

**POSTNATAL CARE UTILIZATION AND ASSOCIATED FACTORS AMONG
WOMEN IN CHEHA WEREDA, GURAGHE ZONE, SNNPR, ETHIOPIA**

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DEPARTMENT OF POPULATION & FAMILY HEALTH

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Abstracts

Background: Ethiopia is one of the countries with the highest burden of maternal death with a mortality ratio of 676 per 100,000 live births and annual death toll of 19,000. Despite the enormous efforts in the past few years, universal access to postnatal Care (PNC) service remains far to be attained with a country wide coverage of only 12% during the 2014 MEDHS.

Objectives: This study was aimed at assessing the PNC service utilization and associated factors among mothers in Cheha Woreda of Guraghe Zone, SNNPR.

Methods: A community based cross-sectional study that involved 646 women who gave birth in the last one year found in selected kebeles of Cheha Woreda was conducted from October 10 to 30, 2015. A two-stage sampling technique using random sampling for selection of kebeles with proportionate allocation of the subjects and simple random sampling to get 658 women was used after getting updated list of targeted women from health extension workers. A pre-tested structured questionnaire was employed to collect data from women at household level. The important factors of PNC service utilization in the study population was identified by fitting a multivariable logistic regression model. All analyses was conducted using SPSS for windows version 20.0 and statistical significance was considered at $\alpha < 0.05$.

Result: With a 98% response rate the assessment showed that the magnitude of PNC was 51.9% and the probability of PNC utilization among mothers who gave birth at institutions was 7 [AOR=7, 95%CI (3.5, 14)] times that of home delivered ones, the odds of utilizing PNC was 4 [AOR=4, 95%CI (1.10, 4.7)] times among women who accepted four or more ANC than that of <4 ANC, compared to mothers aged ≥ 35 years, the odds of PNC was 4 [AOR=3.9, 95%CI (1.8, 8.4)] times and 2 ([AOR=1.7, 95%CI (1.07, 2.70)] times among whose age was 20-24 and age 25-29 respectively, and the odds of PNC was 2 [AOR=2.2, 95%CI (1.3, 3.5)] times for those women who are better knowledgeable about danger signs as that of their counterparts.

Conclusion: For about 50% prevalence of PNC in the district, enhancement of the factors institutional delivery, women knowledge about danger signs and frequency of ANC utilization are the most important areas of intervention for stakeholders to upgrade it.

Key words: PNC utilization, Cheha wereda, associated factor, Kebeles

Acronyms and Abbreviations

ANC-	Antenatal care
CHWS	community health workers
CSA	Central Statistics Agency
EBF	exclusive breast feeding
EDHS-	Ethiopian demographic health survey
FMOH-	federal ministry of health
GOV-	governmental
HEW-	Health extension worker
LMIC-	low and middle income countries
MCH-	maternal and child health
MMR-	maternal mortality ratio
MOH-	ministry of health
NGO-	non-governmental
PNC-	postnatal care
UNFPA-	united nations fund for population activities
WHO-	world health organization

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CHAPTER ONE :INTRODUCTION

1.1 BACKGROUND

According to mutual report of development agencies, developing countries like Ethiopia account for 99% (286 000) of the global yearly maternal deaths per hundred thousands, with sub-Saharan Africa region alone accounting for 62% (179 000). While none of the MDG regions had extremely high MMR, while it was 210 globally sub-Saharan Africa was the only MDG developing region with very high MMR, 510 [1].

Worldwide about 30 million women experienced obstetric complications in 2012, but the large majority of these women (about seven in ten did not receive the care they needed). Much of the unmet need for maternal and newborn care reflects a lack of access to and the poor quality of maternal and newborn health care, along with the prevalence of beliefs that delivering in a health facility is not necessary or not customary. According to data from 22 Demographic and Health Surveys conducted in all major regions, two important reasons women gave for not delivering in a health facility were cost and distance or lack of transportation. All these affects ANC, skilled delivery and PNC services utilization [2].

The postnatal care is a care given to a woman or her neonate after one hour of birth up to forty two days of postpartum. The postpartum period, especially the first few hours is critical to the health and survival of a mother and her newborn. The WHO strong recommendation describes that if birth is in a health facility, mothers and newborns should receive postnatal care in the facility for at least 24 hours after birth, if at home, the first postnatal contact should be as early as possible within 24 hours of birth, & at least three additional postnatal contacts, on day 3 (48–72 hours), between days 7–14 after birth, and six weeks after birth are required [3].

Based on the national data with a maternal mortality ratio of 676 per 100,000 live births and 19,000 maternal deaths annually, Ethiopia is a major contributor to the worldwide death toll of mothers. Although improvements have been reported in regard to reducing infant and child mortality in the country, there has been slow progress regarding Millennium Development Goal 5, the cornerstone of maternal health [4]. In other words, despite enormous effort, universal access to maternal health services remains limited, particularly when it comes to skilled delivery attendance & PNC service. The 2014 mini EDHS showed that the level of postnatal care

coverage is extremely low in Ethiopia (12%) & few reasons are articulated for low coverage that are expected to be varied from one area to another, & from cultural & socio-economic diversification [5, 6].

1.2 STATEMENT OF THE PROBLEM

Every year in Africa, at least 125,000 women and 870,000 newborns die in the first week after birth, yet this is when coverage and program are at their lowest along the continuum of care. The first day is the time of highest risk for both mother and baby. The fact that 18 million women in Africa currently do not give birth in a health facility poses challenges for planning and implementing postnatal care for women and their newborns. Regardless of place of birth, mothers and newborns spend most of the postnatal period (the first six weeks after birth) at home. Postnatal care program are among the weakest of all reproductive and child health program in the region [7, 8].

Half of all postnatal maternal deaths occur during the first week after the baby is born, and the majority of these occur during the first 24 hours after childbirth. The leading cause of maternal mortality in Africa – accounting for 34 percent of deaths – is hemorrhage, the majority of which occurs postnatal. Sepsis and infection claim another 10 percent of maternal deaths, virtually all during the postnatal period. Access to family planning in the early postnatal period is also important, and lack of effective PNC contributes to frequent, poorly spaced pregnancies. This is a stressful time for new mothers, so emotional and psychosocial support should be available to reduce the risk of depression [7].

Ethiopia is one of the countries with the highest burden of maternal death having a mortality ratio of 676 per 100,000 live births and annual death toll of 19,000 [4]. Despite of the fact that different figures were stated in national and global data (676 and 420, respectively) for maternal deaths in the country, everyone agrees that there are .still maternal deaths which needs due attention for intervention as it was less achieved compared to improvements made for child survival.

In spite of the fact that there was huge number of maternal death in the country, the level of postnatal care coverage is extremely low in Ethiopia. Only 12 percent of women received postnatal care within two days, as recommended. Nevertheless, this is an improvement from

three years ago when only 7 percent received postnatal care during the first two days of delivery. The great majority of women (83 percent) with a live birth in the preceding five years did not receive a postnatal checkup at all. Among women who received a postnatal checkup, 7 percent were examined within 4 hours of delivery, 3 percent within 4-23 hours, 2 percent within 1-2 days, and 5 percent within 3-41 days of delivery [5].

The SNNPR, the region where the zone is administrated had a very low coverage of below national level, 9.4% [5]. But in this study area (Guraghe zone) , and especially of Cheha wereda, the prevalence of PNC care was not assessed & associated factors were not searched for evidence based response but the report from the zone health desk shows that it is one of the lowest health service coverage of the area. Therefore, this assessment is vital to tailor approaches to solve factors of the PNC for improvement of maternal & child health after identifying the magnitude and predictors of the problem & communicating with local health managers & other stakeholders in the area.

CHAPTER TWO: LITERATURE REVIEW

2.1 Postnatal care utilization

In 2012, there were an estimated 122 million births in developing regions. All women who gave birth needed antenatal, delivery and postnatal care for themselves and their newborns. Of these, 30 million women experienced obstetric complications, but the large majority of these women (70%) did not receive the care they needed. Moreover, forty-six million newborns experienced complications, such as infections, breathing difficulties and low birth weight; more than half of these (56%) did not receive needed care [2].

In a study conducted in 30 low and middle income countries involving home and facility deliveries, an average of 40% of all women with a live birth in the previous five years did not receive any postpartum care check-ups. Among women who receive PNC, health professionals reportedly provided 57% of PNC services. The remainder received from traditional birth attendants (36%) and others, 7% [7].

A survey from rural areas of China showed that 8% women received a timely postnatal visit (within one week after delivery) and 24% of women received postnatal care within 42 days after delivery. Among women who received postnatal care, 37% received counseling or guidance on infant feeding and 32% on cord care. 24% of women reported that the service provider checked jaundice of their newborns and 18% were consulted on danger signs and thermal care of their newborns [9]. In contrary among the 264 Palestinian postpartum women in 2008, 97 (36.7%) obtained postnatal care. But the majority of women considered postnatal care necessary (66.1%) and there was regional differences [10]

A survey from the districts of Nepal showed that of the 223 participants, 25.1% attended any PNC, 13.5% attended early PNC (within 24 hours of delivery) and 19.3% sought PNC service from health workers [11].

A study from Morocco showed that 79% women received PNC from skilled attendants, that means only 21% did not attend the services from a survey published in 2013 [12].

A survey from Democratic republic of Congo examined that the median time between delivery and the first postnatal visit was 14 days. Up to 42 days after delivery, the median number of visits

was three for all of the women; the majority (80.6%) made at most four visits to the services [13].

The 2014 mini EDHS in our country showed that only 12 percent of women received postnatal care within two days, as recommended. The great majority of women (83 percent) with a live birth in the preceding five years did not receive a postnatal checkup at all. Among. Differentials by background characteristics of the mother are similar to the differences for postnatal care coverage in general[6]. Similarly PNC utilization prevalence was also known to be low, 34% on HSDP-IV national report of 211-2012 [14].

The utilization of PNC by women in different parts of Ethiopia was varied, in Jabitena of Amhara region it was 20.2% [15], in north Gondar 6.3% in 2013 [16] and Tigray region of Enderta district found to be 49.7% [17] and was shown to be 34.8% at Dembecha district [18].

2.2 WHO best PNC practices and guideline

The WHO March 2015 update from 2013 postnatal guideline recommend as best practice that:

Firstly to provide PNC in the first 24 hours for every birth with two important components ; one to delay facility discharge for 24 hours and the other to visit women & babies with home deliveries within 24 hours by midwives. The other point is to provide every mother and baby a total of four postnatal visits(First day (24 hours), day 3 (48–72 hours), between days 7–14, and six weeks. It is important to offer home visits by midwives, other skilled providers or well-trained and supervised community health workers [3].

As to the contents of postnatal care, mothers should receive regular assessment of vaginal bleeding, uterine contraction, fundal height, temperature and heart rate (pulse) and blood pressure within the first 24 hours after birth. For the time beyond the first 24 hours the service should include the assessment of checking urination and urinary incontinence, bowel function, healing of any perineal wound, headache, fatigue, back pain, perineal pain and perineal hygiene, breast pain, uterine tenderness, breast feeding and lochia [19].

2.3 Predictors of PNC

The 2015 data showed that the `hardware` explained as the availability of skilled professionals, logistics like transport, cost, equipments, drugs & the `software` explained as values, believes,

motivation of the health workers as well as the community & relation between the health workers & the health workers & the community are an important predictors. Unlikely, many health facilities lack the equipment, supplies or skilled medical personnel necessary to treat complications among mothers and children [20].

These were the witnesses for the previous findings that stated in most developing countries, factors that hamper access and use of maternal and newborn health services are lack of adequate numbers of trained staffs, not educating women and families about the benefits of having skilled care before, during and after a birth, cost, distance to facilities, social & cultural attitudes [21].

In the assessment of postnatal care for Palestinian women, the most frequent reason for not obtaining postnatal care was because of women did not feel sick so that they did not need postnatal care (85%), followed by not having been told by their care providers to come back for postnatal care (15.5%). As a predictor of postnatal care utilization, it was higher among women who had experienced problems during their delivery time, had a cesarean section, or had an instrumental vaginal delivery than among women who had a spontaneous vaginal delivery [10].

A survey from India evidenced that women residing in urban and increase in age of women were 2w(36% more likely to utilize PNC than their counterparts. The utilization increase 2w (25%) for those women having husbands with 10 or more years of education and it was twice for those women who received any ANC than those women who did not receive any ANC [22].

In Pakistan, the finding from PNC utilization study reiterate that factors such as women age, residential status, education, economic status, birth order, distance, transportation cost, ANC utilization & timing of PNC were significant determinants of PNC. Another survey analysis showed that urban mothers receive more PNC (77 per cent) from medically trained providers compared their rural counterparts (58.6 per cent). and knowledge of potentially life-threatening conditions during or after delivery is found be very low among the rural women [23].

A Cambodian review in 2013 of early Postnatal Care and its Determinants showed utilization of postnatal care was 61% in the first 24 hours. Women who had a secondary education or higher (62%), who had knowledge of pregnancy complications from prenatal visits (62%)were significantly more likely to utilize postnatal care services than other women. Women who said that distance to a health facility was not a big problem for them (either the facility was not far away or there were reliable means of transportation) were significantly more likely to utilize the

services than women who said that the distance to a health facility was their biggest problem (24%). The desire for the child at the time of pregnancy versus unwanted pregnancy was 31 percent more likely to have postnatal care than an unplanned pregnancy and women who delivered at a health facility (62%) and women who delivered with the assistance of a qualified health personnel (31%) was much higher than women who delivered at home or with an unqualified health provider [24].

From Nepal study of PNC utilization from health care providers revealed that mothers who were affected by the danger signs during delivery were around 17 folds more likely to get PNC utilization from health workers. On the other hand, mothers who had completed secondary or higher education (6 times) who attended four or more ANC services around 4 times or 1-3 ANC visits 3 times were more likely to utilize postnatal care [11].

