ADDIS ABABA UNIVERSITY

COLLEGE OF HEALTH SCIENCE

SCHOOL OF PUBLIC HEALTH, DEPARTMENT OF REPRODUCTIVE HEALTH

MASTER THESIS PROPOSAL ON:

Assessment of magnitude and factors associated with unmet need for family planning among married women of reproductive age who are in extended postpartum in Tahtay Koraro Woreda, Tigray regional state, Ethiopia

BY

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Acronym

AAU- Addis Ababa University

AOR- Adjusted Odds Ratio

CSA- Central Statistics Agency

DHS- Demographic and Health Survey

ETB- Ethiopian Birr

EDHS- Ethiopia Demographic and Health Survey

EPPP- Extended Postpartum Period

FGAE- Family Guidance Association of Ethiopia

FHI- Family Health International

FP- Family Planning

HIV- Human immuno deficiency virus

ICPD- International Conference on Population and Development

LAM- Lactational Amenorrhea

MDG- Millennium Development Goal

PP- Postpartum

PPFP- Postpartum Family Planning

REC- Research Ethics Committee

USAID- United State Agency for International Development

WHO- World Health Organization

Abstract

Background: About 222 million women in developing countries had unmet need of contraception. Women in their first year after childbirth had the largest proportion of unmet need for contraception. This first year after delivery is described as an extended postpartum period.

Objective: To determine the magnitude and factors associated with unmet need among women who are in extended postpartum in Tahtay Koraro Woreda, Tigray regional state, Ethiopia.

Methods: A cross sectional facility based study complemented by in-depth interview of key informant was implemented. A total of 409 Women in the 1st year after delivery were recruited. The study period was from 1st February to March 30, 2014. For quantitative data Epi-Info version 3.5.4 software was used for data entry, and then data exported to SPSS Version 21 software for further analysis. Logistic regression model was used to identify factors associated with the outcome variable. The transcribed and translated qualitative text data were imported into an Open Code program and coded. Then codes were categorized and thematically described.

Results: The overall unmet need for family planning was 150 (36.7%), with 121 (29.6%) for spacing and 29 (7.1%) for limiting. One hundred twenty (29.3%) women were using family planning. And 84 (70%) of them were using injectable. The commonest reasons for non-use of FP were non-menstruating since last birth 201 (69.6%), side effects 39 (13.5%) and infrequent sex 22 (7.6%). Rural residence (AOR=7.16, 95% CI 2.57-19.95), postpartum week (38-52 week; AOR=8.71, 95% CI 3.90-19.44) and low perceived risk of pregnancy (AOR=1.79, 95% CI 1.04-3.09) were significantly associated with high unmet need. Opposition from different groups of the community, low perceived risk of pregnancy, provider refusal of removal of implants and misunderstanding of FP use and side effects were additional triggering factors for unmet need.

Conclusion and Recommendation: The unmet need for family planning was high. Rural residence, increased maternal postpartum week and low perceived risk of pregnancy were associated with high unmet need. Opposition from different groups of the community and refusal of implant removal were also other factors affecting unmet need. Empowering women with knowledge of the risk of pregnancy and FP use during extended postpartum period should be enhanced. Further awareness creation should be extended to periphery at different levels of the community.

1. INTRODUCTION

1.1. Background

In 2013 the world population reached 7.2 billion with 5.9 billion (82.5%) living in the less developed regions [1]. This fast population growth, fueled by high fertility, hinders the reduction of poverty and the achievement of other internationally agreed development goals. Furthermore, universal access to reproductive health, one of the key goals of the Program of Action adopted by the International Conference on Population development, is still far from being achieved. And unmet need for family planning in the least developed countries remains high [2].

WHO reported Global use of modern contraception has risen slightly, from 54% in 1990 to 57% in 2012.In Africa it went from 23% to 24% [3]. Of the 1.5 billion women of reproductive age in developing countries, about 222 million women were found to have unmet need for modern methods in 2012 [4]. One of the main factors that account for future population growth is the increased number of unwanted births as a result of unmet need for contraception [5]. Eighty million unintended pregnancies occur every year in developing countries. Women who have an unmet need for effective contraception account for 79% of all unintended pregnancies in developing countries[6].

Globally, an estimated 287 000 maternal deaths occurred in 2010. Sub-Saharan Africa accounts 56%, which is mainly due to complications associated with pregnancy and childbirth[7]. The Millennium Development Goal (MDG) target 5B—universal access to reproductive health by 2015—strongly corresponds to the right to contraceptive information and services to meet the unmet need for family planning which is one of the indicators for this target[8].

Ethiopia is the second-most populous country in Sub-Saharan Africa next to Nigeria with a population of about 85 million[9]. The population grows at a rate of 2.6 percent per annum. The vast majority of the people (84 percent) reside in rural areas. Females constitute 50.5% of the total population. Women aged 15 – 49 years and under five children constitute 23.4% and12.2% of the total population respectively[10]. Since the introduction of modern FP service in Ethiopia by The Family Guidance Association of Ethiopia (FGAE) in 1966 and with the adoption of the Population Policy in 1993, local and international institutions partnered with the government are working in expanding FP programs and services[11]. Despite these cumulative efforts the

maternal mortality ratio in Ethiopia is still strikingly high and has stagnated at 676 per 100,000 live births after declining from 871 per 100,000 live births in 2000 to 673 in 2005 ratio of 676 deaths per 100,000 live births. And the infant mortality rate (59/1000 live births) is also high as well[12], which made it among the seven countries which account for 3%-5% of global maternal deaths [7]. At the current pace, there is little optimism that Ethiopia will be able to meet the MDG 5 target [13].

1.2. Statement of the problem

Worldwide 12% of women 15-49 married or in union wanting to avoid a pregnancy didn't have access to or are not using any effective method of contraception in 2010. This unmet need was especially high among groups such as women in postpartum period [14].

