclear. I was informed that I have the right to withdraw from the study at any time or not to answer any question that I do not want. Therefore, I declare my voluntary consent to participate in this study with my initials (signature)

Name and Signature of Participant: _____ Date _____ Time _____

Name and Signature of Data facilitator: _____ Date _____ Time _____

Thank you!!!

ANNEX II. ENGLISH VERSION QUESTIONNAIRE

BAHIR DARUNIVERSITY

Dear Respondents:

This questionnaire is prepared to assess postpartum care, its predictors and barriers among mothers who gave birth in the last six months in Yilmana Densa District, Northwest Ethiopia, 2021. The assessment is made for the partial fulfillment of MSc Degree in Integrated Emergency Surgery and Obstetrics. The questionnaire contains both closed and open-ended questions and will be interviewed. You are therefore kindly requested to provide genuine response to the questions. The information you provide is confidential and is used only for the purpose of this study. If you have any question, don't hesitate to ask the data facilitator.

Your cooperation and participation until the completion of the interview is very necessary for the successful completion of the assessment.

Thank you in advance for your cooperation!!!

Data facilitators sign: _____

Table 4. Questionnaire of the study for Associated factors of postpartum care uptake among mothers who gave birth in the last six months in Yilmana Densa District, Northwest Ethiopia 2022.

Instruction: Encircle respondent choice and fill in the blank space with her response provided.

S/ No	Question	Response	Skip
Part I: Socio- demographic Characteristics			
001	Would you tell me your age in year?	/ / in year	
002	Would you tell me your Marital status?	1. Married 2. Divorced 3. Widowed 4. Never married 5. Separated	
003	Would you tell me your Educational status?	1. Cannot able to read and write 2. Can read and write 3. Elementary school 4. Secondary 5. College and above	
004	Would you tell me your husband educational status?	1. Cannot able to read and write 2. Can read and write 3. Elementary school 4. Secondary 5. College and above	
005	Would you tell me your religion?	1. Orthodox 2. Muslim 3. Protestant 4. Traditional 5. Other, specify	
006	Would you tell me your occupation?	1. Housewife 2. Farmer 3. Merchant 4. Government employer 5. Daily laborer 6. Other, Specify _____	
007	Would you tell me your husband occupation	1. Farmer 2. merchant 3. governmental employer 4. daily laborer	

		5. other, specify	
008	Place of residence	1. urban 2. rural	
Part II: Maternal and child health services			
009	Would you tell me how many pregnancies did you have (it includes abortion)	1. One 2. Two 3. Three 4. Four and above	
010	Do you have Antenatal Care? Contact?	5. Yes 6. No	If no, skip to Q 016
011	Where did you get ANC checkup?	1. Health post 2. Health center 3. Hospital 4. if other (specify)	
012	How many times you received Antenatal Care service from health care provider?	() in Number	
013	Have you been advised about postpartum care use during Antenatal Care contact?	1. Yes 2. No	
014	If above answer is Yes, what about it? (Enlist them)	_____ _____ _____ _____	
015	Had you faced any type of complication during pregnancy?	1. Yes 2. No	
016	Where did you give birth for index child?	1. Health institution 2. Home	
017	If you gave birth at health facility, would you tell me the time you were discharged after Delivery?	1. Immediately after birth 2. six hours after birth 3. one day after birth 4. More than 1day 5. other (specify)	
018	Had you faced any complication during delivery?	1. Yes 2. No	
019	What was mode of your delivery?	1. Spontaneous vaginal 2. Instrumental 3. Cesarean section	
020	What was Outcome of your delivery?	1. Alive 2. Not alive	
021	Who gave care for you after delivery?	1. Health Extension Worker (HEW) 2. Family/ mother-in-law	