A survey from Turkey (85% women utilized PNC) revealed that the most important predictor for not to utilize the care were place of delivery and those mothers from non-institutional delivery were 40 times more likely not to utilize PNC, and compared to women age 20-34, the odds of not to utilize PNC was 1.68 times less for age below 20 and 35-39 were with the odds of 0.58 and women with incomplete primary education were 2.1 times more likely not to utilize PNC than secondary school or degree level women and another previous showed 94% women received postnatal checkups, and postnatal care (PNC) within 24 hours (80.2%) from medical professionals [25, 26].

In Morocco, women with no PNC utilization were women who had a lower level of education , a lower socioeconomic score , and higher parity. Among the 1,210 women who attended a postpartum consultation, 893 (74%) did not have medical insurance, and 91% were unemployed. Most women (87%) had fewer than three children, and 32% were primigravidae [12].

A study to assess factors of maternal health utilization in Nigeria at different times found that education was the only individual level variable that is consistently a significant predictor of service utilization. At the community level, urban residence and community media saturation are consistently strong predictors. Women in urban areas were more than 2 times likely to attend postnatal clinic than women in rural areas and Muslims or other religions were more than 2 times likely to attend PNC clinic than women who were Christians. Also, Women whose ages 25-27

years and older were more than 2 times more likely to utilize PNC than women who were 25 years or younger [27].

The survey from Democratic republic of Congo revealed that those women who had not attended ANC during pregnancy were three times more likely not to attend postnatal consultations. Likewise, the desire for pregnancy (planned pregnancy) was associated with the use PNC and the women who had an unplanned or unwanted conception were more likely not to attend PNC in comparison with those who had planned their pregnancy alone or in a couple [13].

A research in Kenya indicate that 47% of the women received PNC services. Factors associated with PNC use are mothers' age at delivery of the last child, 4+ ANC visits, urban residence, and skilled delivery [28].

According to mini EDHS 2014, women whose age 20-34, first order births, mothers who delivered in a health facility, urban mothers, those residing in Addis Ababa, mothers with secondary education or higher, and those in the highest wealth quintile were most likely to have received a postnatal checkup in the first two days after childbirth [6].

Another study in Jabitena district of Amhara region showed that 20.2% mothers utilized postnatal care service. Accordingly, educational status of the mother, final decision maker on health care service utilization, number of pregnancy, place of delivery and being aware of at least one postpartum obstetric danger sign were found to be significantly associated with post natal care service utilization [15].

Postnatal care by skilled attendant at the individual level in north west Ethiopia of north Gondar in 2013 with coverage of only 6.3% revealed that women who preferred skilled provider for their maternity care, and who had experience of at least one antenatal care for their previous pregnancies used a skilled postnatal care more likely compared with those who did not have such characters, & the odds of postnatal care by a skilled provider significantly increased among women belonging to communities who had mixed (farming and trading) source of income compared with those belonging to only farming as the main source of income [16].

A study in Tigray region of Enderta district found that 49.7% of the mothers attended postnatal services. Women who were delivered at health institution were 3 times more likely to attend postnatal care services as compared to women who were delivered at home. Similarly, those

women who had knowledge on complication related pregnancy/labor were 5.4 times more likely to utilize postnatal care service as compared to those women who had no knowledge on complication related pregnancy /labor. Moreover, those women who had got information about postnatal care services from health extension workers (HEW) and Midwife/Nurse were 24.87 and 37 times more likely to attend postnatal care service respectively compared to those women's who had got information from other sources in the area [17].

Another assessment at Dembecha wereda of North east Amhara region showed that women who had formally education (2x), antenatal care service utilization for the last child (4x), and distance from the health institutions(4x), had shown significant association and about 73.9% of respondents answered their reason for not to use PNC service was lack of awareness followed by transportation problem [18].

The finding from Abi-Adi town of Tigray region revealed that postnatal care follow up in the study area was low (11.9%). Mothers who were unable to read and write were 86% less likely utilize post natal care follow up as compared to mothers education college level and above (86%), who agreed the importance of postnatal care utilization were 7.5 times with more likely to utilize post natal care as compared to mothers who are not sure whether postnatal care was importance or not [29].

A study of KAP on PNC in Gondar evidenced that the majority of the women (84.39 %) were aware and considered PNC necessary (74.27 %); however, only 66.83 % of women obtained PNC. Based on the finding, place of residence, urban (3 times), distance from a health institution (2times), antenatal care visit (3 times), and having decision making authority for utilization, autonomous (14%) were factors found to be significantly associated with PNC utilization [30].

A theses work published from Addis Ababa University which was done in Addis Ababa city in 2015 revealed that the prevalence of PNC was 277(65.6%) and having utilization of postnatal care service. PNC counseling and provision of appointment(32x), counseling on danger sign(1.95x), past experience of PNC utilization (2.8x), and less than 6 hours stay at health institution before discharge (0.22) showed statistical significant association for the current PNC service Utilization [31].

The study from Hossaina revealed that 51.4 % of the women received at least one postnatal check-up and average family monthly income, awareness on obstetric danger signs of pregnancy during recent pregnancy, and frequency of ANC were positive predictors of Postnatal Care (PNC) utilization [32].

2.4 Significance of the study

Mothers and their newborns are vulnerable to illnesses and deaths during the postnatal period. Globally about 289,000 women died in 2013 with a rate of 210 per hundred thousand for causes related to pregnancy and childbirth [1]. Higher income countries had 94% skilled deliveries but developing countries on average was 64% in 2012 [2]. The majority of deaths occur in less developed countries but utilization of postnatal care (PNC) service in Ethiopia is low due to various factors. The SNNPR, the administrative region of this research area, was below national level (9.4%) & less program focus is given for the issue.

Assessing factors that hinder such services will help to identify the gaps in the accessibility, the socio-cultural, maternal and utilization of these services in order to determine the best intervention to improve them. Moreover, understanding the factors that affect service utilization helps to design appropriate strategies and guidelines towards improvement of service utilization and thereby reduce maternal mortality. Therefore, this assessment is vital to tailor approaches to solve factors of the area for improvement of maternal & child health after identifying the magnitude of the problem & communicating with health managers & other stakeholders.

2.5 Conceptual framework

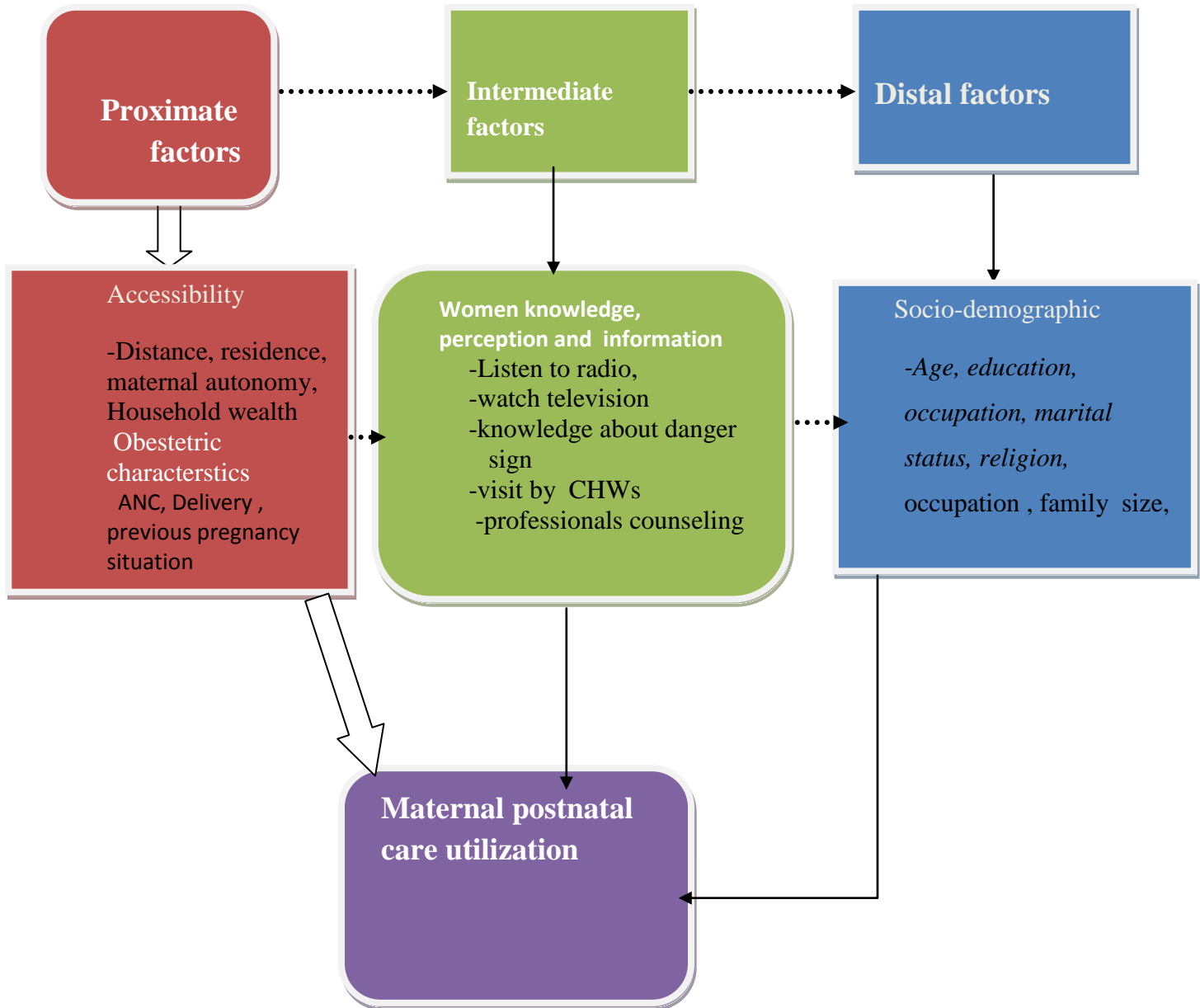


Figure 1: Conceptual framework developed for the determinants of postnatal care service utilization by the women.

CHAPTER THREE: OBJECTIVES

3.1 General Objective

To assess PNC service utilization and associated factors among women who gave birth in the last one year in Cheha wereda, Gurage zone, from October 10-30,2015 .

3.2 Specific Objectives

- To determine the magnitude of PNC service utilization among women in Cheha wereda, Gurage zone.
- To identify the determinants of PNC service utilization among women in Cheha wereda, Gurage zone.

CHAPTER FOUR:METHOD AND SUBJECTS

4.1. STUDY AREA AND PERIOD

The study was conducted in Gurage zone, *Cheha* Woreda. The zone is one of the fourteen zones found in the SNNPR. *Cheha* is one of thirteen woredas in Gurage zone. The capital town of the woreda is Endibir, which is found 40 Km away from the zonal center, Wolkite, and 466 km from the regional capital, Hawassa.. This woreda is bounded by: in the East-Gumer woreda, in the West and South- Enemore woreda and in the North- Eza woreda. It has a total of 41 kebeles of which 38 are rural while three are urban kebeles. There are 142,541 total population in the district; from these 4932 are women who are eligible for postnatal care. It has one NGO hospital supported by government, & 6 health centers. In addition the district had 4 primary level private clinics but no pharmacy or drug vendor (Wereda Health Office, 2007 E.C zonal report). The study was conducted from October10-30,2015

4.2. STUDY DESIGN

Community based cross-sectional study design with quantitative methods of data collection was employed

4.3. POPULATION

4.3.1. SOURCE POPULATION

All women who gave birth in the last one year and are living in the district were the source population.

4.3.2. STUDY POPULATION

Women who gave birth in the last one year and are living in the selected kebeles of the district that fulfill the inclusion criteria were the study populations.

4.4. SELECTION CRITERIA

4.4.1. INCLUSION CRITERIA

Women who gave birth in the last one year and resides permanently in the selected kebeles during data collection period were included .

4.4.2. EXCLUSION CRITERIA

Women with severe illnesses and those who were pregnant were excluded from the study.

4.5. SAMPLING PROCEDURE

4.5.1. SAMPLE SIZE DETERMINATION

The sample size was determined by the single population proportion formula with a marginal error of 5% between the sample and the population at 95% confidence level. The formula for single population proportion (as one of the most important predictor variable, institutional/skilled delivery was known to be less utilized) was used to calculate by EPI info version 7:

$$n = \frac{(Z_{\alpha/2})^2 \times p (1-p)}{d^2}$$

n = 319

Where:-

n = Sample size

$Z_{\alpha/2}$ = the value of standard normal distribution corresponding to 95% confidence interval (1.96)

P = expected coverage for PNC service utilization (66.8%) from a study at Gondar Zuria district

d = margin of error of 5%

As the total number of estimated women's in the catchments is 4932 which was less than 10,000, the final sample size was corrected by using the finite population correction formula as below.

$$n_f = n(1/1+n/N) = 299$$

Where n= sample size (319)

N=4932(total estimated number of postpartum women in the wereda)

Because of the two stage sampling technique a design effect of 2 was taken that makes the sample size to become 598 and with possible non-response rate, 10% of the calculated sample was added and the overall sample size included was about **658** women.

4.5.2. SAMPLING TECHNIQUE

A stratified sampling technique involving two-stages was employed. In the first stage, in order not to miss one of the three kebeles of towns category, the district was stratified in to two: as town and rural kebeles. Then two from town & ten from rural kebeles with a total of 12 kebeles of the district were selected by applying simple random sampling technique using lottery method for the towns and table of random numbers for rural kebeles (**Table 1 Annexed**).

Then the total number of 658 women who participated in the study from the district was determined by probability proportional to size allocation for the eligible women found in each kebele or cluster.

Proportionate allocation formula:

$$n_j = \frac{n \cdot N_j}{N}$$

n_j = is sample size of the j^{th} kebele

N_j = is population size of the j^{th} kebele

$n = n_1 + n_2 + n_3$ is the total sample size.

$N = N_1 + N_2 + N_3$ is the total population size.