Reducing unmet need would significantly reduce unintended pregnancies, abortions, and maternal and child deaths[15]. Particularly serving all women in developing countries who currently have an unmet need for modern methods would prevent an additional 54 million unintended pregnancies, including 21 million unplanned births, 26 million abortions (of which 16 million would be unsafe) and seven million miscarriages; this would also prevent 79,000 maternal deaths and 1.1 million infant deaths[6].

One of the strategies to reduce maternal morbidity and mortality is to avert the high risk of pregnancies through the use of effective and appropriate family planning methods. It has been suggested that about 35% of maternal deaths could be eliminated if all women and men had access to contraception to prevent unwanted pregnancies [16]. As of 2011, 29 percent of married Ethiopian women of childbearing age (15–49) use any method of FP; this is a dramatic increase from the 2005 level—when only 15 percent of married women of childbearing age were using any form of contraception. However, 25% of married women do not want any more children or want to wait for two or more years before having another child but were not currently using any form of contraception [12].

The year after a woman gives birth presents a rising risk of an unwanted conception and often frustrated desire for contraceptive protection. Survey study of 27 countries, indicated that two-thirds of women who are within one year of their last birth have an unmet need for contraception, and nearly 40% say they plan to use a method in the next 12 months

but are not currently doing so[17]. Study in Ethiopia has shown that 86% of women in first year postpartum have unmet need[18]. ACCESS-FP USAID-sponsored global program defines this first year after delivery as extended postpartum period, which has particular importance to the health of both mother and child, and to use FP to prevent an unintended or unwanted pregnancy, or to space the next birth by 24 months. WHO reports that over 60% of maternal deaths in developing countries occur during this postpartum period[19].

Evidences have shown that for a small proportion (10–25%) of women, low perceived risk of conceiving is the main reason for unmet need, but for most individuals, obstacles prevent the translation of genuine need into contraceptive adoption. The four key barriers are: insufficient knowledge about contraceptive methods and how to use them; fear of social disapproval; fear of side-effects and health concerns; and women's perceptions of husbands' opposition [5].

1.3. Rational of the study

The postpartum period is an important intervention point for improving access to family planning services. This period is critical for two reasons: postpartum women have a high need for contraception, and these women have multiple contacts with the health facility either for postnatal or child immunization visits. Although the majority of postpartum women indicate a desire to use contraceptives, family planning methods are often not offered to, or taken up by, women after delivery or in the first year postpartum[17, 20, 21].

Therefore with regard to this extended postpartum unmet need for FP and factors associated to it, no adequate data are available in our country Ethiopia despite the magnitude shown above by ACCESS-FP and the total unmet need of reproductive age group by EDHS. Beside this the target set to increase contraceptive prevalence to 60% by 2010 of the national reproductive health strategy has not been achieved[22]. As a result studies are needed on the magnitude and factors associated with unmet need of family planning in extended postpartum as they constitute 40% of the unmet needs in the general population. Not only do pregnancies during this period hold the greatest risk for mother and baby, the first 12 months after childbirth also present the greatest opportunities in terms of number of contacts with health care services[21]. Efforts to address this postpartum unmet need should first seek to understand the specific patterns and factors associated with unmet need for contraceptive in the postpartum period. So this study was

conducted in Tahtay Koraro Woreda, North Ethiopia, particularly in immunization and child health clinics of health facilities in which they are supposed to be the best area of contacts with the mother. The results and recommendations of the study are expected to be helpful in providing a convenient programmatic approaching to address the unmet need of mothers who are in the postpartum period and will serve serve as base line for other future studies.

2. LITERATURE

2.1. Extended postpartum unmet need

Extended postpartum unmet need for FP is percentage of women (ages 15 to 49) within the first year following the birth of their most recent child who desire to either stop or postpone childbearing who are at risk or have returned to fertility, but are not currently using a contraceptive method[23]. An issue important to analysis of women in the first year postpartum is what to do with amenorrhic women. There are two possibilities. The first, most popular solution is to define their unmet need status based on their fertility preferences retrospectively at the time of their most recent pregnancy. A second possibility is to define their unmet need status based up on their fertility preferences at the time of the survey interview or prospectively (looking forward) [24]. This is because it is most likely to correlate with their need for family planning in the extended postpartum period. Since women's return to fertility varies and it is difficult to predict that return, all women who are postpartum and not using a method could be considered to have an unmet need for family planning. Furthermore, the largest proportion of women with an unmet need for contraception is found among those in their first year after childbirth [17]; maximizing efforts to reduce unmet need among these women could have a proportionally bigger impact on increasing contraceptive use than targeting on any other group.

An estimated 222 million women in developing countries would like to delay or stop childbearing but are not using any method of contraception mainly in South Asia and sub-Saharan Africa [4]. In sub-Saharan Africa 24% of married women had unmet need for contraceptive, being the lowest in Zimbabwe (13%) and the highest in Rwanda (38%) [25].However with respect to women of reproductive age group it raises to 53% of unmet need for contraception. A study by Ross and Winfrey (2001) using data from 27 countries reported that most of these unmet needs were prevalent in postpartum women and it showed that two-thirds of women who were within one year of their last birth had an unmet need for contraception[17]. Yet, globally, nearly 65% of women in their first postpartum year had an unmet need for family planning services [26].

According to the 2008–09 Demographic and Health Survey (DHS) data from Kenya, from 0–5.9 months postpartum, overall unmet need was 76%. At the end of one year postpartum, overall

unmet need had decreased to 59%, and then to 48% by the end of the second year. And half (50%) of all pregnancies in Kenya occur within short intervals of less than 24 months after the preceding birth. Of these pregnancies, 15% occur within very short intervals of less than 12 months, and another 35% occur within intervals of 12–23 months[27]. A prospective cohort study in Swaziland majority (69.2%) of postpartum women reported that their most recent pregnancy was unintended with no differences between HIV-positive and HIV-negative women[28]. Another study on basis of DHS Rwanda showed 72% and 54% unmet need at 0-5.9 and 6-11.9 months postpartum. Over half (52%) of all pregnancies in Rwanda occurred within short intervals of less than 24 months after the preceding birth. Of these, 4% of pregnancies occurred within very short intervals of less than six months following the preceding birth, 9% occur within short intervals of less than 12 months, and another 39% occur within intervals of 12–23 months [29].