		<ul style="list-style-type: none"> 3. Neighbor 4. My mom 5. Other, Specify_____ 	
022	Did you have Postnatal Care contact?	<ul style="list-style-type: none"> 1. Yes 2. No 	If no skip to Q028
023	If yes, how many times was it?	<ul style="list-style-type: none"> 1. One 2. Two 3. Three and above 	
024	When was it	<ul style="list-style-type: none"> 1. Within 6-24 hrs. 2. At the 3rd day 3. At the 7th day 4. Within 42 days 	
025	What was Your reason for PNC uptake?	<ul style="list-style-type: none"> 1. Immunization 2. The infant was ill 3. Family planning 4. For Health professional appointment 5. Fear of illness 6. Medical checkup 7. Health problems after delivery 8. Referred by others 9. Others_____ 	
026	Would you tell me what types of postnatal Services did you receive when you went back to health facility after delivery?	<ul style="list-style-type: none"> 1. Physical examination 2. Immunization of baby 3. Counseling PNC danger signs 4. Counseling about baby care 5. Family planning services 6. Breastfeeding education 7. Other(specify)_____ 	
027	If you did not go for services, would you tell me possible reasons why you did not attend PNC services?	<ul style="list-style-type: none"> 1. Felt fine 2. Too busy with baby 3. No need for it 4. Unable to walk distance 5. Waiting time is too long 6. Cultural belief reasons 7. Health care providers told me that I should come when I get problem 8. Others_____ 	
Part III: Source of Information postpartum Care uptake and Health care providers Counseling related question			
028	Have you heard/counseled About Postpartum care after delivery?	<ul style="list-style-type: none"> 1. Yes 2. No 	
029	What was it about?	<ul style="list-style-type: none"> 1. About need of the care 	

		<ol style="list-style-type: none"> 2. About availability 3. Schedule of the contact 4. when to contact when problems occur 5. postpartum danger signs 6. Others(specify)----- - 	
030	From which source you heard the information?	<ol style="list-style-type: none"> 1. Health professionals 2. Health Extension Workers (HEWs) 3. Health Development Army (HDA) 4. Neighbors 5. Friends 6. Media 7. Other, Specify_____ 	
031	Do you know the time that PNC service Should be started?	<ol style="list-style-type: none"> 1. Yes 2. No 	
032	Can you mention correct time to start PNC?	<ol style="list-style-type: none"> 1. 6-24 hours 2. 3-7 days 3. At 42 days 4. Other(specify)_____ 	
033	Do you know the postnatal services that you Are supposed to receive after delivery?	<ol style="list-style-type: none"> 1. Yes 2. No 	
034	What are they?	<ol style="list-style-type: none"> 1. Physical examination 2. Maternal Feeding 3. Personal hygiene 4. Immunization of baby 5. Family planning services 6. Breastfeeding education 7. Other (specify)_____ 	
Part IV: knowledge related questions			
035	Mother know that postpartum care contact is must to have for postpartum mothers.	<ol style="list-style-type: none"> 1. Yes 2. No 	
036	Mother know availability of PNC?	<ol style="list-style-type: none"> 1. Yes 2. No 	
037	Mother know that	<ol style="list-style-type: none"> 1. Yes 	

	Postpartum period is more dangerous for her?	2. No	
038	Mother know the correct time for PNC uptake	1. Within 6- 24 hrs. 2. At the 3 rd day 3. At the 7 th day 4. within 42 days 5. others _____	
039	Mother knows at least one postpartum complication? (The list will not be read)	1. Vaginal Bleeding 2. Sever head ache 3. Fever 4. Breast problem 5. Urinary problems 6. Offensive vaginal discharge 7. Mood change 8. Others_____	
040	What did you do when postpartum complication occurred?	1. Went to Health facility 2. Went/came mother 3. Traditional healers 4. Religious practices 5. Wait at home	
041	For what purpose you should go to health institution after giving birth?	1. For my health checkup 2. For my child health checkup 3. Others_____	
042	Who decided for you to take postpartum care?	1. Myself 2. My husband 3. Both 4. Others_____	
Part V: Health care related			
043	Which health institution is found in your surrounding?	1. Hospital 2. Health center 3. Health Post 4. Other, Specify_____	
044	Distance to health institution from your home on foot?	1. Less than 30 minutes/5 km 2. 30-1hrs /5-15 km 3. Greater than 1 hr./15 km	
045	Did you get transportation service to go to health facility?	1. Yes 2. No	
046	How much does it cost you to get to Health facility?	(_____) Birr	
047	Did you have to pay any fee for the postnatal services	1. Yes 2. No	