Hence, in Yetenaka $n_j = 46$, Yefekiterek $n_j = 58$, Yedebe $n_j = 43$, Othernasise $n_j = 65$ Werdenenakorquat $n_j = 35$, Kechotinadaweke $n_j = 64$, Gurdenagerembo $n_j = 40$, Gasorenakaracha $n_j = 72$, Endibir 02 $n_j = 64$, Dakuna $n_j = 66$, Buchach $n_j = 52$ and Aftir $n_j = 53$. Therefore, a total of 658 women will be interviewed from these selected kebeles.

In the second stage after getting updated list of women that gave birth in the last one year in each kebele by the help of health extension workers and health development armies, participants who were interviewed through house-to-house visits were selected by simple random sampling method. Accordingly, the women for interview were selected by using computer generated random number. Finally, data collectors visited the homes of a woman selected for interview from the list and their homes was identified by the help of health extension workers. When the selected woman`s home was closed during data collection, the interviewers revisited the home three times at different time intervals and when interviewers failed to get that woman they

excluded her from the survey. The schematic representation of the whole procedure can be seen below(Fig 2).

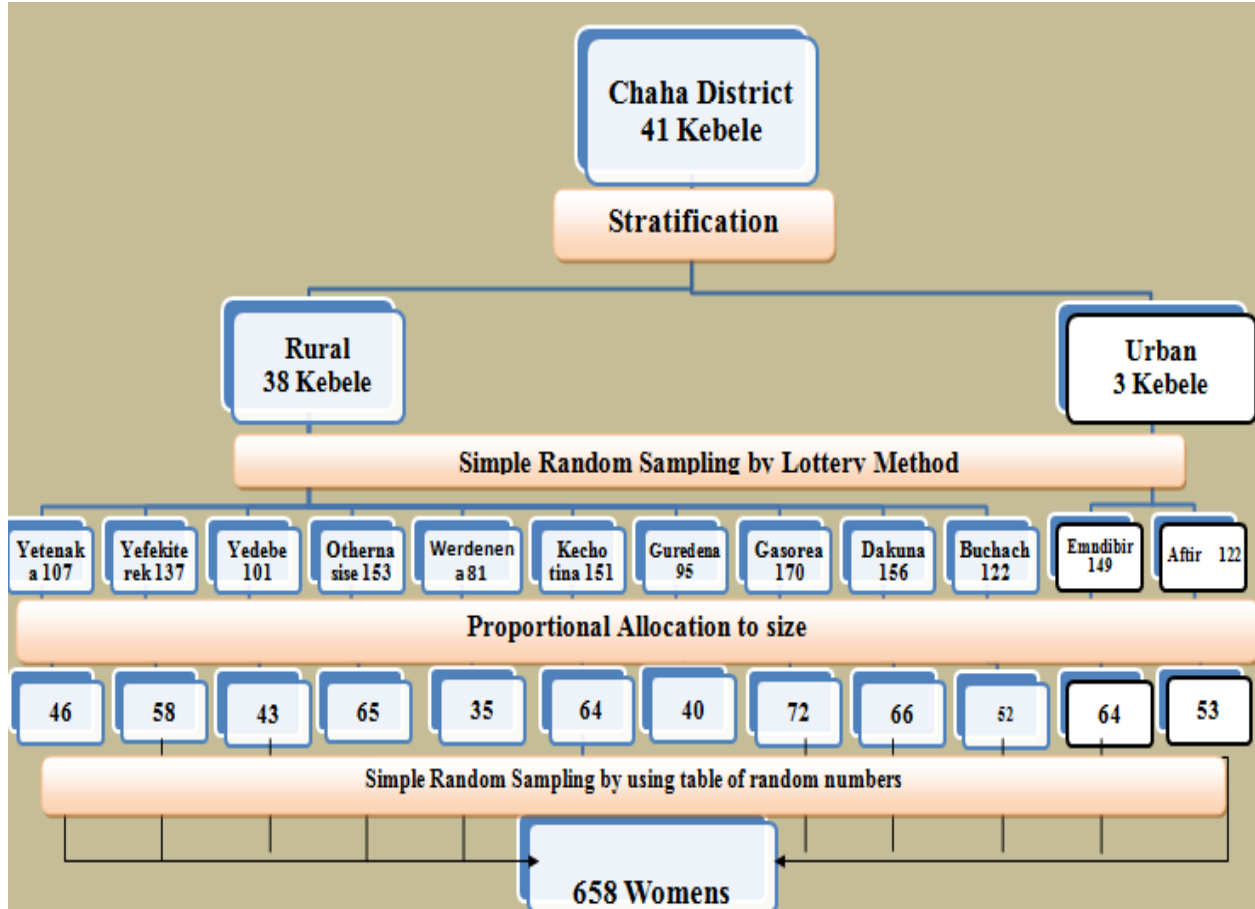


Figure 2: Schematic representation of sampling procedure for the assessment of postnatal care utilization among women in Cheha district, Guraghe zone, SNNPR, Ethiopia

4.6. STUDY VARIABLES

4.6.1. DEPENDENT VARIABLE

Utilization of PNC service during the last encounter

4.6.2. INDEPENDENT VARIABLES

Socio-demographic

Age of women	Husband`s occupation
Religion of women	Marital status of the women
Occupation of women	Family size
Women education	Husband`s education
Sex of child	

Accessibility

partner accompany	Transport cost
Distance from facility	Household wealth
Residence	Maternal household decision making level

Women knowledge, perception and information

Watch television	Listen to radio
Visit level by HEW	
Women knowledge level about danger signs	
Counseled women by Health professionals	
Women level of information	

Obstetric characteristics

ANC service utilization of the women	
Place of delivery	previous pregnancy situation

4.7. OPERATIONAL DEFINITIONS

Postnatal Care utilization by the women: indicates whether the women received at least one or more checkups of her own health after giving birth in the last one year (If yes coded as 1, if not coded as 0)[2].

Level of women household decision making authority: Women who made all decisions of four major ones(Own health care, Schooling of children, purchase of major household goods, Purchase of major jewelry items)either alone or jointly were categorized as having high decision-making authority. Those who were not involved in all four decisions were categorized as having low decision-making authority [33]

Knowledge of a woman about postpartum danger signs : -A woman who mentioned the three key danger signs during the postpartum period (severe vaginal bleeding, foul smelling vaginal discharge, and high fever) will be taken as better knowledgeable & otherwise were considered as less knowledgeable [34]

Permanent residence: If a woman resides in the kebele for the last six months before data collection period.

Women Level of information: If a woman got information from one of the three sources that means was counseled about maternal health from health professionals alone, visited by health extension workers, and have media or from all was considered as well informed but others were recorded as not well informed.

Seriously ill: Mothers who were unconscious, not able to talk and listen due to severe illness.

Household wealth : Was classified as the poorest, poorer, middle, richer, richest based on quintile of 20 poorest, 20 richest and 10 middle income category [35]

Postpartum period: The period that starts from one hour after the birth of placenta and up to ends of six weeks after delivery[3].

4.8 DATA COLLECTION PROCEDURE

4.8.1. DATA COLLECTION TOOLS / MEASUREMENT TOOLS

The data was collected using pre tested semi-structured questionnaires that was developed for this study after review of different literatures. The questionnaire contains 76 items which are related to socio-demographic characteristics(13), Postnatal care utilization(19) , knowledge, perception and information of women(20), household wealth index related(14) & health system related factors(10)

4.8.2. DATA COLLECTION METHODS AND PERSONNEL

Then, interview administered questionnaire was used to be filled by data collectors through house to house assessment. During data collection when the selected woman`s home was closed, the interviewers revisited the home three times at different time intervals and when interviewers failed to get that woman they excluded her from the survey.

Twelve diploma level health professionals and two degree level nurses or midwifery personnel who are the staff members of the facilities in the catchment kebeles of the district were recruited as data collectors and supervisors respectively.

4.9 DATA QUALITY MANAGEMENT

The questionnaire for data collection was prepared in English & was translated to Amharic. Twelve data collectors and two supervisors were recruited and trained a week ahead of the actual data collection period on data collection process to standardize interviews and reduce interviewer biases. Pretesting of the questionnaire was conducted among 5% of women other than the study population in two kebeles of one rural and another urban (Endibir 01 and Attat) prior to actual data collection to assess the face validity of the questionnaire. After pre-testing, necessary modification of the questionnaire was made for unclear, difficult, erroneous, or ambiguous questions. During data collection the data was checked for completeness and consistency of information by the principal investigator to avoid further errors or other problems before the next day`s activities.

4.10. DATA PROCESSING AND ANALYSIS PROCEDURE

Following the data collection, data coding, double entry and processing to a computer was performed using Epidata version 3.1 and then exported to SPSS version 20.0 for analysis. Both descriptive and analytic methods were employed. In the descriptive analysis, frequency, and odds ratio were calculated. The result of the analysis was presented in tables and graphs as appropriate. In the analytic statistics, logistic regressions was done by considering PNC as a binary outcome variable. Binary logistic regression analysis was used to predict the factors. Those explanatory variables with a p-value ≤ 0.25 for bivariate association were candidates for multivariate analysis.

The bivariate analysis revealed that age at first birth, family size, pregnancy intention, number of ANC follow up, husband education, husband occupation, maternal occupation, maternal education, religion, categorized age, autonomy, knowledge level, perceptions, facility distance, presence of PNC at nearby, presence of counseling, listening to radio, visit level by HEWs, and place of delivery were significant variables and these were candidates for multivariate.

Multivariate analysis was performed to control confounding variables by entering both highly significant & less significant variables with p-value less than 0.25 (many independent variables) together for the analysis and those variables with a p-value ≤ 0.05 were considered as significant in multivariate analysis.. For all statistical significant tests p-value < 0.05 was used as a cut-off point. Therefore, age at first birth, family size, pregnancy situation, husband education, husband occupation, maternal occupation, maternal education, religion, autonomy, facility distance, presence of PNC, presence of counseling, listening to radio, visit level by HEWs, were excluded from the model (**Table 7**).

Moreover, principal component analysis was employed for components of economic factors or identify household wealth index level that was interpreted as poor, poorest, rich, richest and middle.

4.11.ETHICAL CONSIDERATIONS

Ethical clearance letter was obtained from the Research Ethics Committee of College of Health Sciences, Jimma University. An explanatory statement was provided for all women participated in the survey about the study and informed that participation is voluntary and anonymous prior to commencing the survey. Additionally, the respondents were informed about the purpose of the study and their written consent was obtained.

4.12. DISSEMINATION OF FINDINGS

The result of the study was communicated to Jimma University College of Health Sciences, Department of Population & Family Health, and Wereda Health office, the administrative Council & the respective facilities. An attempt will be made to present on performance review meeting at zonal level and Wolkite University research review meeting occasions. Finally an effort will be made to publish in local or international peer review journals.

CHAPTER FIVE: RESULT

5.1. Socio-demographic characteristics

From 658 sampled subjects, a response was obtained from about 646 (98%) of women who gave birth in the last one year in the district. The mean age of the study subjects was 30 years with a standard deviation of about 4 years. The maximum number of the study subjects, 526(81.5%) were from rural community followed by urban. Nearly all 639 (99.1%) of these in the study were reported to have married (Table 1).

Table 1: The Socio-Demographic Characteristics of women who gave birth in the last one year in Gurage Zone, Cheha Wereda, n=646, November 2015

Variables	Frequency	Percent
Maternal Age		
20-24	58	8.9
25-29	247	38.5
30-34	181	27.9
>=35	160	24.7
Respondent's education		
Read and write	453	70
Primary	120	18.5
Secondary and above	73	11.5
Respondent's religion		
Orthodox	287	44.3
Muslim	224	34.9
Protestant	90	13.9
Catholic	45	6.9
Maternal occupation		
House wife	533	82.5
Farmer	19	2.9
Merchant	53	8.2
Employed	41	6.3
Husband's occupation		
Farmer	381	59.0
Merchant	142	22.0
Employed	91	14.
Others	32	5.0
Husband's education		
Read and write	394	61.0
Primary	157	24.3
Secondary and above	95	14.7

5.2. MATERNAL/OBESTETRICS FACTORS

The vast majority, 559(86.5%) of the women who gave birth in the last one year in the district attended antenatal care of four and above visits and the highest number of the women, 536(83%) also had gave birth at institutions(**Table 2**).

Table 2: The Obstetrics Factors of PNC utilization among women who gave birth in the last one year in Gurage Zone, Cheha Wereda , n=646, November 2015

Variables	PNC		Crude OR with 95%CI	P-value
	Yes	No		
	Count (%)	Count (%)		
No of ANC Follow up				
Less than Four	22(3.4)	65(10.1)	0.26(.1, 4)	0.000
Four and above	313(48.4)	246(38.1)	1	
Pregnancy situation				
Wanted/planned	259(40.1)	205(31.7)	1.7(1.2, 2.)	0.001
Unwanted/unplanned	76(11.8)	106(16.4)	1	
Family size				
<5 children	204(31.5)	151(23.4)	1.6(1.2, 2.)	0.002
>=5 children	131(20.3)	160(24.7)	1	
Age at first birth				
<20	134(20.8)	143(22.1)	0.78(0.5, 1)	0.121
>=20	201(31.1)	168(26)	1	
Place of delivery				
Home	12(15.2)	98(1.8)	0.08(.04, .1)	0.000
Institution	323(50)	213(33)	1	

5.3 Women knowledge and perception

5.3.1 Knowledge about danger signs

The assessment of women knowledge level about danger signs during pregnancy and child birth showed that the vast majority of the women who gave birth in the last one year in the district, 581(90%) were better knowledgeable.

5.3.2 Maternal perception

On the approach made to identify maternal perception about the importance of maternal postnatal care utilization for the health and survival of mothers, most women, 523(80.9%) perceived that postnatal care is important for them.