According to the Ethiopia DHS, use of any contraceptive methods among currently married women has increased nearly six fold in the last 20 years, from 5 percent in the 1990 NFFS to 29 percent in the 2011 EDHS. Whereas 25% of currently married women have an unmet need for family planning—16 percent for spacing and 9 percent for limiting and the total demand for family planning among currently married women is 54 percent [12]. In Tigray regional state where the study was carried out, 22.2 % of women in the reproductive age use any method of family planning whereas 22% has unmet need for FP.As to analysis based on 2005 EDHS data of one year postpartum women, 86% of them had unmet need with only 8% were using any method of family planning and only 5% of women during the 12 month postpartum period desire another birth within two years[12, 18]. Another community based survey in Bahir Dar, Ethiopia, showed 21.2% unmet need for FP in EPPP[30]. However there is a limitation of further detailed studies concerning the unmet need of family planning in this critical postpartum period in the study area and in Ethiopia in general.

2.2. Rational of postpartum family planning

Many women in the postpartum period do not start to use contraception until the return of menstruation, but they become fecund before menstruation returns, and, thus, they are at risk of unwanted pregnancy if sexual activity has resumed [24]. This period is also a risk for women in

which over 60% of maternal deaths in developing countries occur during the postpartum period[19]. According to an analysis of DHS data from 27 countries, 65% of women who are 0–12 months postpartum want to avoid a pregnancy in the next 12 months but are not using contraception [17]. These postpartum women may not realize they are at risk of pregnancy even if they are breastfeeding. A study in Egypt found that conception occurred during the first 6 months postpartum in 4.4%, before resumption of menstruation in 15.1% and while exclusively or almost exclusively breastfeeding in 28.1% [31].

WHO recommends pregnancy at least 24 months interval after last birth and at least six months interval after miscarriage or abortion. Study showed that closely spaced pregnancies within the first year postpartum were the riskiest for mother and baby, resulting in increased risks for adverse outcomes such as preterm, low birth weight and small for gestational age. Pregnancy occurring within six months of the last delivery holds a 7.5-fold increased risk for induced abortion and a 1.6-fold increased risk of stillbirth [32].

The dynamics of contraceptive use among women in extended postpartum period, i.e. one year period after the birth of child, is of interest at the family planning program level, since delay of use until the return of menstruation might subject women to the risk of unwanted pregnancy. An increase in contraceptive use during the postpartum period substantially reduces the rates of maternal and infant mortality by preventing unplanned and unwanted pregnancies, and spacing new pregnancies to at least two years after the previous birth [33]. So promotion of family planning in those countries with high birth rates has the potential to avert 32% of all maternal deaths and nearly 10% of childhood deaths[5]. Moreover, a study demonstrated that the addition of family planning to PMTCT services could avert nearly twice as many HIV-positive births as the use of ARV-based prophylaxis does in countries with a high prevalence of HIV[34].

2.3. Demographic and socio-economic characteristics of women with unmet need

The characteristics of women with an unmet need for contraception vary according to their childbearing intentions (whether they want to delay having their first child, space subsequent births or have no more children at all), marital status, age, income and whether they live in urban or rural areas [35].

Analysis of 59 DHS data indicated that in most countries substantially higher levels of unmet need in rural than in urban areas with few exceptions in Mozambique, Moldova, Guyana, Samoa, and the Dominican Republic, where unmet need is the same or slightly higher in urban than rural areas. The unmet need also decreases as women's education and household wealth increases, though the relationship is not consistent. In most countries, patterns for unmet need by parity are similar to those by age because, as would be expected, age and parity are closely linked. In general, most surveys show that unmet need for spacing decreases with age and parity while unmet need for limiting increases, with slightly lower levels of unmet need among the oldest group of women, who have reached menopause, at which point they no longer need family planning at all[36].

Women younger than 35 years in Ethiopia have a higher unmet need for spacing; while older women age 35 or older have a higher unmet need for limiting. Unmet need is almost twice as high among rural women as among urban women (28 percent versus 15 percent). Women with no education (16 percent) or primary education (19 percent) are much more likely to have an unmet need for spacing than those with secondary or higher education (10 and 6 percent, respectively). Unmet need is lowest among women in the wealthiest household[12].

Unmet need is inversely related to ideal number of children. Women whose ideal number of children was between 3 and 4 were 30% less likely to have unmet need compared with those whose ideal number was 5 children and above. And women with less number of living children were less likely to have unmet need for family planning [37]. Women married (for the first time) at age 18-24 had higher unmet need for spacing compared to those who had their first marriage was at less than 15 years old[38].

A cross sectional study of women attending immunization and postpartum care in India showed that prevalence of unmet need is high among illiterate women (46.1 %) and primary literacy group (52.1%); compared to that in the higher educational groups. whereas prevalence of unmet need for spacing significantly decreased as the number of living children increased and unmet need for limiting increased with increased in numbers of living children[39].

2.4. Reasons for non- use of FP in extended postpartum (unmet need)

DHS analytical study of four countries showed that a substantial proportion of mothers in the postpartum period did not use any contraceptive method after they became susceptible, two in five women in Kenya, one in four in the Dominican Republic, and one in five in Indonesia and Peru[40]. A central factor behind the prevalence of postpartum unmet need is women's awareness of when they are at risk for pregnancy. After giving birth, women cannot get pregnant for some period of time that varies depending upon certain factors. Many new mothers are not aware when they are at risk of pregnancy. Often, women (and providers) believe they cannot get pregnant unless their menses have returned, which is not true [41].

Women who gave a reason for nonuse that pertains to their "exposure" to pregnancy indicated that they believe they are at low risk of getting pregnant either because they have sex infrequently, they are experiencing postpartum amenorrhea, or they are generally in fecund or sub fecund [25].