	that you were provided in the health facility?		
048	Since you gave birth in healthy facility, are there any problems you have faced that prevented you from going to receive postnatal services?	<ol style="list-style-type: none"> 1. Yes 2. No 	
049	If you faced problems in health facility, would you tell me those problems you have faced?	<ol style="list-style-type: none"> 1. Shouted at me 2. They didn't respect me 3. They did not teach me well 4. Examine me roughly 5. Not come when called 6. If other specify 	
050	Think of your own experience of the maternity services when you delivered and afterwards, how would you describe the service?	<ol style="list-style-type: none"> 1. Good 2. Fair 3. Bad 	
051	What do you say about mode of health delivery system of health care workers?	<ol style="list-style-type: none"> 1. Good 2. Fair 3. Bad 	

Thank you for your cooperation and I hope good luck in your life!!!!

ANNEX III. PARTICIPANTS INFORMATION SHEET AND
CONSENT FORM AMHARIC VERSION

ለጥናቱ ተሳታፊ የምርምር ጥናት ማብራሪያ

ስሜ-----ይባላል፡ እኔም ባየ ወርቁ ለተባለ በባህር ዳር ዩኒቨርሲቲ የተቀናጀ የድንገተኛ ቀዶ ህክምና የማስተርስ ዲግሪ ተማሪ የሚያካሂደውን ጥናት መጠይቅ ለማስሞላት የተመርጥኩ ነኝ።እኔም በትህትና የምጠይቀዎ ሲኖር ስለጥናቱ ምንነትና እርስዎ ለምን ለጥናቱ እንደተመረጡ ገለጻ ስለማድረግለዎት እንዲያዳምጡኝ ነው።

የጥናቱ ርዕስ፡- በአለፉት ስድስት ወራት ውስጥ በይልማናደንጎ ወረዳ የወለዱ እናቶች የድህረ ወሊድ ጤና ክትትል ና ተግዳሮቶቹ ምንድን ናቸው የሚል ነው።

ሀ/ የጥናቱ መግቢያና ዋና አላማ

ድህረ ወሊድ ክትትል በዓለማችን ባሉ ሃገሮች ሽፋኑ ዝቅተኛ ነው። ይህ የጤና አገልግሎት ከሌሎች የናቶች ና ህጻናት ጤና አገልግሎቶች አንጻር ሲታይ ዝቅተኛ ትኩረት ተሰጦታል። ነገር ግን የበርካታ እናቶች ሞት የሚከሰተው በድህረ ወሊድ ማለትም ከወለዱ በ ሁለት ቀን ውስጥ ነው።

የጥናቱ ዋና አላማ፡ ድህረ ወሊድ ክትትል እንዳይኖር የሚያደርጉ ጉዳዮችን፤ ሽፋኑን ና ተግዳሮቶችን መዳሰስ ይሆናል።

ለ/ የጥናቱ ሂደትና ጊዜ፡ እኔ ጥያቄዎቹን በማንበብ እርስዎ ደግሞ ለጥያቄዎቹ ምላሽ በመስጠት 30 ደቂቃዎች አብረን እንቆያለን።የጥያቄዎቹ ብዛትም 50 ነው።ስለዚህ እኔ ጥያቄዎቹን አነብለዎታለሁ የምትሰጡኝን የጥያቄ መልሶች በቦታቸው እሞላለሁ።

ሐ/ ጥቅምና ጉዳት፡ ይህ ጥናት የእርስዎን የተወሰነ ሰዓት ከመሻማት በቀር የሚያመጣው ብዙ የሚባል ጉዳት የለም።በጥናቱ ስለተሳተፋችሁ የምታገኙት ቀጥተኛ የሆነ ጥቅም የለም።ነገር ግን የጥናቱ ወጤት በአካባቢው በጤና ዙሪያ ለሚሰሩ ድርጅቶች ጠቀሚ የሆኑ መረጃዎችን ይሰጣል።