Table 3: Knowledge and perception about PNC among women who gave birth in the last one year in Gurage Zone, Cheha Wereda , n=646, November 2015

Variables	PNC utilization		Crude OR with 95%CI	P- value
	Yes	No		
	Count (%)	Count (%)		
Knew about danger sign				
Yes	271(42)	201(31)	2.3(1.6, 3.3)	0.000
No	64(10)	110(17)	1	
Knowledge status about Danger sign				
Better Knowledgeable	311(48.1)	270(41.9)	1	
Less knowledgeable	24(3.7)	41(6.3)	0.3 (.2, .4)	0.000
Maternal perception about importance of PNC				
Important	288(44.5)	235(36.4)	0.5(.3,.7)	0.001
Not important	47(7.3)	76(11.8)	1	

5.3.3 Level and sources of information

On the assessment made to identify maternal level of information, 350(54.5%) of the women were well informed(counseled by professionals, visited by health extension workers and exposed to media) about postnatal care. On the other hand, most women, 535(82.8%) did not have access to watch TV where us 541(83.8%) of the women were visited by health extension workers during their pregnancy(**Table 4 below**) .

Table 4: Level and sources of information about maternal health among women who gave birth in the last one year in Gurage Zone, Cheha Wereda , n=646, November 2015

Variable	PNC		Crude OR with 95%CI	P-value
	Yes Count (%)	No Count (%)		
Households visited by health extension workers during pregnancy				
Yes	296(45.8)	245(38)	2(1.3, 3)	0.001
No	39(6)	66(10.2)	1	
Watch TV				
Yes	53(8.2)	58(9)	1	0.34
No	282(43.7)	253(39.1)	0.82(0.5, 1.2)	
Listen to Radio				
Yes	275(42.6)	222(34.4)	1.8(1.2, 2.6)	0.001
No	60(9.3)	89(13.7)	1	
Had been counseled about PNC during pregnancy				
Yes	246(30)	158(24.4)	2.5(1.9, 3.7)	0.000
No	89(14)	153(23.6)	1	
Women information level				
Well informed	212(32.8%)	140(21.7%)	2(1.5, 2.8)	0.000
Less informed	123(19%)	171(26.5%)	1	

5.4 Accessibility related factors

Regarding the accessibility, the maximum number of the women interviewed in the district, 412(64%) reported that they had access to a facility at a walking distance of ≤ 30 minutes. Additionally, the vast majority of women, 581(90%) also replied that they were autonomous to be involved or declared for major household decisions either jointly with their husband or alone. Another important point here was there was no significant variation in frequency of wealth level among the poor & the rich in the households of the women selected for the assessment in the district(**Table 5**).

Table 5: Accessibility related Factors of PNC utilization among women who gave birth in the last one year in Gurage Zone, Cheha Wereda , n=646, November 2015

Variables	PNC		Crude OR with 95%CI	P-value
	Yes	No		
	Count (%)	Count (%)		
Wealth index tertile				
Poorest	64(10)	59(9)	1	
Poor	70(10.8)	67(10.4)	0.9(0.5, 1.5)	.88
Middle	71(11)	59(9)	1.1(0.6, 1.8)	.68
Rich	55(8.5)	65(10)	0.7(0.4, 1.2)	.33
Richest	75(11.7)	61(6.4)	1.1(0.6, 1.8)	.61
Residence				
Urban	62(9.6)	58(8.9)	0.9(0.6, 1.4)	0.96
Rural	273(42.3)	253(39.2)	1	
Walking distance to facilities				
<30 minutes	233(36%)	179(28%)	1.6(1.2, 2.)	0.002
>=30 minutes	102(16%)	132(20%)	1	
Maternal autonomy				
Autonomous	311(48.1)	270(41.9)	1.9(1, 3.)	0.012
Not autonomous	24(3.7)	41(6.3)	1	

5.5 PNC utilization

It was revealed that the prevalence of PNC utilization among mothers in the districts was 51.9%(Table 6 below).

Table 6: The magnitude of PNC utilization among mothers who gave birth in the last one year in Gurage Zone, Cheha Wereda , n=646, November 2015

Variable	Count	Percent
PNC Utilization by the Women		
YES	335	51.9
NO	311	48.1
TOTAL	646	100

According to the response provided by the women in the district it was reported that the vast majority of the mothers, 188(56.2%) utilized PNC in the first most important period of the postpartum, within 24 hours, Moreover, the dominant number of mothers reportedly got the

service from health centers or hospitals. Concerning to service providers, more than half of the mothers explained that the service was provided by midwives or nurses, 201(31.1%) and next figure was hold by HEWs, 75(11.6%).

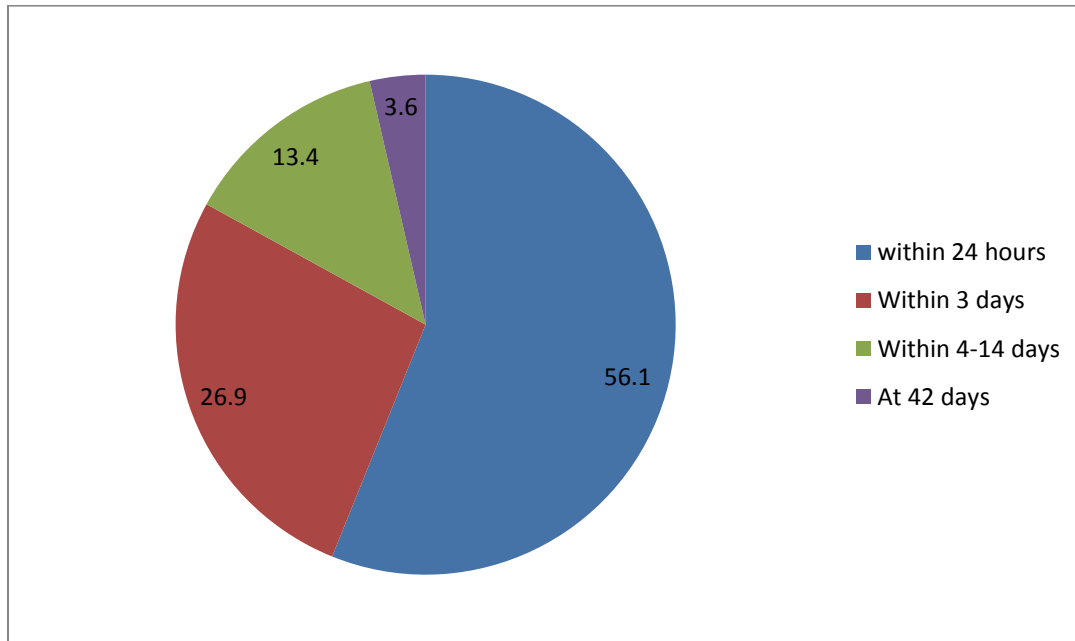


Figure 3 : The percentage of women who utilized PNC at different periods of postpartum among who gave birth in the last one year in Gurage Zone, Cheha Wereda , n=646, November 2015

Maternal reason for PNC utilization

On the assessment response on maternal reason to utilize postnatal care, about half of the women 169 (50.4%) replied that their basic reason to accept postnatal service was because of health professionals counseling & the next frequency, 68 (20.2%) was held by the mothers who said to immunize my child that means even though the women visited the facilities for the purpose of their child immunization, the women reportedly said that professionals checked some components of postpartum care for maternal health(**Figure 6 below**) .

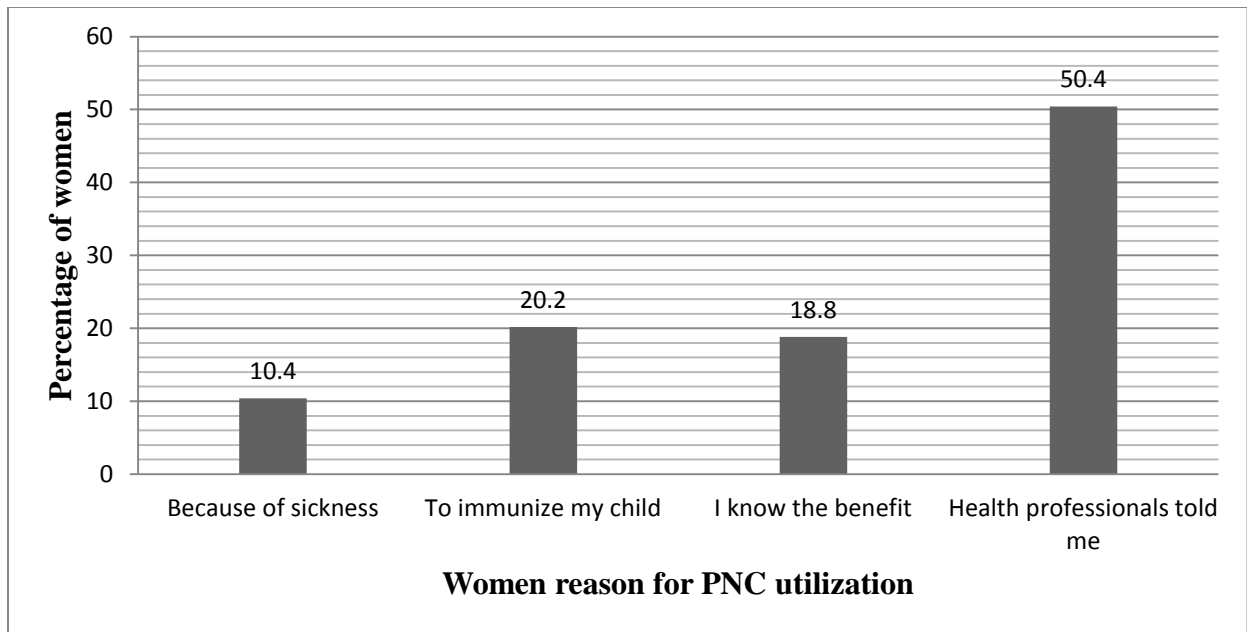


Figure 4: Percentage of women for maternal reasons to use PNC services among women who gave birth in the last one year in Gurage Zone, Cheha Wereda , n=646, November 2015

Place of PNC utilization

In this assessment, it was revealed that majority of the women,204(61%) in the district who gave birth in the last one year accepted the postpartum care at health centre or hospital followed by home visits, 111(33%).

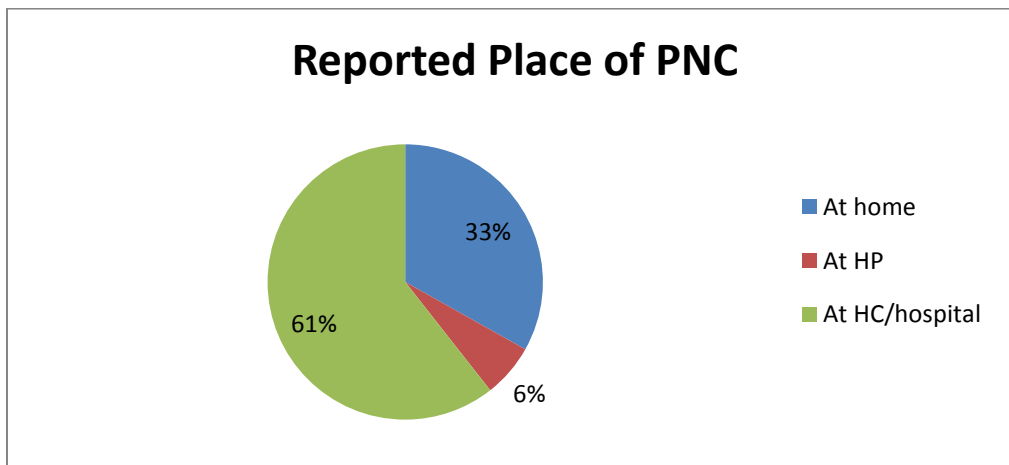


Figure 5: The percentage for the place of PNC service utilization among women who gave birth in the last one year in Gurage Zone, Cheha Wereda , n=646, November 2015

Maternal reason for not to utilize PNC services

Based on the response from mothers for the assessment of their reasons for not to utilize postnatal care , 90 (46%) of the women reported that it was not customary or unusual to be out for such services utilization within the specified postpartum period and the next dominant reason for 64 (33%) of the women was husband refusal.

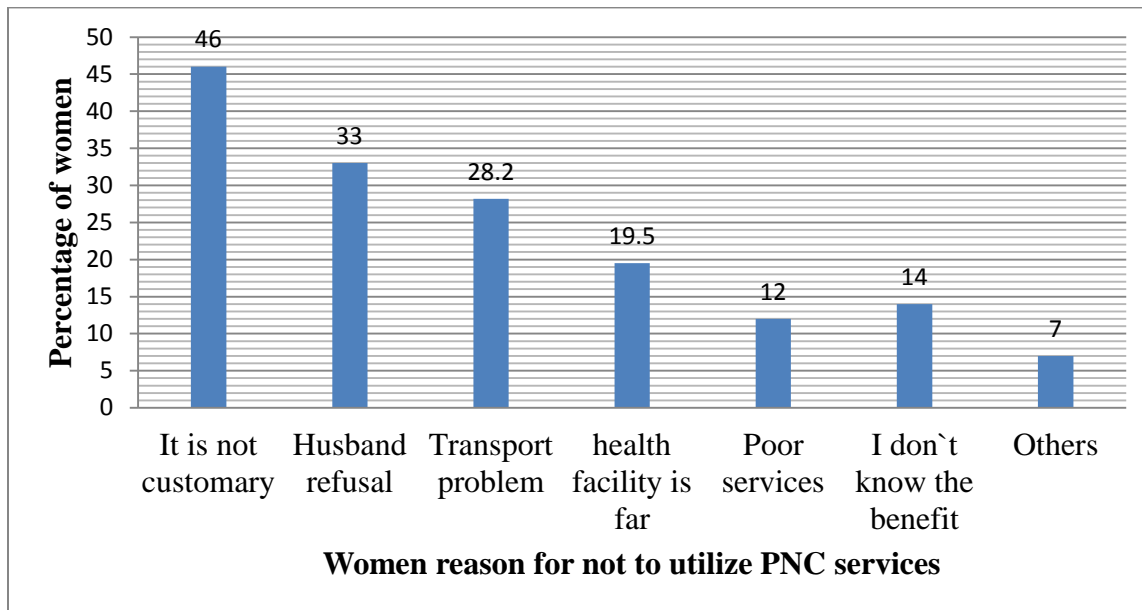


Figure 6: Percentage of the women with the most important maternal reasons for not to use PNC services among women who gave birth in the last one year in Gurage Zone, Cheha Wereda , n=646, November 2015

5.6.Associated factors of PNC utilization

From the analysis made to get predictor variable it was revealed that the probability of utilizing PNC among mothers who gave birth at institutions was 7 [AOR=7, 95%CI (3.5, 14)] times that of home delivered ones, the odds of utilizing PNC was 4 [AOR=4, 95%CI (1.1, 4.7)] times among women who accepted four or more ANC than that of their counterparts. Moreover, the odds of PNC was 4 [AOR=3.9, 95%CI (1.8, 8.4)] times among whose age was 20-24 that of mothers aged ≥ 35 years, and the odds of PNC was 2 ([AOR=1.7, 95%CI (1.07, 2.7)] times among age 25-39 as compared to those counter parts , and the odds of PNC was 2 [AOR=2.2, 95%CI (1.3, 3.5)] times for those women who are better knowledgeable about danger signs as that of their counterparts(**Table 7 below**).