A community based survey among postpartum in Rwanda showed that modern method use was at 50.4%; unmet need to limit births was at 21.7%; unmet need to space births was at 15.1%. 58.4% of the women not currently using any FP method cited waiting for menses to return as the reason for non-use (73/120 women were more than six months postpartum); 15.3% cited fear of side effects; and 14.9% cited breast-feeding (12/30 respondents were more than six months PP). Factors that increased the likelihood of non-use included being older age; being less than six months PP; wanting a child within 12 months; distrusting contraception; and acknowledging barriers to use [42]. A prospective study of 254 women in antenatal care in Nigeria showed that 59.4% unmet need despite high level of awareness of common contraception in postpartum period. The commonest excuse that was given for non-use of contraception was breastfeeding (20.40%), followed by perceived side effects (8.5%) and delayed resumption of sexual intercourse (8.5%). The largest proportion (30.3%) of the respondents, however, did not give any reason. Furthermore, neither educational attainment nor parity significantly influenced the use of contraception among the respondents (p› 0.05) [43].However, a study in Ethiopia indicated that feeling of not exposed to risk of pregnancy (34.4), fear of side effects (10%) and fearing of change in breast milk content (8.6%) were the common reasons for non-use of FP in PP [30].

Another follow up survey of postpartum women in Tanzania showed 62% of unmet need. As a result of this high unmet need, 36% of pregnancies in the postpartum period were unwanted or wanted later. Pregnancies occurred at a median of 6.6 months postpartum, which provides evidence for the increased pregnancy risk after 6 months postpartum. The overwhelming reason for not using FP (even respondents over 10 months postpartum) was that their menses had not returned. Partner disapproval constituted the second most important reason for not using FP, accounting for 10-16% of non-use. Concern over side-effects was the third most common reason, and was by far the largest barrier to FP use at baseline, accounting for 56% of never use of FP [44].

Family Health International (FHI) 360 reviewed data of six separate studies in four different countries (Ghana, India, Rwanda and Zambia) including qualitative study. Beside the above reasons identified by other studies, providers' refusal to provide FP while menses was absent was found to be another important factor. Fifty three percent (53%) of the immunization providers (one study in Rwanda) were unsure or agreed with the statement "a woman must be menstruating to start a family planning method." Many women also confirmed that providers would require menstruation before giving a method. In the non-use study (Rwanda), 43% of women agreed with the statement: "If I go for family planning, the nurse will ask to see my pad." In the qualitative sample in this study, 7 out of 35 current or past family planning users reported being asked to show proof they were menstruating or told to come back during their next period[20].

According to the performance monitoring and accountability by 2020 (PMA/2020) report, being lactating (16.2%), religious opposition (6.5%), personally opposition (3.9%) and lack of knowledge about method or source (8.9%) were among the reasons for non-use of FP in Ethiopia[45]

It has been understood that the largest proportion of women with unmet need for family planning is found among those in their first year after delivery. As a result it contributes to unwanted pregnancy which could further increase the life time risk of maternal mortality. Beside the demographic and socioeconomic status of the mothers, low perceived risk, fear of side effects, spousal/ religion opposition and unavailability of method choice have become important factors affecting unmet need.

Though the unmet need of all women of reproductive age group is well studied, the magnitude and factors associated with unmet need in this critical period of extended postpartum period is not well studied in our country. So that identifying and meeting of this unmet need will significantly improve the contraceptive prevalence rate and, averts considerable amount of maternal and infant deaths. As a result, the study was aimed to identify the above problem which would in turn help in designing a feasible and convenient programmatic approach to address the unmet need of mothers who are within the first year of delivery.

Research questions;

1. What is the prevalence of unmet need for family planning among women who are in extended postpartum period?
2. Do demographic and socioeconomic characteristics of postpartum women affect their unmet need for family planning?

Hypothesis of the study;

1. Women's education is negatively associated with postpartum unmet need for family planning.
2. Women who reside in rural areas have higher postpartum unmet need for family planning as compared to urban dwellers.
3. Women's low perceived risk of pregnancy is associated with increase of postpartum unmet need for family planning.

3. OBJECTIVE

3.1. General objective

- To assess the magnitude and factors associated with unmet need for family planning use among married women of reproductive age who are in an extended postpartum period in Tahtay Koraro Woreda, North West of Tigray, Ethiopia.

3.2. Specific objectives

- To determine the magnitude of unmet need for family planning among women who are in extended postpartum period.
- To identify factors associated with unmet need for family planning during extended postpartum period.
- To explore opinions, attitudes, behavioral and cultural aspects that contribute to unmet need for family planning among postpartum mothers.

4. METHODS

4.1. Study area and period

The study was conducted in Tahtay Koraro Woreda which is found in the North West of Tigray regional state, Ethiopia. The study period was from 1st February to January 30, 2014.It covers an area of 1,940.38 square kilometers. In this Woreda there are two urban and thirteen rural *Kebeles*, *Shire Inda-Silassie* being the administrative town. According to the Ethiopia central statistics agency (CSA) 2007, the total population of the Woreda was116273, of which female population accounts 59929 (51.5%). As the 23.4% of the Ethiopia population is female in reproductive age group, there are an estimated 27208 females aged 15-49 in this Woreda. And infant less than one year accounts 2.9% (3372) of the total population. This Woreda had 1 zonal hospital, 6 health center and thirteen health posts. As to the 2011 EDHS, the unmet need for family planning and contraceptive prevalence of the region was 22% and 22.2% respectively. And according to 2013 report of the Woreda health office, contraceptive prevalence rate of the Woreda was 72%.

4.2. Study design

Institution based cross sectional study design was employed and it was complemented by qualitative study whereby key informant in-depth interview was carried out on six key informants. These key informants were composed of providers, programmers, respected religious leaders and government officials.

4.3. Population

4.3.1. Source Population

The source of the study population for the quantitative part was married women of reproductive age group who were with in the first year after delivery and who came with their infants for immunization or child health service in Tahtay Koraro Woreda, North West of Tigray, Ethiopia. And the source of population for the qualitative data was key informants (health care providers, programmers, religious leaders' and government officials) who live in the locality of respective health facilities.