መ/ ምስጢራዊነት፡ የምትሰጡት መረጃ ምስጢራዊነቱ የተጠበቀ ነው።በመጠይቁም ውስጥ የእርስዎን ማንነት በተለየ ሁኔታ የሚጠይቅ ጥያቄ የለም።የጥናቱም ወጤት ጥናቱ ለተካሄደበት አካባቢ ጠቅለል ያለ መረጃ የሚሰጥ ሲሆን የአንድን ግለሰብ ወይም ቤት ማንነት የሚያንጸባርቅ አይደለም።ጥናቱም በምንም ዓይነት መልኩ በቃልም ይሁን በጽሁፍ የጥናቱን ተሳታፊ ማንነት በሚያሳወቅ ሁኔታ ምሳሌ አድርጎ አያቀርብም።

ሠ/ የተሳታፊዎ መብት ፡ በጥናቱ መሳተፍ ሙሉ በሙሉ በፈቃደኝነት ላይ የተመሰረተ ነው። በጥናቱ የመሳተፍም ሆነ ያለመሳተፊ መብት አለዎት።ለመሳተፍ ፈቃደኛ ከሆኑ ደግሞ

በማንኛውም ሰዓት የማቆም ወይንም መመለስ ያልፈለጉትን ጥያቄ ያለመመለስ መብት አሎት።በማንኛውም ሰዓት ጥናቱን ብታቆሙ በተለየ መልኩ የምትታዩበት ነገር የለም።

የበለጠ መረጃ ማግኘት ካሰፈለገዎ

ጥናቱን የተመለከተ ማንኛውም ዓይነት ጥያቄ ወይንም አስተያየት ካለዎት በሚከተሉት አድራሻዎች መረጃ ማግኘት ትችላላችሁ፡

የጥናቱ ባለሙያ

ስም፡ ባየ ወርቄ ስ.ቁጥር፡ 0910564955 ኢ-ሜል፤ bayeworkie91@gmail.com

በፈቃደኝነት ላይ የተመሰረተ በዚህ ጥናት ለመሳተፍ ፍቃደኛ መሆንን የሚገልጽ መግለጫ

ይህ የስምምነት መግለጫ በሚገባ ተነቦልኛል።እኔም የጥናቱን ዓላማ በሚገባ ተረድቻለሁ።ጥቅምና ጉዳቱን፣ምስጢራዊነቱን፣መብትን እንዲሁም ጥናቱን የተመለከቱ ጥያቄዎችና አስተያየቶች ካሉ ማንን መጠየቅ እንደምንችል ተገንዝቤአለሁ።ግልጽ ያልሆኑ ነገሮችን እንድጠይቅ እድሉ ተሰጥቶኛል።እኔም በማንኛውም ሰዓት መጠይቁን የማቆም ወይንም መመለስ ያልፈለኩትን ያለመመለስ መብት እንዳለኝ ተነግሮኛል።ስለዚህ በፈቃደኝነት ላይ በተመሰረተ እኔ በጥናቱ እንድትሳተፍ መወሰኔን ከዚህ በታች ባለዉ ፊርማዬ አረጋግጣለሁ።

ስምና ፊርማ.....

መጠይቁን ያስሞለዉ ሰዉ ፊርማ.....

ፊርማዉ መጠይቁን በሚያስሞላዉ ሰዉ ፊ

Table 5. Amharic Version Questionnaire developed for predictors of postnatal care uptake among mothers who gave birth in the last six months in Yilmana Densa District, Northwest Ethiopia 2022.