Table 7: Independent factors of PNC utilization among women who gave birth in the last one year in Gurage Zone, Cheha Wereda , n=646, November 2015

Variables	PNC		Adjusted OR with 95%CI	P-value
	Yes	No		
	Count (%)	Count (%)		
No of ANC follow up				
Less than Four	22(3.4)	65(10.1)	1	
Four and above	313(48.4)	246(38.1)	4(2.3, 7.3)	0.00
Knowledge about danger sign				
Better knowledgeable	271(42)	201(31)	2.2(1.3, 3.5)	0.02
Less knowledgeable	64(10)	110(17)	1	
Maternal age				
20-24	41(6.3)	17(2.6)	3.9(1.8, 8.4)	0.00
25-29	138(21.3)	109(16.8)	1.7(1.07, 2.7)	0.02
30-34	79(12.2)	102(15.7)		
>=35	77(11.9)	83(12.8)	1	
Place of delivery				
Home	12(15.2)	98(1.8)	1	
Institution	323(50)	213(33)	7(3.5, 14)	0.00

5.7 Discussion

According to the finding from this survey, not far to 50% of the women in the district utilized PNC services. This is almost similar to study report from Tigray region of Enderta district, 49.7% [19], Hosanna, 51.4% [33] and Kenya 47% [33]. Although one of the key strategies for reducing maternal morbidity and mortality is increasing utilization of PNC through the delay of facility discharge for 24 hours and to visit women & babies with home deliveries within 24 hours by midwives or other skilled providers [20], nearly half of the reproductive age women in the area were out of this opportunity as 48.1% did not utilized maternal PNC.

The magnitude of PNC utilization was remarkably high compared to MEDHS 2014 that was 12%, 34% on HSDP-IV national report of 211-2012 [15], in Jabitena of Amhara region that was 20.2% [16], in north Gondar 6.3% in 2013 [17], 34.8% at Dembecha district [19], 25.1% districts of Nepal, 40% from 30 LMIC study, 8% from rural areas of China , and so on. This could be explained by temporal differences and, increased number of ANC follow up, improved

skilled delivery utilization and professionals counseling about PNC during ANC and campaigned approach by the government to avoid home deliveries in the last two years by establishing ample of maternity waiting areas in the districts.

In contrary to other findings, the prevalence was still less as compared to studies done in Gondar zuria district that was 66.8% , Addis Ababa 65.6%, Morocco, 79% , Cambodia 61% and Turkey which was 85%.

Coming to factors associated with PNC utilization from multivariate analysis, this study reiterate the same result as of MEDHS, Hossaina, Jabitena, Enderta 3 [AOR=3.04, 95% CI (1.05, 8.8)], Cambodia(4x), Keneya, and Turkey (40x not to utilize PNC for home delivered mothers) that stated place of delivery (institutional versus home) was seemingly universal predictor of maternal PNC utilization; for all women who attended births at institutions/skilled delivery were in a position to better utilize PNC as compared to their counter parts . The odds of PNC utilization in this survey was 7 times among mothers who gave birth at institution compared to home delivered ones [AOR=7, 95%CI (3.5, 14)]. This could be due to the facts that professionals recent counseling about maternal health/about postnatal or the opportunity for skilled/institutional delivery created another chance to stay for the first 24 hours at hospitals or health centers which enable them to utilize Postnatal service.

Unlike some other publications, increased number of ANC rather than having any ANC follow up was strong predictor of PNC utilization resembling to Hossana, KAP in North Gondar, Kenya, and Nepal[(AOR: 4; 95% CI (1.139-11.9)]. In this assessment, the odds of utilizing PNC was 4 times among women who accepted four or more ANC in comparison with their counterparts. Likewise, mothers with 4 or more ANC from Nepal were about 4 times more likely to utilize PNC than their counterparts. But finding from Gondar, Demebecha, India, Pakistan, and DRC showed that having history of at least one/any ANC during the recent pregnancy was an important factor for better utilization of PNC than women who did not have ANC follow up. This is may be associated with heightened contact number with care providers led the mothers to upgrade their attitude regarding birth preparedness and complication readiness for skilled delivery utilization then for PNC.

The other factor, knowledge about maternal pregnancy complications/danger sign, was one of the most important variables similar to Cambodia, Nepal [OR 17.4; 95% (CI 4.09-74.08)], Jabitena, Hossana and Enderta [AOR=5.4, 95% CI (2.3,12.7)] that was associated with PNC outcomes. Similar to this assessment, for example, Cambodian mothers with knowledgeable about pregnancy complication(1.63) were more likely to utilize PNC, and a women response from Enderta district revealed that mothers who had knowledge on complication related pregnancy/labor were 5.4 times more likely to utilize postnatal care services. The advantage of increased knowledge about danger sign could be associated with due to boosted human resource development in health who are capable of discussing about the issues including far remote rural areas and improved women perceived benefit of health service utilization.

In line with other studies, mothers age was another factor associated with PNC service utilization. Hence, compared to mothers aged ≥ 35 years, the odds of PNC was 4 times among whose age 20-24 years , and 2 times among whose age 25-29years. This finding was consistent with other reports from MEDHS, India, Pakistan, and Nigeria. Here the association might be due to the assumption that for most cases as age of mothers increases the number of children might also rises which in turn prohibit mothers for seeking services secondary to heavy duty at home or lack of time because of extended family members as PNC was not customary for the mothers in the area.

Meanwhile, opponent to some other studies, residence, maternal/husbands education, decision maker for health care/maternal autonomy, household wealth level, mothers desire for pregnancy & distance to health facility were not associated with PNC here in this assessment. Lack of significant variation among town versus rural women in this study could be due to either few population size or urbanization demand by the community otherwise kebeles recorded as town were in similar situation with rural ones with less facilitated for services. Concerning household wealth level, the community had less variability among the categories of household wealth in the district that may not created association or variation in acceptance of PNC.

5.8 Strength

Unlike most of similar works, this was a survey performed by collecting data from mothers who relatively gave birth in recent months to minimize the bias. Because this was a community based study, data collected from house to house survey might show real situation of the problem. Besides, the topic is the most prioritized public health importance areas of study both nationally & globally.

5.9 Limitation

It is inevitable to have some constraints in spite of the fact that the necessary measures were taken to minimize or avoid the possible drawbacks of this study. Therefore, the result should be seen in the light of some limitations, to mention few of them: the source of the data for this study was based on self-report of mothers, and no validation of information was obtained with any objective source such as client cards, and observation checklist for service standard/quality level at facilities, it is impossible to establish causal relationship between the outcome and exposure variables, recall bias was likely since women were asked for events which have already happened within the past one years prior to this study despite the consideration of recent births because this assessment was made at shorter time period than all other literature found to be cited, and because of limited geographic coverage the result of this study could not be extrapolated to the zonal community of Guraghe zone administration. Furthermore, this study does not included information on specify elements of care during postpartum that were provided to the women as it was assumed to be varied from one facility to another.

5.10 Conclusions

The assessment implied that utilization of PNC by the women in the district (51.9%) was not critically low, but women who utilized the services were predominantly not because of intentional act due to awareness of the entire benefit of the PNC service utilization. The witness for this assumption is among women who had got the services, 169(50.5%) explained because of health professionals told me/ commonly high risk situation (hospital delivery secondary to CS, and instrumental delivery and only 63(18.8%) said because they were aware about the benefit Moreover, maternal reasons for not to attend the services was associated with believes, values and relation among communities like not customary activities of the community, and husband refusal were the dominant reasons. Based on evidences from the multivariate analysis, the association of skilled delivery, knowledge about danger signs, ANC service utilization and

maternal age seems to be universally important predictors of opportunities for PNC ahead of economic status of families that are supported by tremendous researches.

Therefore, the findings of this study is expected to hold inputs for activities aimed at incorporating strategies and guidelines targeted to improve maternal health in the country as a whole and the district in particular that could be taken as a reference at this crucial period of already launched health sector transformation plan at minister level. The district needs substantial progress as huge number of women, 48% did not utilize PNC

5.11 Recommendations

Although multiple strategic approach should be considered for the improvement of utilization of PNC in this area, it is pivotal to promote health facility/hospital or health centre delivery in the district for its strong positive effect on essential postnatal care for the mothers. This can be realized through the effort of tremendous stakeholders of program leaders regionally and managers in the study area.

Zonal or district managers/experts

To bring improvement in strategic approaches these level professionals should strengthen their usual support for the respective lower hierarchy ones in changing knowledge, perception and attitude of the community to strengthen the postnatal care component in the MNCH program, particularly in the area of maternal health as substantial number of them in the district were explaining the socio-cultural related points for not to use the services. This can be accomplished through discussion with professionals on issues how to make social mobilization on socio-cultural obstacles like customary activities in PNC utilization, expand maternity waiting homes at many health facilities & regular supportive supervision to enhance monitoring and evaluation of performances in reliable skilled delivery and PNC coverage plus quality maternal health service provision in more targeted and strategic manner.

Technical managers/ service providers

Technical managers and services areas workers/health professionals should have huge responsibility in bringing fascinating changes in better clients counseling, eradication of home deliveries, delay of discharges for at least 24 hours for mothers who delivered in facilities,

comprehensive maternal health service packages provision approach. In addition, due emphasis has to be given in routine activities, community mobilization, monitoring and evaluation of PNC program by arranging catchment review meeting with community workers & care providers on maternal health, plan for the establishment of more maternity waiting homes and arranging community home visit programs.

Community health workers

Based on the Ethiopian health sector prevention strategies and program approach, community health workers in these areas should elaborate the usual tasks of family health improvement including advocacy and mobilization of the community looking for due emphasis of maternal PNC utilization by promoting skilled delivery , increased frequency of ANC, educating women and family on danger signs, arrange catchment review meeting for maternal health services monitoring and enhancing women perception on PNC with a message or advise is tailored to individual woman.

Researchers/experts at all level

The other most important point here for experts or any interested researchers at all levels is initiating further studies that include quality and elements of postnatal care will offer better programmatic insights to the utilization of postnatal care services across diverse socioeconomic and geographical settings especially in the settings of health facilities may help to assess the level of material and human resource, attitude of care givers or quality package issues in the areas.

5.12 Acknowledgement

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CHAPTER EIGHT: ANNEXES

Annex I: List of selected kebeles

Table 1: Selected kebeles for the assessment of postnatal care utilization among women in Cheha district, Guraghe zone, SNNPR, Ethiopia, from October 10-30,2015

S.N	Selected kebeles	Population size	Eligible women	Sampled women
1	Aftir	3541	122	53
2	Buchach	3516	122	52
3	Dakuna	4515	156	66
4	Endibir 02	4316	149	64
5	Gasorenakaracha	4918	170	72
6	Gurdenagerembo	2746	95	40
7	Kechotinadaweke	4351	151	64
8	Werdenenakorquat	2348	81	35
9	Otherenasise	4411	153	65
10	Yedebe	2909	101	43
11	Yefekiterekwediro	3953	137	58
12	Yetenaka	3102	107	46

Annex II: English version Questionnaire

Jimma University, College of Public Health and Medical Sciences

Questionnaire for utilization of postnatal care service among women who gave birth in the last one year in Cheha wereda, Guraghe zone, SNNPR Ethiopia, October 2015.

Informed verbal consent form (GUIDELINE FOR RESPONDENTS)

Good morning/ afternoon Sur//Madam,

My name is -----I am a student from Jimma University working a research project, which is conducted in Cheha wereda kebeles to assess utilization of postnatal care service among women who gave birth in the past one year. You have been chosen to participate in this study by chance and you will help us by answering the questions we ask you and study will not need to do any experiment or apply any invasive procedure to you except you will spending some time for interview.

We assure you that whatever answers you give us are kept secret. We do not need your name and address. We also inform you that you have the right to withdraw from the study or stop the interview at any time if there is any discomfort before completing the study.

THANK YOU VERY MUCH IN ADVANCE

Are you willing to participate in this study?

yes

no

If yes, go to the next page

Part I: Structured questionnaire to interview postpartum women

Respondent code _____

1 . Socio – cultural & demographic data

Q.ID	Questions	Choice	Remark
101	Age of the mother	_____ years	
102	Women`s marital status:-	A/ married B/ single C/ Divorced D/ widowed E. other	
103	Women`s education(Grade)	A. Read and write B. Primary C..secondary and above	
10 4	Maternal Religion:-	A/ orthodox B/ Muslim C/ protestant D/ Catholic E/ other (specify)_____	
105	Your place of residence?	A/ urban B/ rural	
106	Sex of your last child	A. Male B. Female	
107	Women`s occupation	A. House wife B. Farmer C. Merchant D. Employed E. Others (specify) _____	
108	Husbands` educational status	A. Read and write B. Primary C .secondary and above	
109	Husbands` occupational status	A. Farmer B. merchant C. Employed D. Others (specify)_____	
110	Marriage relationship	A. Monogamy B. Polygamy	
111	How do you spent most your time during the first two months postpartum?	A. On bed/inside curtain for the whole day B. Culturally forbidden to be out C. I sometimes walk for something.	