4.3.2. Study population

The study population for the quantitative data was married women of reproductive age group who were within the first year after delivery and who came with their infants for immunization or child health clinics at the time of data collection, whereas key informants of the respective health facility who were found to be voluntary in the time of data collection were the source of population for the qualitative study.

4.4. Sample size and sampling procedure

The sample size for the quantitative design was calculated based on the outcome variable, unmet need for FP which is the first objective of the study. Other factors were used to see the sample size and the sample size calculated using the prevalence was found to be the maximum.

4.4.1. The sample size was calculated by using single population proportion sample formula;

Where $$n = \frac{(z_{\alpha/2})^2 \cdot pq}{d^2}$$

- d = degree of precision = 0.05
- p = observed prevalence = 0.518 which the prevalence of unmet need among extended postpartum mothers taken from a study in Bahir Dar, North Ethiopia [30]
- Z α\2 at 95% confidence level =1.96
- q = 1-p = 0.482

Based on the assumption, the calculated sample size was:

n= (1.96) x 0.482(0.518) = 384

(0.05)

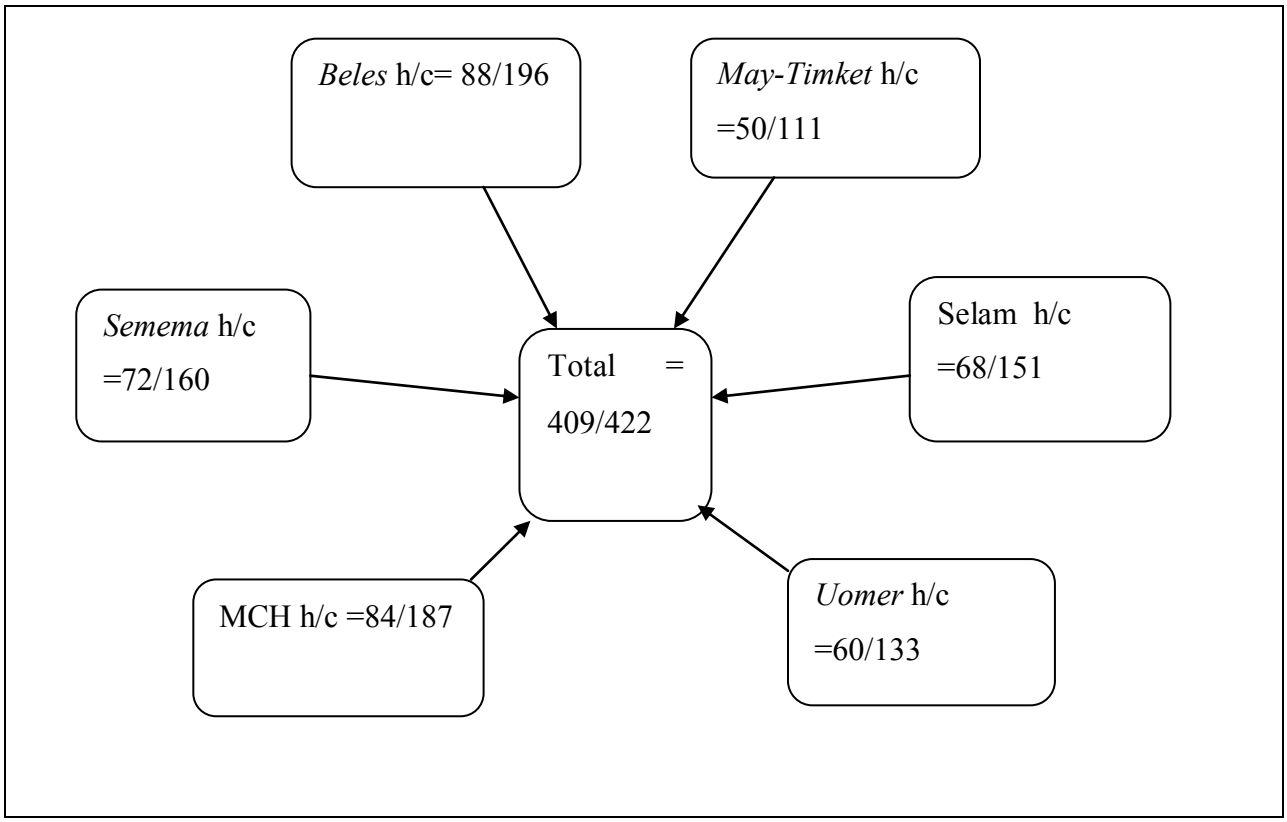
With 10% none response rate, the total sample size was 422.

4.4.2. Sampling procedure

Public health facilities located in Tahtay Koraro Woreda with immunization and child health services and client flow to the respective services were identified. Then, all of the rural health

centers (which were 4 in number) and the urban health centers (which were 2 in number) were selected. The sample size was assigned to each selected health facility proportional to the number of infants served to immunization and child health care services in the respective health facility. A 2013 second quarter measles immunization performance report was used to determine the number of infants. The mothers of those infants were consecutively recruited during the mornings of data collection time according to their order of arrival during their visit. Recruitment was continued until the required sample size was obtained from each facility. Randomization was not possible due to the short period of data collection and due to a limited number of daily client flow in the rural facilities. On the other hand, in-depth interview was conducted among those experienced and volunteer key informants who were selected based on purposive sampling, residing in the selected health facilities until a point of saturation of information was reached.

Figure 1 Schematic presentation of sampling procedure



Where; Numerator=sample size from each facility, Denominator= quarter measles immunization which is used to calculate the required sample from each facility.

Inclusion and exclusion criteria

Inclusion criteria

- Postpartum married women who were within the first year after delivery, who came for immunization and child health services with their infants (less than one year baby) to a health center.

Exclusion criteria

- Postpartum married women who were within the first year after delivery, who came for immunization and child health services with seriously ill infants and having communication problems.