መጠይቅ በአማርኛ

መመሪያ

ትክክል ወይም ትክክል አይደለም የሚባል መልስ የለም፤ ነገር ግን ምላሽዎ የድኅረ ወሲድ ክትትልን በተመለከተ ያለውን ግንዛቤዎንና ልምድዎን እንድናውቅ ይረዳናል።

ከቀረቡት አማራጮች መልስዎን በቃላት ይግለፁ፤ ማብራሪያ በሚጠይቅበት ቦታ በቃላት ያብራሩ።

ክፍል 1: የማህበራዊና አካባቢያዊ ሁኔታዎች			
ተ.ቁ	መጠይቅ	መልስ	ይለፍ
001	የዕድሜዎት በሙሉ ዓመት ስንት እንደሆነ ሌነግሩኝ ይችላሉ?	_____	
002	ሀይማኖትዎ ምንድን ነው?	<ol style="list-style-type: none"> 1. ኦርቶዶክስ 2. ፕሮቴስታንት 3. ካቶሊክ 4. ሙስሊም 5. ሌላከሆነ(ይግለፁ)- 	
003	የጋብቻ ሁኔታ ሊነግሩኝ ይችላሉ?	<ol style="list-style-type: none"> 1. ያገባች 2. ያላገባች 3. የፈታች 4. የሞተባት 5. አብራ የማትኖር 6. ሌላ ከሆነ ይገለፁ----- 	
004	የትምህርት ደረጃዎ ስንተኛ ነዎት?	<ol style="list-style-type: none"> 1. ማንበብና መጻፍ የማትችል 2. ማንበብና መጻፍ የምችል 3. አንደኛ ደረጃ(1-8) 4. ሁለተኛ ደረጃ(9-12) 5. ኮሌጅ/ዩኒቨርሲቲ 	
05	የመኖርያ ቦታ	<ol style="list-style-type: none"> 1. ገጠር 2. ከተማ 	
006	የእርስዎ የሥራ ዓይነት ምንድን ነው?	<ol style="list-style-type: none"> 1. አርሶ አደር 2. የቤት እመቤት 	

		<ol style="list-style-type: none"> 3. የቀን ስራተኛ 4. የመንግስት/ መንግስታዊ ባሌሆነ ድርጅት የሚሠሩ 5. ቀጥሮ የሚያሠሩ 6. ነጋዴ 7. በግል ሥራ የሚተዳደሩ 8. ሌላ ከሆነ ይግለጹ----- 	
007	የባለቤትዎ የትምህርት ደረጃ ስንተኛ ነው?	<ol style="list-style-type: none"> 1. ማንበብና መጻፍ የማይችል 2. ማንበብና መጻፍ የሚችል 3. አንደኛ ደረጃ (1-8) 4. ሁለተኛ ደረጃ(9-12) 5. ኮሌጅ/ዩኒቨርሲቲ 	
008	የባለቤትዎ ሥራ ምንድን ነው?	<ol style="list-style-type: none"> 1. አርሶ አደር 2. የቀን ስራተኛ 3. የመንግስት/ መንግስታዊ ባሌሆነ ድርጅት የሚሠሩ 4. ቀጥሮ የሚያሠሩ 5. ነጋዴ 6. ሌላ ከሆነ ይግለጹ 	
ክፍል 2 የእናቶችና ሕፃናት ጤና አገልግሎት			
009	ስለ ድህረ ወሊድ አገልግሎት ሰምተዉ ያዉቃለ?	<ol style="list-style-type: none"> 1. አዎን 2. አላዉቅም 	
010	ሰምተዉ ከሆነ ከየት ነበር የሰሙት? (ከአንድ መልስ በላይ ይቻላል)	<ol style="list-style-type: none"> 1. ከጤና ኤክስቴንሽን ሠራተኛ 2. ከሴቶች ልማታዊ ቡድን መሪ 3. ከጤና ባለሙያ 4. ሌላ ከሆነ ይግለጹ 	
011	የድኅረ ወሊድ ክትትል የሚጀመርበት ትክክለኛውን ጊዜ ያዉቃለ?	<ol style="list-style-type: none"> 1. አዎን 2. አላዉቅም 	
012	መልስዎ አዎን ከሆነ የድኅረ ወሊድ ክትትል የሚጀመርበት ትክክለኛው ጊዜ መቼ ነው?	<ol style="list-style-type: none"> 1. ከወለዱ በኋላ ከ 6-24 ሰዓታት ውስጥ 2. በ 3 ቀናት ውስጥ 3. በ 7 ቀናት ውስጥ 4. ከወለዱ በኋላ በ42 ቀናት ውስጥ 	