		D. Others(specify)_____	
112	Family size of the household	_____	
113	Age of the mother at first birth	_____	

2. PNC utilization & determinant

Q.No	Question	Choices	Remark
201	After you gave birth to (NAME), did anyone check on your health	A/ yes B/ No	If no goes to Q.209
202	If yes how for (question 201) how many time?	A/ once B/ Twice C/ Three D/ more than three	
203	If yes how for (question 201) at what time/period?	A. within 24 hours B. Within 3 days C. Within 4-14 days D. at 42 days	
204	.If yes for (Ques 201), who accompanied for PNC service	A. Husband B. Neighbors/friend C. Family D. others	
205	If your answer to Q 201 is yes where was the service you get	A . At home B. At HP C. At HC/hospital	
206	Who provided the service	A. HEW B. Midwife/Nurse C. TBA D. others (specify)_____	
207	What was your reason to use the service?	A. Because of sickness B. To immunize my child C. I know the benefit D. Health professionals told me E. Other(specify)_____	
208	Average time spent at HF for	A. too much long C. fair	

	maternal health was	B. too much short D. I cannot determine	
209	If "no" what was your reason not to attend the PNC services	A. Husband/family refusal B. It is not customary C. Transport problem D. health facility is far E. Poor services F.I don`t know the benefit G. others specify_____	
210	Have you attended ANC for this delivery	A. Yes B. No	IF no skip to 212
211	If yes for the above, how many times?	A. once B. twice C. three times D. four & above	
212	Where was your Place of delivery?	A. At health institutions B. At home	
213	Have you experienced any complication related to your last pregnancy/labor?	A. yes B. No	
214	Was your pregnancy & delivery planned?	A. yes B. No	
215	Commonly decision for health care is made by	A. Mother alone B. Mother & her husband C. Husband alone D. Others	
216	Commonly decision for Purchase of major household goods is made by	A. Mother alone B. Mother & her husband C. Husband alone D. Others	
217	Commonly decision for Purchase of major jewelry items is made by	A. Mother alone B. Mother & her husband C. Husband alone D. Others	

218	Commonly decision for Schooling of children is made by	A. Mother alone B. Mother & her husband C. Husband alone D. Others	
-----	--	---	--

3. Health system related(Accessibility, service attraction/focus, professionals attitude)

301	How far is the nearest health facility from your house ?	_____minutes/km-----	
302	Is there postnatal service near to your resident?	A . yes B. No	
303	How do you get the service?	A / It is attractive & need based B/ Neither C/ I do not know D/ other(specify)	
304	Are health professionals friendly	A . yes B. No	
305	Have you ever been told shortage of manpower, or equipments by the facilities?	A . yes B. No	
306	Do the health professionals listen your case carefully in any maternity related problem	A . yes B. No	
307	Do you have accessible road to reach facilities easily?	A . yes B. No	
308	How is the transport cost from your home to facility?	A. Cheap B. Costly C. Fair D. others(specify)-----	
309	Were you asked for any cost for	A . yes B. No	

	maternal health services?		
310	For what purpose was the cost requested?	A. ANC B. delivery C. PNC D. Family planning E. others(specify)-	

4. Family wealth index Assessment questions

Instruction: Please complete all the following information carefully through interview of the mothers/household head

401. What is the current main source of drinking water for members of your household? [*Tick only one answer*]

- | | | |
|---|--------------------------|--------------------------|
| 1 Pipe water into dwelling Ž | 5 Protected spring Ž | 8 Unprotected spring Ž |
| 2 Public tap / standpipe Ž | 6 Protected dug well Ž | 9 Rain water Ž |
| 3 Tube well / borehole Ž | 7 Unprotected dug well Ž | 99 Don't know or Refusal |
| 4 Surface water (river, dam, lake, pond, stream, canal) Ž | | |

402. Do you treat your water in any way to make it safer to drink (excluding washing the container)?

1. Yes Ž 0. No Ž 9. Don't know or refusal Ž

→ Continue to question **404** if the answer to **402** is **No** or **Don't know/refused to answer**

403. What do you usually do to make your water safer to drink? [*Tick all possible answers*]

- | | |
|-------------------------------|--|
| 1 Boil Ž | 6 Use a water filter (ceramic, sand, composite, etc) Ž |
| 2 Let it stand & settle Ž | 7 Add bleach/chlorine ('wuha agar') Ž |
| 3 Strain it through a cloth Ž | 8 Other (Specify: _____) Ž |
| 4 Solar disinfection Ž | 9 Don't know or refusal Ž |
| 5 Mix with leaves Ž | |

404. Where do members of your household usually go to relieve themselves? [*Tick only one answer*]

- | | |
|---------------------------------------|---|
| 1 Bush or field Ž | 5 Ventilated Improved Pit latrine (VIP) Ž |
| 2 On ground within compound Ž | 6 Composting toilet Ž |
| 3 Pit latrine without slab/open pit Ž | 7 Other (Specify: _____) |
| 4 Pit latrine with slab Ž | 9 Don't know or refusal Ž |

405. Where do you usually cook? [Tick only one answer]

1. In the house Ž 2. In separate building Ž 3. Outdoors 4. Other (specify: _____)

406. What type of fuel does your household mainly use? [Tick only one answer]

- | | | |
|--------------|-----------------|---|
| 1 Biogas Ž | 4 Animal dung Ž | 6 Agriculture crop (straw/shrubs/grass) |
| 2 Kerosene Ž | 5 Electricity Ž | 7 Other (specify: _____) |
| 3 Charcoal Ž | | |

407. I will now mention some animals and I would like you to tell me how many animals of each type your household have. [Write the number of animals in the boxes provided; write '000' if no animal, '999' for I don't know/refusal]

Plough oxen: __ __	Cows: __ __	Horses, donkeys, mules: __ __
Bulls: __ __	Calves: __ __	Chicken: __ __
Hephers: __ __	Sheep & goats: __ __	Bee hives: __ __

408. I would like you to tell me if your household own the following things, I will mention you now.

[For each item, write '1' if yes, '0' if no, '9' if don't know or refusal]

Electricity	__	Kerosene/electric stove	__	Chair or bench (not stool)	__
Kerosene lamp	__	Animal-drawn cart	__	Bed with sponge/spring mattress	__
Pressure lamp	__	Bicycle	__	Bed with cotton mattress	__
Generator	__	Motorcycle or 'Bajaj'	__	Bed with straw mattress	__
Radio	__	Sewing machine	__	Refrigerator	__
Television	__	Diesel water pump	__	Land growing coffee or khat	__

Mobile phone Electric 'mitad' Mill house
 Landline Table
 phone

409. What is the material of the roof made from? [Make your own observation & tick only one answer]

1. Thatched/Grass 2. Corrugated iron sheet 3. Other (specify: _____)

410. What is the material of the walls made from? [Make your own observation & tick only one answer] 1. Bricks/stone & cement 2. Bricks mud & cement 3. Bricks & mud 4. Wood, mud & cement 5. Wood & mud 6. Wood only 7. Other (specify: _____)

411. What is the material of the floor made from? [Make your own observation & tick only one answer] 1. Ceramic tiles 2. Carpet 3. Cement (with or without plastic carpet) 4. Wood 5. Bricks 6. Mud with plastic carpet 7. Mud 8. Other (specify: _____)

→ Ask the mother to call for the household head and ask questions 412 to 414 to the household head

412. What is the current primary source of income for your household? [Tick only one answer]

- | | |
|--|--|
| 1 Farming of food crops <input type="checkbox"/> | 8 Handicrafts/artisan <input type="checkbox"/> |
| 2 Farming of cash crops (like khat, coffee) <input type="checkbox"/> | 9 Receiving money from relatives abroad <input type="checkbox"/> |
| 3 livestock &/or bee keeping <input type="checkbox"/> | 10 Supported by relatives in Ethiopia <input type="checkbox"/> |
| 4 Employment/salary <input type="checkbox"/> | 11 Other (Specify: _____) <input type="checkbox"/> |
| 5 Daily labour <input type="checkbox"/> | 12 Refusal <input type="checkbox"/> |
| 6 Small scale trade (like vender, small retailers, local brewery, selling of wood/charcoal, shops etc.) <input type="checkbox"/> | |
| 7 Large scale trade (like wholesalers of agriculture products or goods in towns of the country) <input type="checkbox"/> | |

413. Do you have agricultural land of your own?

1. Yes 0. No 9. Don't know or refusal

414. How much agricultural land do you own?

[Write the size of the land & tick the unit used; write '00' if no land is owned, '99' if don't know or refusal]

Size of land ||

Name of unit used: 1. Hectare 2. wedere/zengi 3. Timad 4. Other (specify: _____)

5. About knowledge & awareness of a woman on maternity care

S. N	Knowledge on PNC danger sign	Yes	No	
501	Do you know about danger sign during postpartum?			If no skip to number 408 but if yes allow her to mention it & record it
502	Do you know about anemia during postpartum?			
503	Do you know about headache during postpartum?			
504	Do you know about hypertension during postpartum?			
505	Do you know about hemorrhage during postpartum?			
506	Do you know about persistent vomiting during postpartum?			
507	Do you know about fever during postpartum?			
	About Women perception & information level			
508	Which types of PNC services do you know?	A. General maternal check up B. Child immunization C. Counseling D. Family planning E. counseling F. others(specify)_____		

509	Do you have Radio	A . yes B. No	If no skip to Q511
510	How often do listen to radio	A. Always B. Once a week C. sometimes D. Not at all	
511	Do you have TV	A . yes B. No	If no skip to Q513
512	How often do you listen to TV	A. Always B. Once a week C. sometimes D. Not at all	
513	Do you think PNC is important for the mothers?	A . yes B. No	
514	Have you got adequate information about PNC during Pregnancy?	A . yes B. No	If no skip to Q516
515	If you said yes for the above, from where did you get the information?	A.HEW B. Midwife C. other health professionals D. others(specify)_____	
516	Were you counseled specifically to postnatal care during labor & delivery?	A . yes B. No	
516	Were you visited by HEW during your last pregnancy?	A. yes B. No	
517	How many times were you visited by HEW ?	A. Once weekly B. once monthly C. twice weekly D. twice monthly E. None at all	

519	If your last pregnancy/delivery service was at health facilities how was the approaches of health personnel?	A. was attractive B. Not attractive C. satisfactory D. I don't know	
520	If your last pregnancy/delivery was at health facilities how was the health services given to you?	A. satisfactory B. Not satisfactory C. I don't know	

Annex III: Amharic version questionnaire

የመላሽ ስምምነት መግለጫ ቅጽ፤

እንደምን አደሩ/አረፈዱ/ዋሉ ወ/ሮ/

እኔ _____ እባላለሁ የመጣሁት ከ _____ ሲሆን የጅምር ዩኒቨርሲቲ ተማሪ የሆኑ ባለሙያ በወረዳችን የሴቶችን ጤና በተለይም በእናቶች የድህረ ወሊድ አጠቃቀምና ተያያዥ ችግሮች ዙሪያ መረጃ በመሰብሰብ ላይ እገኛለሁ። ይህ ጥናት በወረዳችሁ ስላሉ እናቶች ጤና በተለይም በእናቶች የድህረ ወሊድ አጠቃቀምና ተያያዥ ችግሮች ጠለቅ ብሎ ለማወቅ በጣም አስፈላጊ ነው። በዚህም የጥናቱ ውጤት ቀጠይ ስለሚተገበሩ ተግባራት አጋዥ ይሆናል ተብሎ ይጠበቃል።

ይህ ተግባር በመገንዘብ ለዚህ ጥናት መሳካት አስፈላጊውን ተሳትፎ እንዲያደርጉ በትህትና እጠይቃለሁ። የሰጡትን መረጃ ሁሉ ደግሞ በሚስጢር እንደሚጠበቅ እናረጋግጣለን።

ይህ መጠይቅ በአጭር ጊዜ ተሞልቶ የሚቀርብ ነው።

ሀ/ እስማማለሁ (መጠይቁን ማስሞላት)

ለ/ አልስማማም (ቀጥሎ ወዳለው መላሽ መሄድ)

ከተስማሙ ይቀጥሉ።

ፊርማ-----

ስለትብብርዎ እናመሰግናለን!!!