4.5. Measurement and data collection method

4.5.1. Study variables

Dependent Variable

- Unmet need for family planning

Independent variables

- Socio-demographic variables;

Age, marital status, religion, education and occupational status of women, education status and occupation of their spouses, household income

- Health facilities / Institutional related factors

Inaccessibility (facility being too far), availability of contraceptive commodities (e.g. absence of preferred method)

- Client related factors;

Source of FP information, fertility preferences, fear of FP method side effect, partner or religious leaders' disapproval

- Provider related factors

Provider refusal (need of menses to provide FP)

4.5.2. Data collection and instruments

Quantitative data

Data was collected using adopted and modified structured questionnaire from DHS which included demographic information, full details of postpartum maternal unmet need and other factors that deter use of family planning among mothers. The questionnaire was initially prepared in English after an extensive search and review of relevant studies done on the issue under caption and then it was translated into Tigrigna. The Tigrigna version was again translated back to English to check for consistency of meaning. The translated Tigrigna version questionnaire was pre-tested in similar areas outside of the study site prior to the actual data collection.

Six data collectors (2 druggist, 3 clinical nurses and 1diploma midwife) and one supervisor (diploma midwife) were recruited from outside the study facilities. The purpose of the study was explained to them to minimize bias during data collection. The supervisor and data collectors were trained using lecture and field practice method for one day on basic principles of data collection, on the questionnaire and how to do other related procedures during data collection by the principal investigator. An additional training on data completeness, cross-checking and correction actions was given to the supervisor. Accordingly the supervisor continuously followed and supervised data collectors. He collected and cross-checked the completeness of questionnaires received from data collectors and took corrective measures accordingly. And he reported and discussed with the principal investigator on a daily basis throughout the data collection period.

Qualitative data

Key informants were selected based on the assumption that they were more knowledgeable about the topic of interest and can speak about the general community beliefs and practices. Based on the purposive sampling method, sample sizes were determined on the basis of theoretical saturation—the point in data collection when new data no longer bring additional insights to the research questions. The interview process continued until that point was obtained. And eventually that point reached after 6 people from different fields were interviewed. The in-depth interview was carried out by principal investigator with the assistance of a note taker. A study

guide was developed by the principal investigator to conduct the in-depth interview. The interview was tape recorded, and translated and transcribed in the same day of the interview.

4.6. Data quality assurance

To maintain data quality, all data collectors were fresh graduates of health professionals (clinical nurses, diploma midwives and druggists) who had knowledge on FP and all of them were trained on data collection procedures by the principal investigator. Moreover, 5% of the total respondents were pre-tested outside the study site, to see for the accuracy of responses, language clarity, appropriateness of data collection tools, estimate the time required and the necessary amendment was considered. Accordingly minor corrections regarding language clarity and data collection tool were incorporated into the study tool. The collected data were reviewed and checked for omissions, legibility of handwriting, completeness and consistency by the principal investigator and supervisor on a daily basis during data collection.

Data processing and analyzing

Quantitative data

The data collection instruments were coded and data were checked and entered using Epi-Info version 3.5.4. It was cleaned and edited by simple frequencies and cross tabulation before analysis. For analysis, the data was exported from Epi-Info to SPSS Version 21 and was checked for missing values before analysis. Descriptive statistics and numerical summary measures are presented using frequencies distribution tables and graphs (diagrams) to describe the study population in relation to relevant variables. The outcome variable, i.e. postpartum unmet need was calculated prospectively based on future fertility preferences and FP use of women who were in the extended postpartum period and those who were on LAM have been excluded from the calculation. Bivariate logistic regression analysis with the help of odds ratio along with their 95% confidence interval was used to assess the degree of association between dependent and independent variables and test significance of the association. And variables which had significant association with the outcome variable were entered into multivariate analysis to form the model. Multivariate logistic regression model using adjusted odds ratio (AOR) was applied to identify the important determinants for unmet need in extended postpartum mothers and used to

control for possible confounding effects. Before multivariate analysis, independent variables were checked for multicollinearity effect using variance inflation factor (VIF).

Qualitative data

The tape recorded data was transcribed to Tigrigna and translated to English. Open code software was used to code and categorize qualitative data, and then content analysis was employed to analyze the qualitative data. The exported raw data in open code was read thoroughly text by text and codes were labelled. After that codes were categorized into three different categories. Then every category has been explained below to conceptualize the interpretations of the whole data using the raw data. Finally a theme which fits all the categories was formulated.

Operational definition

Unmet need for family planning:- the percentage of married women who are currently married (in union) and fecund and who wants to wait at least two years before their next birth or stop child bearing entirely, but are not using modern contraception.

Extended postpartum period: - is the first year after delivery**.**

Extended postpartum unmet need:- The percent of married women aged (15-49) within the first year following the birth of their most recent child who desire either to stop or postpone childbearing by at least 2 years and who are not currently using a contraceptive method, but want to use in the future.

Postpartum family planning: - is the prevention of unintended and closely spaced pregnancies through the first 12 months following childbirth.

Unmet need for spacing:- the percentage of married women who are unsure whether they want another child or who want another child after two years but not using any modern methods.

Unmet need for limiting: - the percentage of married women who don't want another child but not using any modern methods.

Lactational amenorrhea (LAM):- is a FP method fulfilled when woman's menstrual bleeding has not returned since her baby was born, and the baby is exclusively breastfed and less than 6 months old.

Exclusive breastfeeding for 6 months:- it is proportion of infants <6 months of age who are fed exclusively with breast milk.

Key Informant: - an individual who has special knowledge on a topic and can speak about the general community beliefs and practices.

Low perceived risk of pregnancy:- those postpartum women who think pregnancy will not happen while menses is absent.

High perceived risk of pregnancy:- those postpartum women who think pregnancy may happen while menses is absent.

Knowledge of FP:- when a woman is able to mention at least one FP method by herself or know after description of any method.

Positive attitude of FP:- when a woman able to think or support use of FP during postpartum period or a husband is able to support his wife to use FP.