013	በድኅረ ወሊድ ክትትል ወቅት አንዲት እናት ማግኘት ያለባት እንክብካቤ/ አገልግሎት ምን እንደሆነ ያውቃለች?	<ol style="list-style-type: none"> 1. አዎን 2. አላውቅም 	
014	መልስዎ አዎን ከሆነ ምን ዓይነት አገልግሎት እንደሆነ ይዘርዝሩ (ምርጫዉ አይነበብም)	<ol style="list-style-type: none"> 1. አጠቃላይ የሰውነት ምርመራ አገልግሎት 2. የህፃን ክትባት አገልግሎት 3. ስለ እናት ንፅህና አጠባበቅ 4. የቤተሰብ ምጣኔ አገልግሎት 5. የጡት ማጥባት ትምህርት 6. ስለ እናት አመጋገብ 7. ሌላ ከሆነ ይግለፁ..... 	
015	የአሁኑ(ኑ-አ)ን ልጅ ከወለዱ በኋላ የድኅረ ወሊድ ክትትል አድርገው ያውቃሉ	<ol style="list-style-type: none"> 1. አዎን 2. አላውቅም 	
016	መልስዎ አዎን ከሆነ የድኅረ ወሊድ ክትትልዎ መቼ ነበር የጀመሩት?	<ol style="list-style-type: none"> 1. ከወሊድ በኋላ በ 6-24 ሰዓታት ውስጥ 2. ከወሊድ በኋላ በ 3 ቀናት ውስጥ 3. ከወሊድ በኋላ በ 7 ቀናት ውስጥ 4. ከወሊድ በኋላ በ 42 ቀንናት ውስጥ 	
017	ድህረ ወሊድ ጤና አገልግሎት ስንት ጊዜ ተከታትለዋል?	()	
018	የድኅረ ወሊድ ጤና አገልግሎት ክትትል ለምን አደረጉ?	<ol style="list-style-type: none"> 1. እኔን ስላመመኝ 2. ህፃኑ(ኑ-አ) ስለታመመ(ች) 3. ህፃኑ(ኑ-አ)ን ለማስከተብ 4. የጤና ባለሙያ መከታተል አለብኝ ስላለኝ 5. የቤተሰብ ምጣኔ አገልግሎት ስላስፈለገኝ 6. ለጤንነቴ ስለሚያስፈልገኝ 7. ሌላ ከሆነ ይግለፅ _____ 	
019	ከወለዱ በኋላ ወደ ጤና ተቋም ሲሄዱ ምን ዓይነት የድኅረ	<ol style="list-style-type: none"> 1. አጠቃላይ የሰውነት ምርመራ አገልግሎት 	