ባለፈው አንድ አመት ውስጥ የወለዱና በወረዳው የሚገኙ እናቶችን በቃል ለመጠየቅ የተዘጋጀ መጠይቅ፤

ክፍል 1: አጠቃላይ መረጃዎች

ክፍል 2- የድህረ ወሊድ ክትትልና ተያያዥ ሁኔታዎች በተመለከተ

ተ/ቁ	ጥያቄ	ምርመራ	ምርመራ	ምርመራ
101	የአገልግሎት አገልግሎት ከወሊድ በላይ አስከሬን ላይ ክትትል ተደርጎለት/አድርገው ያውቃሉ?	2 ቀን ድረስ የጤና ማረጋገጫ	ሀ/ አዎ ለ/ አላውቅም	መልስዎ አላወቅም
102	የትዳር ሁኔታ	ሀ/ ያገባ ለ/ ያላገባ	ሐ/ የፈታ መ/ በሞት የተለየ ሠ/ሌላ	ከሆነ ወደ ጥ.ቁ 209 ይሄዱ
103	የእናት የትምህርት ደረጃ	ሀ/ ማንበብና መጻፍ ደረጃና ከዚያ በላይ	ለ/የመጀመሪያ ደረጃ ሐ/ሁለተኛ	
202	ለ201 ጥያቄ መልሱ አዎ ከሆነ ምን ያህል ጊዜ?		ሀ/ አንዴ ለ/ ሁለቱ	
104	የባለቤት የትምህርት ደረጃ	ሀ/ ማንበብና መጻፍ ደረጃና ከዚያ በላይ	ለ/የመጀመሪያ ደረጃ ሐ/ሁለተኛ ሐ/ሶስቱ መ/ አራትና ከዚያ በላይ	
105	ለ201 ጥያቄ መልሱ አዎ ከሆነ በሌላ ሰዓት/ቀን ስለት/ቀን?	ሀ/ ሌላ ሰዓት/ቀን ላይ ካቶሊክ ሠ/ ሌላ ከሆነ ይጠቀስ	ለ/ መሀለ ሂሳብ አገር ሌላ ቤት ምስጢር ስጥ ሐ/ ከ7-14	
204	ለ201 ጥያቄ መልሱ አዎ ከሆነ ማን እንደሚረገጡት?		ሀ. ባለቤቱ ለ. ጎረቤት ሐ. ቤተሰብ/ጋራ ደኛ መ.	
106	የመኖሪያ አድራሻ	ሀ / ከተማ ለ/ ገጠላ	ሐ/ሌላ ካለ ይጠቀስ-----	
105	ለ201 ጥያቄ መልሱ አዎ ከሆነ አገልግሎት ላይ ካለው የጥያቄ ሰዓት?	ሀ/ አገልግሎት ላይ ካለው የጥያቄ ሰዓት	ሀ. እቤት ለ. ጤና ኬላ ሐ. ጤና ጣቢያ/ሆስፒታል	
108	የሚሰጥ የስራ ሁኔታ	ሀ/የቤት እመቤት ለ/ ማብርና ሐ/ ነጋዴ ሠ/ ተቀጣሪ ረ/ሌላ		
206	ለ201 ጥያቄ መልሱ አዎ ከሆነ አገልግሎት በማን ነበር ያገኙት?	ሀ/ ካሉ በማን ነበር ይጠቀስ	ሀ. በጤና ኤክስፔንሽን ባለሙያ ለ. በልምድ ሃ. ምሥራቅ ስርዓት/ሌላ ነርሲ መ ጤና መኮንን/ሆስፒታል ሠ. ሌላ ካለ ይጠቀስ-----	
109	የባለ የስራ ሁኔታ	ሀ/ ማብርና ለ/ ነጋዴ ሐ/ ተቀጣሪ ረ/ሌላ ካለ		
207	ለ201 ጥያቄ መልሱ አዎ ከሆነ ዋና የሥራ ቤቱ ምን ነው?		ሀ. ስላመመኝ ለ. ለልጅ ክትባት ስል ሐ. ጥቅምን	
110	የጋብቻው አይነት	ሀ/ አንድ ሚስት ብቻ ለ/ ከአንድ በላይ	ለ/ ስለመገንዘብ መ. ጤና ባለሙያዎች ስለተገኙ ሠ. ሌላ ካለ ይጠቀስ-----	
111	ከወሊድ በኋላ በአብዛኛው	ሀ/ በመጋረጃ ውስጥ/አልጋ ላይ ቀኑን ሙሉ ለ/ በባህሉ		
208	ለ201 ጥያቄ መልሱ አዎ ከሆነ አገልግሎት ላይ ካለው የጥያቄ ሰዓት በሌላ ሰዓት ላይ ተቋም ለምን ያህል ያሳልፋለሽ?	ሀ/ ለማግኘት ውጪ መውጣት አይቻልም ጊዜ ቆይተው ነበር እራሳችንን ለሙያዎች ለ/ ሌላ ካለ ይጠቀስ	ሀ. በጣም ብዙ ሰዓት ለ. በጣም ጥቂት ሰዓት ሐ/ አልፎ አልፎ ቤት ውስጥ ሐ. መካከለኛ ሰዓት ሠ. መገመት ያስቸግረኛል	
112	የቤተሰብ ብዛት			
113	ለመጀመሪያ ጊዜ ሲወልዱ አድሜዎ ስንት አመት ነበር	(52)	ዓመት	

	?		
209	በእርግዝናዎ ጊዜ ክትትል አድርገው ነበር?	ሀ.አዎ ለ.የለም	መልስዎ አላወቅም ከሆነ ወደ ጥ.ቁ 211 ይሂዱ
210	ለ 209ጥያቄ መልስዎ አዎ ከነት ጊዜ ተከታትለዋል?	ሀ/ አንዴ ለ/ ሁለቴ ሐ/ሶስቴ መ/ አራትና ከዚያ በላይ	
211	የወለዱትስ የት ነበር?	ሀ. በጤና ተቋም ለ. ቤት	
212	ማን ነበር ያዋለዱት?	ሀ.ነርስ/ጤና መኮንን ለ.ሀኪም ሐ. ጤና ኤክስቴንሽን መ. ሌላ ካለ ይጠቀስ	
213	በባለፈው በወሊድ ወይም ከዚያ በላ ያጋጠሞት ተያያዥ ችግር ነበር?	ሀ. አዎ ለ. የለም	
214	እርግዝናዎም ሆነ የወሊድ ሁኔታ የታቀደ ነበር?	ሀ. አዎ ለ. የለም	
215	ብዙ ጊዜ በቤታችሁ ለጤና አገልግሎት ፍላጎት የሚወስነው ማን ነው?	ሀ. እኔ ብቻዬን ለ. በጋራ ሐ. ባለቤቴ ብቻውን መ. ሌሎች	
216	ብዙ ጊዜ በቤታችሁ ለጤና ፍጆታ አገልግሎት የሚውሉ ዋና ዋና ቁሳቁሶች ግዢ የሚወስነው ማን ነው?	ሀ. እኔ ብቻዬን ለ. በጋራ ሐ. ባለቤቴ ብቻውን መ. ሌሎች	
217	ብዙ ጊዜ በቤታችሁ ለዋና ዋና ጌጣጌጥ ግዢ የሚወስነው ማን ነው?	ሀ. እኔ ብቻዬን ለ. በጋራ ሐ. ባለቤቴ ብቻውን መ. ሌሎች	
218	ብዙ ጊዜ በቤታችሁ ለልጆች የትምህርት ሁኔታ የሚወስነው ማን ነው?	ሀ. እኔ ብቻዬን ለ. በጋራ ሐ. ባለቤቴ ብቻውን መ. ሌሎች	

ክፍል 3. ከጤና አገልግሎት ተደራሽነት የተያያዙ

301	በአካባቢዎ ያለው ጤና ተቋም ከመኖሪያ ቤቶ ምን ያህል ይርቃል ?	_____ በደቂቃ	
302	የድህረ ወሊድ ክትትል አገልግሎት በቅርብ ቦታ ማግኘት ይችላሉ?	ሀ. አዎ ለ. የለም	
303	ካለ አገልግሎቱን እንዴት አገኙት?	ሀ / ማራኪና ሳቢ ነው ለ/ ጥሩ አይደለም ሐ/ አላውቅም መ. ሌላ ካለ ይጠቀስ--- -----	
304	ካለ የጤና ባለሙያዎቹ ለእናቶች ያላቸው አቀራረብ ማራኪ ነው?	ሀ. አዎ ለ. የለም	
305	ስለጤና ባለሙያም ሆነ ስለህክምና መሳሪያ እጥረት ተገልጾለት ያውቃል?	ሀ. አዎ ለ. የለም	
306	የጤና ባለሙያዎቹ የእናቶች ጤና ጉዳይ በሚገባ ያዳምጣሉ ብለው ያስባሉ?	ሀ. አዎ ለ. የለም	
307	ወደ ጤና ተቋም ለመድረስ ያለው የመንገድ ሁኔታ ጥሩና የሚጋብዝ ነው?	ሀ. አዎ ለ. የለም	
308	ከቤትዎ ወደ ጤና ተቋም ለመሄድ ያለው የትራንስፖርት ክፍያ ምን ይመስላል?	ሀ. ርካሽ ነው ለ. ውድ ነው ሐ. መካከለኛ ነው መ. ሌላ ካለ ይጠቀስ	
309	ለማንኛውም ከወሊድ ጋር የተያያዙ የእናቶች ጤና አገልግሎት ክፍያ ተጠይቀው ያውቃሉ?	ሀ. አዎ ለ. የለም	መልስዎ አዎ ከሆነ ወደ ጥያቄ 310 ይሂዱ
310	ለምን ለምን አገልግሎቶች ክፍያ ተጠይቀው ያውቃሉ?	ሀ. ለቅድመ ወሊድ ለ. ለወሊድ ሐ. ለድህረወሊድ መ. ለቤተሰብ ምጣኔ ሠ.	

		ሌላ ካለ ይጠቀስ	
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ክፍል 4 : የቤተሰብ የሀብት አመላካች ጉዳዮች በተመለከተ

401. በአሁን ሰዓት ቤተሰባችሁ የመጠጥ ውሃ የሚያገኘው በዋነኛነት ከየት ነው?

ሀ. የቧንቧ ውሀ በግቢ ለ. የቧንቧ ውሀ ከቦኖ ሐ. ጥልቅ ጉድጓድ መ. ወራጅ ውሀ ሠ. ከተጠበቀ ምንጭ ውሀ ረ. ከተጠበቀ የጉድጓድ ውሀ ሸ. ያልተጠበቀ የጉድጓድ ውሀ ቀ. ያልተጠበቀ ምንጭ ውሀ በ. የዝናብ ውሀ 9. አላውቅም/መመለስ አልችልም

402. በቤት ውስጥ የማጠራቀያ እቃው ከማጠብ ውጪ የመጠጥ ውሀ የማከሚያ መንገዶች አሉ?

ሀ. አለ ለ. የለም 9. አላውቅም/መመለስ አልችልም

→ ለጥያቄ 402 መልስ የለም/አላውቅም/መመለስ አልችልም ከሆነ ወደ ጥያቄ 404 ይሂዱ

403. ውሀን ለመጠጥ አስተማማኝ/ምቹ ለማድረግ ብዙ ጊዜ የምትጠቀሙበት ዘዴ ምንድነው? (መልስ የሆኑትን በሙሉ ማክበብ ይችላሉ)

ሀ. በማፍላት ለ. ለጥቂት ጊዜ በእቃ በማቆየት ሐ. በልብስ በማጥለል መ. የፀሀይ ብርሀን በመጠቀም ሠ. ከቅጠል ጋር በማደባለቅ ረ. የውሀ ማጣሪያ በመጠቀም(አሸዋ፣ ሴራሚክ ወ.ዘ. ተ) ሸ. ክሎሪን/ውሀ አጋር በመጨመር ቀ. ሌላ ካለ ይጠቀስ 9 . አላውቅም/መመለስ አልችልም

404. አብዛኛው ጊዜ ቤተሰቡ ለመፀዳዳት ሲፈልግ የት ይጠቀማል?(አንዱን ብቻ ማክበብ)

ሀ. ቁጥቋጥ/ጥሻ ላይ ለ. በግቢ ላይ በጉድጓድ ሐ. ማስተንፈሻ ያለው ግን መቀመጫ የሌለው/ክፍት ሽንት ቤት መ. ማስተንፈሻና መቀመጫ ያለው ሽንት ቤት ሰ. ማስተንፈሻ ያለው ሽንት ቤት ረ. ከአፈር በማደባለቅ ሸ. ሌላ ካለ ይጠቀስ 9 . አላውቅም/መመለስ አልችልም

405. ምግብ የምታበስሉት የት ነው

ሀ. እቤት ውስጥ ለ. ከቤት በተለየ ክፍል ሐ. ውጪ ላይ መ. ሌላ ካለ ይገለፅ

406. በአብዛኛው ቤተሰባችሁ ምን አይነት የሀይል ምንጭ ይጠቀማል

ሀ. በዮጋስ ለ. ነጭ ጋዝ ሐ. ከሰል መ. አዛባ ሠ. ኤሌክትሪክ ረ. የደረቁ ሰብሎች ውጤት ሌላ ካለ ይጠቀስ

407. በቤታችሁ ውስጥ ከሚከተሉት የተዘረዘሩ እንስሳት መካከል ብዛታቸው በቁጥር ምን ያህል እንዳሉ ይግለፁ ምንም ከሌሉ በሳጥኑ ውስጥ "000" ይሞላ፤ አላውቅም/መመለስ አልችልም ከሆነ "999" ይሞላ

የሚያርሱ በሬዎች |___|___| ጥጃዎች |___|___| ዶሮዎች |___|___|

የጎበ ቀፎዎች |___|___| ላሞች |___|___| በግና ፍየሎች |___|___|ፈረስ፣አህያና በቅሎ |___|___| ድልብ በሮዎች|___|___|

408. ከሚከተሉት የተዘረዘሩ ነገሮች መካከል በቤታችሁ ውስጥ ካሉ "1" ከሌሉ ደግሞ "0" እና አላውቅም/መመለስ አልችልም ከሆነ "9" ይሞላ

የኤልክትሪክ ሀይል |___| መኪና |___| የእህል ወፍጮ |___| ነጭ ጋዝ |___| የልብስ ስፌት ማሽን |___|የኤሌክትሪክ ምጣድ |___| የነጭ ጋዝ/የኤልክትሪክ ስቶቭ |___| የውሀ

መሳሪያ ሞተር |___|ጄኔሬተር |___| የላውንደሪ ማሽን|___|ሬዲዮ|___|ጠረጴዛ|___|

ቴሌቪዥን |___| ወንበር/አግዳሚ|___|የሞባይል ስልክ |___| አልጋ ከነስፕሪንግ/ስፖንጅ ፍራሽ |___|

የመስመር ስልክ|___| የቡና/የጫት ማሳ|___| በእንስሳት የሚጎተት ጋሪ|___| አልጋ ከጥጥ ፍራሽ ጋር |___| በእግር የሚነዳ ሳይክል|___| አልጋ ከጨርቅ/ገለባ ፍራሽ ጋር |___| ሞተር ሳይክል |___| ፍራጅ |___|

409. የተጎበኘው ቤት ጣሪያ የተሰራው ከምንድነው (ቤቱን በማየት አንድ መልስ ብቻ አክብቡ)

ሀ. ሳር ለ. ቆርቆሮ ሐ. ሌላ ካለ ይገለፅ

410. የተጎበኘው ቤት ግድግዳ የተሰራው ከምንድነው (ቤቱን በማየት አንድ መልስ ብቻ አክብቡ)

ሀ. ከሸክላ/ግንብ/ግርፍ ለ. ከሸክላ ጭቃና ሲሚንት ሐ. ከሸክላና ጭቃ መ. እንጨት ጭቃና ሲሚንት ሰ. ከእንጨትና ጭቃ ረ. ከእንጨት ብቻ ሠ. ሌላ ካለ ይገለፅ