4.7. Ethical consideration

An ethical approval from a research ethics committee of School of Public Health in AAU was obtained. Following the endorsement by the research ethics committee, Tahtay Koraro Woreda health office was informed about the study through a support letter from School of Public Health, AAU. Accordingly, written cooperation supportive letter was written to the respective health facilities where the study was conducted.

Informed verbal consent was obtained from each selected study woman who was in extended postpartum period and key informant to confirm willingness. Each woman had been informed about the purpose of the study and participation was voluntary. Also affirmation that they were free to withdraw consent and to discontinue participation (interview) without any form of prejudice was made. Confidentiality of information and privacy of participants' interview was respected; the mother was told that information that she provided was only for the purpose of this

study. The names of the informants were not included in the questionnaire. At the end of each interview necessary advice and right information concerning FP was provided to mothers, especially for mothers who were not using FP for different reasons. And those who were practicing accordingly were appreciated.

5. RESULT

5.1. Socio-demographic characteristic of the study subjects

A total of 409 out of 422 married women who were in extended postpartum participated, which made the response rate 96.9%. The 409 participants were included in the analysis. The mean age of the respondents was 26.9 years with minimum age of 16 and a maximum of 45. The majority of the respondents were in the age group of 20-24 (28.1%) and 25-29 (25.9%). Ninety nine percent were Tigre ethnicity and 274 (67%) of the study participants resided in rural areas. Three hundred seventy seven (92.2%) and 32 (7.8%) were Orthodox and Islam followers respectively. Of all the participants 241 (58.9%) were farmers and 112 (27.4%) were housewives. In addition to these 176 (43%) were illiterate, followed by primary 143 (35%) and, secondary education and above 90 (22%). Two hundred forty five (59.9%) husbands' of the respondents were farmers. And 105 (26.2%) and 156 (38.9%) of husbands of study participants were non- educated and primary completed respectively. Two hundred seven (50.6%) of the respondents reported that they had less than 664 Ethiopian Birr monthly household income (Table 1).

Table 1 Socio-demographic characteristics of women in extended postpartum period, in Tahtay Koraro Woreda, Ethiopia, April 2014

Variables		Frequency	Percent (%)
Maternal age	15-19	49	12
	20-24	115	28.1
	25-29	106	25.9
	30-34	71	17.4
	35 and above	68	16.6
	Total	409	100%
Maternal residence	Urban	135	33
	Rural	274	67
	Total	409	100%
Maternal religion	Orthodox	377	92.2
	Muslim	32	7.8
	Total	409	100%
Maternal education	No education	176	43
	Primary	143	35
	Secondary and above	90	22
	Total	409	100%
Maternal occupation	Housewife	112	27.4
	Farmer	241	58.9
	Merchant	36	8.8
	Others*	20	4.9
	Total	409	100%
Husband's education	No education	105	26.2
	Informal education	28	7.0
	Primary	156	38.9
	Secondary and above	112	27.9
	Total	401	100%
Husband's occupation	Farmer	245	59.9
	Government employee	41	10
	Merchant	53	13
	Daily laborer	70	17.1
	Total	409	100%
Household monthly income	Low income (663 and below EBR)	207	50.6
	High income (>663 EBR)	202	49.4

(* = students, government employee and daily laborer)

5.2. Reproductive history and preferences

The mean age at first marriage and at first birth was 16.7 and 19.7 respectively. Of which 74 (18.1%) of them gave their first birth before they celebrated their 18th birthday while 245 (59.9%) women married at the same age interval. Nine years and 29 years were the minimum and the maximum age of first marriage respectively. A total of 336 (82.2%) women had less than 5 number of living children and 248 (60.6%) respondents reported more than 4 ideal number of children wanted. Three hundred ninety (95.4%) women had at least one Antenatal care (ANC) follow up visit for their recent birth, with 265 (68%) start ANC follow up at 4-6 months of pregnancy. Majority 292 (71.4) of study women gave birth at health center. Three hundred thirty two (76.3) study subjects were counseled for family planning during their contact with providers since their last birth and 97 (26.7%) were denied of it during their postpartum period. Of all only 50 (12.2%) participants had an abortion history (Table 2).

Table 2 Reproductive health characteristics of postpartum women in Tahtay Koraro Woreda, Tigray, Ethiopia, April 2014.

Variable		Frequency	Percentage (%)
Age at 1st marriage	<15	73	17.8
	15-17	172	42.1
	18 and above	164	40.1
	Total	409	100%
Age at 1st birth	17 and below	74	18.1
	18-24	310	75.8
	25 and above	25	6.1
	Total	409	100%
Parity	1	121	29.6%
	2-3	145	35.5%
	4 and above	143	35%
No of living children	<5	336	82.2
	5 and above	73	17.8
	Total	409	100%
Ideal No of children	<5	161	39.4
	5 and above	248	60.6
	Total	409	100%
ANC visits	Yes	390	95.4
	No	19	4.6
	Total	409	100%
Delivery place	Facility	292	71.4
	Home	117	28.6
	Total	409	100%
Ever use of FP method	Yes	239	58.4
	No	170	41.6
	Total	409	100%
FP counselled	Yes	312	76.3
	No	97	23.7
	Total	409	100%
No of ANC visits	1-3	138	35.4
	4 and above	252	64.6
	Total	390	100%
Months' ANC started	1-3	103	26.4
	4-6	265	67.9
	7 and above	22	5.6
	Total	390	100%

With regard to reproductive intention, of all respondents 334 (81.7%) study participants wanted to space their next birth at least 2 years and 72 (17.6%) women wanted to limit their family size. This result showed that the majority of participants wanted to delay their births (Figure 1).