	ወሊድ አገልግሎት አገኙ?	<ol style="list-style-type: none"> 2. የህፃን ክትባት አገልግሎት 3. ምክር አገልግሎት 4. የቤተሰብ ምጣኔ አገልግሎት 5. የጡት ማጥባት ትምህርት 6. ሌላ ካለ ይግለጹ..... 	
020	ድኅረ ወሊድ ክትትል ያላደረጉበት ምክንያት ምን እንደሆነ ይዘርዘሩ	<ol style="list-style-type: none"> 1. የቤተሰብን ጉዳይ በቤት ውስጥ እየሰራሁ 2. ግንዛቤወ ስለልነበረኝ 3. ዋጋወ ወድ ስለሆነ 4. ዕምነቴ ስለሚከለክለኝ 5. አስፈላጊ ነው ብዬ ስለማላምን 6. የመጓጓዣ ገንዘብ ስላልነበረኝ 7. ብዙ ሰዓት ስለሚያስጠብቅ 8. ልጄን የሚጠብቅልኝ ሰው ባለመኖሩ 9. ትራንስፖርት ስለሌለ 10. ሌላ ከሆነ ይገለጹ..... 	
021	ከዚህ በፊት የጨቅላ ህፃን ሞት አጋጥሞዎታል?	<ol style="list-style-type: none"> 1. አዎን 2. አላጋጠመኝም 	
022	በዕርግዝና ወቅት የቅድመ ወሊድ ክትትል በጤና ተቋም አድርገዋል?	<ol style="list-style-type: none"> 1. አዎን 2. አልተከታተልኩም 	
023	ስንት ልጄ አለዎት (ወርጃንም ይጨምራል)	()	
024	መልስዎ አዎን ከሆነ የትነበር የቅድመ ወሊድ ክትትል ያደረጉት;	<ol style="list-style-type: none"> 1. በጤና ኬላ 2. በጤና አጠባበቅ ጣቢያ 3. ሆስፒታል 4. ሌላ ከሆነ ይገለጹ----- <p style="text-align: center;">-</p>	
025	የቅድመ ወሊድ ክትትል ስንት ጊዜ ነበር ያደረጉት?	()	
026	በቅድመ ወሊድ ክትትል ጊዜ ስለ ድኅረ ወሊድ ክትትል ተነግሮታል?	<ol style="list-style-type: none"> 1. አዎን 2. አልተነገረኝም 	
027	መልስዎ አዎን ከሆነ ድኅረ ወሊድ ክትትል ማን ነገርዎት?	<ol style="list-style-type: none"> 1. ጤና ኤክስቴንሽን ሠራተኛ 2. ጤና ባለሙያ 3. ልማት ቡድን አስተባባሪ 4. ጎረቤት 	

		5. ሌላ ከሆነ ይግለፁ	
028	የመጨረሻውን ልጅ የት ነበር የወለዱት?	1. በጤና ተቋም 2. ቤት	
029	በድህረ ወሊድ ወቅት ችግር ነበር	1. አዎን 2. የለም	
030	ካለ ለችግሩ መፍትሄ ምን አረግሽ	1. ወደ ጤና ተቋም ሄድኩ 2. እናት ትመጣለች 3. ቤት እቆያለሁ 4. ባህላዊ ቤቶች 5. እምነት ቤቶች 6. ሌላ	
031	የወለዱት በጤና ተቋም ከሆነ በምን መንገድ ነው የወለዱት?	1. በማህፀን በር በተለመደ መንገድ 2. በመሳሪያ እገዛ 3. በማደንዘዣ ማህፀን ተከፍቶ 4. ሌላ ከሆነ ይገለጽ	
032	ከወሊድ በኋላ ምን ያህል ጊዜ ጤና ተቋም ቆይተው ወጡ ?	1. ወዲያው እንደተገለገልኩ 2. ስድስት ሰዓት ያህል ቆይቼ 3. አንድ ቀን ቆይቼ 4. ከአንድ ቀን በላይ ቆይቼ	
033	ከወሊድ በኋላ ስለ ድኅረወሊድ ክትትል አስፈላጊነት ተነግርዎታል?	1. አዎን 2. አልተነገረኝም	
034	የአሁኑ(አ)ን ልጅዎን የተገለገሉት በቤትዎ ከሆነ በማን እርዳታ ነው የተገለገሉት?	1. በልምድ አዋላጅ 2. በዘመዴ 3. በጤና ኤክስፔንሽን ባለሙያ 4. ሌላ ከሆነ ይገለፁ-----	
035	የመጨረሻ ወሊድዎ ወጤት ምን ነበር	1. ህይወት ያለው ህጻን 2. የሞተ ህጻን	
036	የመጨረሻ ልጅዎን ከወለዱ በኋላ ያጋጠምዎት ችግር አለ?	1. አዎን 2. የለም	
ክፍል3: እውቀት ጋር የተዛመዱ ጥያቄዎች			
037	ድህረ ወሊድ ጤና አገልግሎት ለእናቶች ያስፈልጋል	1. አዎ 2. አያስፈልግም	
038	ድህረ ወሊድ አገልግሎት መኖሩን ታውቃለች	1. አዎ 2. አታውቅም	