411. የተጎበኘው ቤት ወለሉ የተሰራው ከምንድነው (ቤቱን በማየት አንድ መልስ ብቻ አክብቡ)

ሀ. ከሴራሚክ ንጣፍ ለ. ከጣውላ ሐ. ሊሾ በምንጣፍ/ያለምንጣፍ መ. ከእንጨት ሰ. ሸክላ ረ. ከጭቃና ፕላስቲክ ንጣፍ ሠ. ከጭቃ ብቻ ሸ. ሌላ ካለ ይገለፅ

412. በአሁኑ ወቅት የቤተሰባቸው ዋና የገቢ ምንጭ ምንድነው/ከየት ነው (አንድ መልስ ብቻ አክብቡ)

ሀ. የሰብል ምርት በማምረት ለ. የገበያ ምርቶችን(እንደ ቡናና ጫት) በማምረት ሐ. በርቢ/ንብ በማነብ መ. በቅጥር/በወር ገቢ ሰ. ከጉልበት ስራ ረ. በአነስተኛ ንግድ(መደብር፣ግርሰሪ፣እንጨት/ከሰል ሸያጭ ሠ. ከፍተኛ ንግድ (ጅምላ ሸያጭ) ሸ. የእጅ ባለሙያ ቀ. ውጪ ባለ ዘመድ እርዳታ በ. ሀገር ውስጥ ባለ ዘመድ እርዳታ ተ. ሌላ ካለ ይገለፅ ቸ. መመለስ አልቻልንም

413. ለራስዎ የሆነ የእርሻ መሬት አለዎት

ሀ. አዎ ለ. የለም 9 . አላውቅም/መመለስ አልቻልንም

414. ምንምም መጠን ያለው የእርሻ መሬት አለዎት ያሉትን የመሬት መጠንና የመለከያው የእይነት ይገለፁ-

→ ምንም ከሌሎች በሳጥኑ ውስጥ "00" ይሞላ፤ አላውቅም/መመለስ አልቻልንም ከሆነ "99" ይሞላ

የመሬቱ መጠን: |___| |___|

የመለከያው አይነት: ሀ. ሐክታር ለ. ዘንግ ሐ. ጥማድ መ. ሌላ ካለ ይገለፅ

ክፍል 5: ከእናቶች የድህረ-ወሊድ እውቀትና ግንዛቤ የተያያዙ ጉዳዮች በተመለከተ

501	በድህረ ወሊድ ጊዜ ሊያጋጥሙ የሚችሉ አደገኛ ምልክቶች ስምተው ያውቃሉ?	ሀ. አዎ ለ. የለም	መልስዎ የለም ከሆነ ወደ ጥያቄ 508 ይሂዱ
502	የደም ማነስ በድህረ ወሊድ ጊዜ ሊያጋጥም እንደሚችል ስምተው	ሀ. አዎ ለ. የለም	

	ያውቃሉ?		
503	በድህረ ወሊድ ጊዜ ሊያጋጥም ስለሚችል የራስ ምታት ስምተው ያውቃሉ?	ሀ. አዎ ለ. የለም	
504	በድህረ ወሊድ ጊዜ ሊያጋጥም ስለሚችል የደም ግፊት ስምተው ያውቃሉ?	ሀ. አዎ ለ. የለም	
505	በድህረ ወሊድ ጊዜ ሊያጋጥም ስለሚችል የደም መፍሰስ ስምተው ያውቃሉ?	ሀ. አዎ ለ. የለም	
506	በድህረ ወሊድ ጊዜ ሊያጋጥም ስለሚችል የማያቋርጥ ትውከት ስምተው ያውቃሉ?	ሀ. አዎ ለ. የለም	
507	በድህረ ወሊድ ጊዜ ሊያጋጥም ስለሚችል ትኩሳት ስምተው ያውቃሉ?	ሀ. አዎ ለ. የለም	
	ስለእናቶች አመለካከትና የመረጃ ወይም የግንዛቤ ደረጃ		
508	የድህረ-ወሊድ ክትትል ለእናቶች ይጠቅማል ብለው ያስባሉ	ሀ. አዎ ለ. አላስብም ሐ. አላውቅም	
509	ምን አይነት የድህረ-ወሊድ ክትትል ያውቃሉ?	ሀ. አጠቃላይ የእናቶች ጤና ክትትል ለ. ለህፃናት ክትትል መ. የምክክር አገልግሎት ሠ. የቤተሰብ ምጣኔ ረ. ሌላ ካለ ይገለፁ-----	
510	ቤታችሁ ውስጥ ሬድዮ አለ?	ሀ. አዎ ለ. የለም	መልስዎ የለም ከሆነ ወደ ጥያቄ 512ይሂዱ

511	ካለ/መልስዎ አዎ ከሆነ ምን ያህል ያዳምጣሉ?	ሀ. ሁልጊዜ ለ. በሳምንት አንዴ ሐ. አንዳንዴ መ. ምንም አላዳምጥም	
512	ቤታችሁ ውስጥ ቴሌቪዥን አለ/ያዳምጣሉ?	ሀ. አዎ ለ. የለም	መልስዎ የለም ከሆነ ወደ ጥያቄ 514 ይሂዱ
513	ካለ/መልስዎ አዎ ከሆነ ምን ያህል ያዳምጣሉ?	ሀ. ሁልጊዜ ለ. በሳምንት አንዴ ሐ. አንዳንዴ መ. ምንም አላዳምጥም	
514	በእርግዝናዎ ጊዜ ስለ ድህረ ወሊድ አገልግሎት በቂ መረጃ አግኝተው ነበር?	ሀ. አዎ ለ. የለም	መልስዎ የለም ወደ ጥያቄ 516 ይሂዱ
515	ለጥያቄ 511 መልስዎ አዎ ከሆነ መረጃው ከማን ነበር ያገኙት?	ሀ. ከጤና ኤክስፔንሽን ባለሙያ ለ. ከነርስ ሐ. ከጤና መኮንን/ዶክተር መ. ሌላ ካለ ይገለፁ_____	
516	በምጥና በወሊድዎ ጊዜ ስለ ድህረ ወሊድ ክትትል የተለየ ምክር አግኝተው ነበር?	ሀ. አዎ ለ. የለም	
517	በእርግዝናዎ ጊዜ በጤና ኤክስፔንሽን ባለሙያ ተጎብኝተው ነበር?	ሀ. አዎ ለ. የለም	መልስዎ አዎ ከሆነ ወደ ጥያቄ 518 ይሂዱ
518	በጤና ኤክስፔንሽን ባለሙያ ተጎብኝተው ከነበረ ምን ያህል ጊዜ ድግግሞሽ ነበረው?	A. በሳምንት አንዴ B. በወር አንዴ C. በሳምንት ሁለት D. በወር ሁለት	
519	በእርግዝናዎ/በወሊድ ጊዜ ጤና ተቋም ከሄዱ በጤና ተቋም	ሀ. ማራኪ ነበር ለ. ማራኪ አልነበረም ሐ. በቂ ነው መ.	

	ያገኛቸው የጤና ባለሙያዎች አቀባበል/አቀራረብ እንዴት ነበር	አላውቅም	
520	በእርግዝናዎ/በወሊድ ጊዜ ጤና ተቋም ከሄዱ በጤና ተቋም ያገኛቸው የጤና ባለሙያዎች አገልግሎት አሰጣጣቸውስ እንዴት ነበር	ሀ. የሚያረካ ነበር ለ. አርኪ አልነበረም ሙ.አላውቅም	

ANNEX-IV: - DUMMY TABLES

Table 6: Frequency Distribution of Socio-cultural & demographic data of the women

S. N	Socio-demographic variables	Number	Percent
1	Age in years	15-19	
		20-24	
		25-29	
		30-34	
		35-39	
		40-44	
		45-49	
		Total	
2	Marital status	Monogamous	

		Polygamous		
3	Educational status of a woman			
		Read and write		
		Primary		
		secondary and above		
		Total		
4	Maternal Occupation	House wife		
		House maid		
		Student		
		Merchant		
		Government employee		
		Others		
		Total		
5	Religion	Muslim		
		Orthodox		
		Protestant		
		Others		
		Total		
6	Households wealth level	Poorest		

		Poorer		
		Medium		
		Richer		
		Richest		
		Total		
7	Residence	Urban		
		Rural		
		Total		
8	Level of women HHs decision making authority	Autonomous		
		Not autonomous		
		Total		
9	Presence of media at home	Yes		
		No		
		Total		
10	Husband`s education	Illiterate		
		Read and write		
		Primary		
		secondary and above		
		Total		
11	Husband`s occupation	Farmer		

		Merchant		
		Employed		
		Student		
		Others		
		Total		

Table 7: Utilization of PNC & associated factors

S. N	predictor variables		Number	Percent
1	PNC utilization	Yes		
		No		
2	period of PNC was	first 24 hrs		
		3days		
		7-14 day		
		42 days		
		Total		
3	place of PNC utilization	At home		
		At HP		
		At HC/Hospital		
		TOTAL		
4.	PNC services was provided by	Skilled provider		

		Not skilled provider		
5	Place of delivery	Health institution		
		Home		
		Total		
6	Waiting time at facilities	long		
		Short		
7	Accompany for PNC	Husband		
		Neighbors/friend		
		Family		
		Others		
		Total		
8	Previous complication	Yes		
		No		
		Total		
9	ANC f/up	Yes		
		No		
		Total		
10	Number of ANC	Once		

		Twice		
		Three times		
		Four & above		
		Total		
11	Age at first birth	Less than 20 years		
		20-34		
		35 & above		
		Total		
12	Family size	Less than 5 children		
		Greater or equal to 5 children		
		Total		
13	Pregnancy situation	Wanted/planned		
		Unwanted/unplanned		

Table 8:-Level of Knowledge, perception & information of women

1	Level of knowledge on danger sign	Number	Percent
	Better Knowledgeable		
	Less knowledgeable		
2	Knows about danger signs	Yes	
		No	
		Total	

	Total		
3	level of information		
	Well informed		
	Less informed		
	Total		
4	women perception		
4.1	Maternal Services were Attractive		
	Maternal Services were not attractive		
	Total		
4.2	Health professionals were friendly		
	Health professionals were not friendly		
	Total		

Annex IV: - BUDGET BREAKDOWN

6.1. Personnel budget breakdown

Table 8:- Personnel budget breakdown for assessment of postnatal care utilization among women in Cheha district, Guraghe zone, SNNPR, Ethiopia, from October 10-30,2015

Personnel	Task/responsibility	Qualification	No	Working days	Per diem	Total(in birr)
Data collector and Supervisor	For data collection and supervision	Diploma Midwives/ Nurses	12	20	100	24,000
		BSc Midwife/ Nurse	2	15	100	3000
Data collector and Supervisor	For training of Data collector and Supervisor	Diploma Midwives/ Nurses	12	2	100	2400
		BSc Midwife/ Nurse	2	2	100	400
Writing	Secretary	-----	1	---	1000	1000
	Total					30,800.00

6.2. Stationary cost breakdown

Table 9:- stationary cost budget breakdown for assessment of postnatal care in health facilities, Guraghe zone, SNNPR, Ethiopia, from March.21-April 15,2015

S. No	Item	Unit	Quantity	Unit price	Total price
1.	Pencil	Piece	5	2	10
2.	Pen	Piece	5	5	15
3.	CD (RW)	Each	2	30	60
4.	Flash	Piece	1	250	250
5.	Photo copy (questionnaire)	Each	6page*396	0.50	1188
6.	Duplicating proposals		4 (50 pages)	50	200
7.	Duplicating final report		4 (80 pages)	80	320
8.	Total				2043

6.3. Budget summary

Table 10:- Summary of budget breakdown for assessment of postnatal care utilization among women in Cheha district, Guraghe zone, SNNPR, Ethiopia, from October 10-30,2015

No	Expense type	Total / in birr
1	Personnel cost	30, 800.00
2	Stationary cost	2043
	Grand total	32,843.00

Annex V: Administrative Sketch Map of Gurage zone where Cheha wereda is located

I. Zonal Background

1.1 GURAGEA ZONE

AREA = 5932 KM³

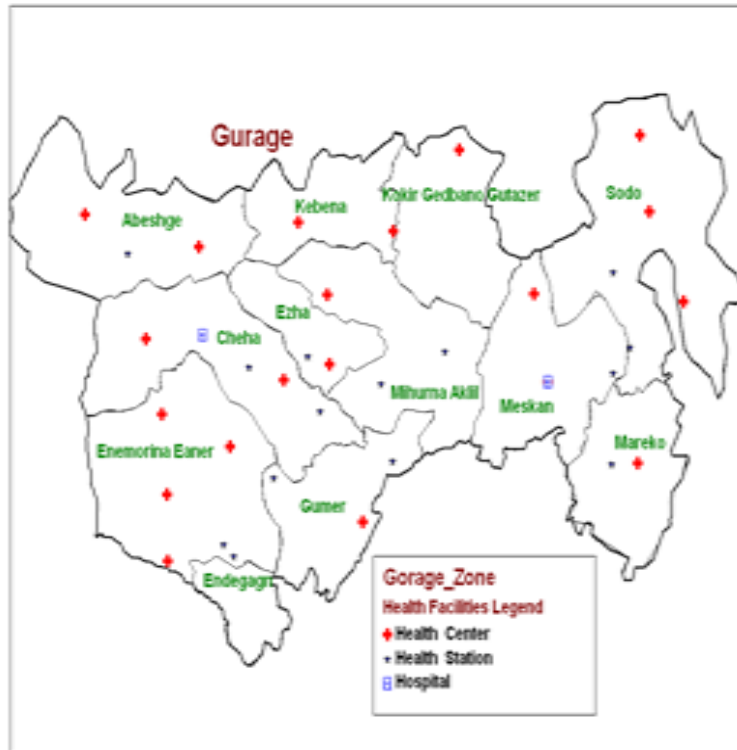
POPULATION = 1418931

13
Woredas

02 Town Adm.

408
Rural
Kebeles

21 Urban
Kebeles



3