039	የድህረ ወሊድ ወቅት ለእናት አደገኛ እንደሆነ ታውቃለች	1. አዎ 2. አታውቅም	
040	ትክክለኛውን የድህረ ወሊድ ክትትል መውሰጃ ጊዜ ታውቃለች	1. 6-24 ሰዓት 2. በ 3 ቀናት 3. በ 7 ቀናት 4. በ 42 ቀናት 5. ሌላ (ይጠቀስ)	
041	ቢያንስ አንድ የድህረ ወሊድ አደገኛ ምልክት ታውቃለች	1. ከፍተኛ የደም መፍሰስ ችግር 2. መጥፎ ጠረን ያለው ፈሳሽ በማህፀን በር መፍሰስ 3. ከፍተኛ ራስ ምታት 4. ራስን መሳት 5. ሌላ ከሆነ ይገለፅ-----	
042	ድህረ ወሊድ ችግር ቢያጋጥምሽ ምን ታደርጊያለሽ?	1. ወደ ጤና ተቁአም መሄድ 2. እናቴ ትመጣለች 3. ወደ ባህል ህክምና መሄድ 4. ሃይማኖት አባት ማማከር 5. ቤት መጠበቅ 6. ሌላ(ይገለፅ).....	
043	በድህረ ወሊድ ወቅት ወደ ጤና ተቁአም የሄድሽበት አላማ ምን ነበር?	1. ለጤናየ ክትትል 2. ለህፃኔ ጤና ክትትል 3. ሌላ (ይገለፅ).....	
044	ድህረ ወሊድ ክብካቤ አገልግሎት እንድትደረጁ የሚደስነው ማን ነው?	1. ራሴ 2. ባለቤቴ 3. ባለቤቴና እኔ 4. ሌላ (ይገለፅ).....	
ክፍል 4: ድህረወሊድ ክትትል የሚከለክሉ ምክንያቶችን የሚመለከቱ ጥያቄዎች			
045	በቅርብዎ ያለው ጤና ተቋም (ከአንድ በላይ መልስ ይቻላል)	1. ሆስፒታል 2. ጤና ጣቢያ 3. ጤና ኬላ 4. ሌላ	
046	የጤና ተቋም ያለበት ቦታ	1. ከ 5 ኪ ሜ በታች /ከ30 ደቂቃ	

	ከእርስዎ ቤት ምን ያህል ይርቃል (በኪ.ሜ ወይም ምን ያህል ደቂቃ ይፈጃል?)	በታች 2. ከ 5 -15 ኪ.ሜ /ከ30 አስከ አንድ ሰዓት 3. ከ 15 ኪ.ሜ በላይ/ ከአንድ ሰዓት በላይ	
047	ወደ ጤና ተቋም ለመሄድ የትራንስፖርት አገልግሎት ያገኛሉ?	1. አዎን 2. አላገኝም	
048	መልስዎ አዎን ከሆነ እስከ ጤና ተቋም ስንት ብር ያስከፍላል?	()ብር	
049	በጤና ተቋም የሚሰጠውን የድህረ ወሊድ አገልግሎት ለማግኘት የሚያስከፍለው ገንዘብ አለ ?	1. አዎን 2. አያስከፍልም	
050	ድህረ ወሊድ ሲከታተሉ ችግር ደርሶዎበት ከሆነ ምን ዓይነት ችግር ነበር የገጠሞት ይዘርዘሩ? (ምርጫዎ አይነበብ)	1. በትክክል አያስተምሩም 2. አስፈራሩኝ 3. በትክክል አይመረምሩም 4. ሲጠሩ ቶሎ አይመጡም 5. አያከብሩኝም 6. አያዘኑልኝም 7. ሌላ ከሆነ ይገለፅ	
051	በእርስዎ ልምድ በተመለከቱት ሁኔታ ለእናቶች የሚሰጠውን የድህረ ወሊድ አገልግሎት አሰጣጥ እንዴት ይገልጹታል?	1. ጥሩ ነው 2. በመጠኑ ጥሩ ነው 3. መጥፎ ነው	

ቃለ መጠይቁን በመስጠት ስለተባበሩኝ እጅግ አመሰግናለሁ፤ መልካሙን ሁለ እንመኛለን!!