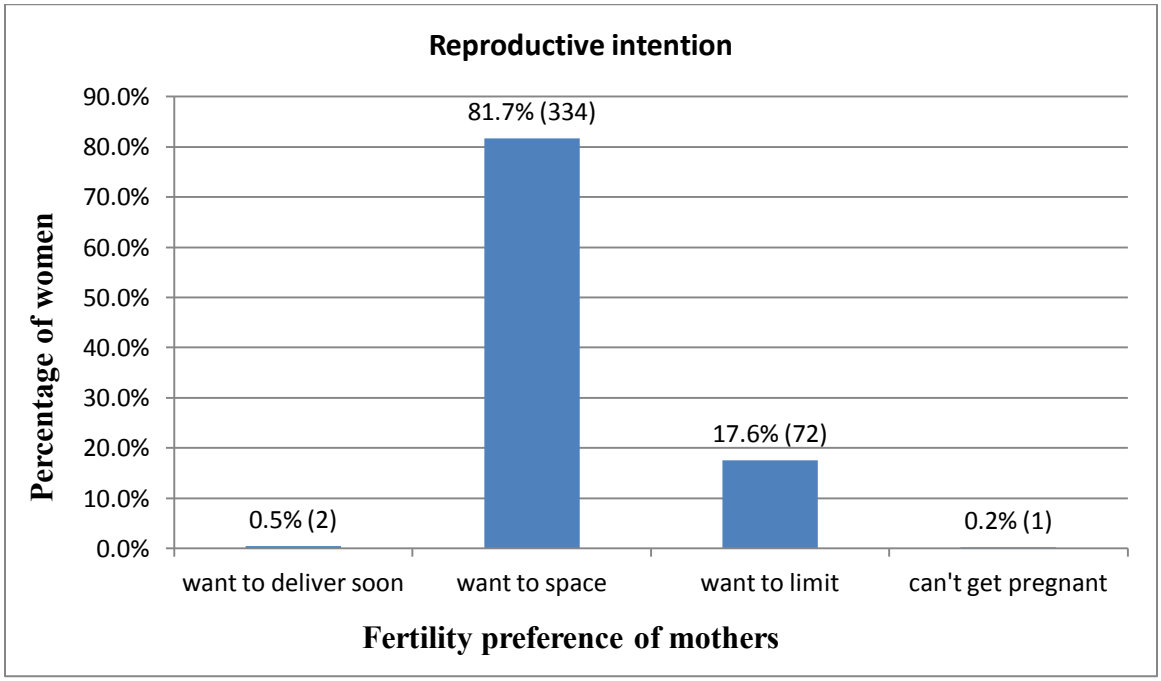
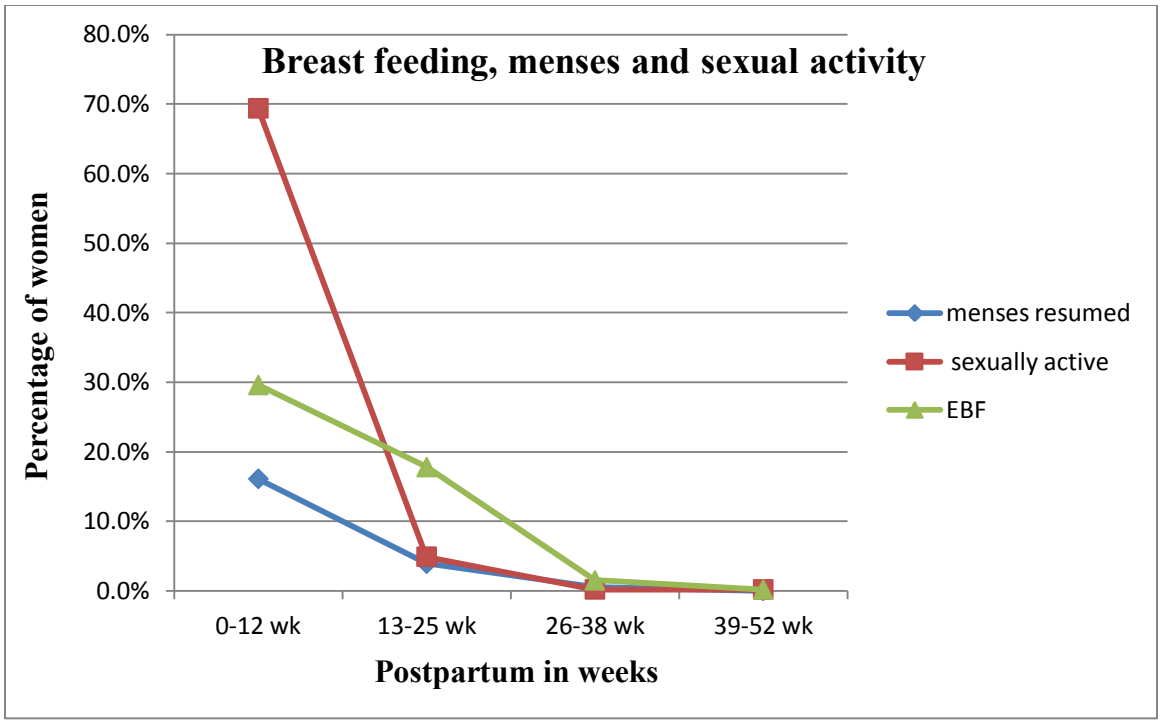


Figure 1 Reproduction intention of extended postpartum women in Tahtay Koraro, Ethiopia, April 2014

5.3. Breast feeding, menses and sexual resumption

All study participants were breastfeeding their children at the time of the survey. One hundred thirty nine (34%) were on 0-12 weeks postpartum and 109 (26.7%) were on 13-25 weeks since their last birth (Figure 3). Most study women, 306 (74.8%) were sexually active at the same 0-12 postpartum week. One hundred eighty six (45.5%) were exclusively breastfeeding their children. Only 84 (20.5%) of all respondents reported resumption of menses and 66 (78.6%) of the menstruating mothers resumed their menses in 0-12 weeks of postpartum (Figure 2). Of all the study subjects 107 (26%) mothers were on lactational amenorrhea.



Where N=409

Figure 2 exclusive breastfeeding, commencement of menses and sexually activity of women in extended postpartum period in Tahtay Koraro, Ethiopia, April 2014

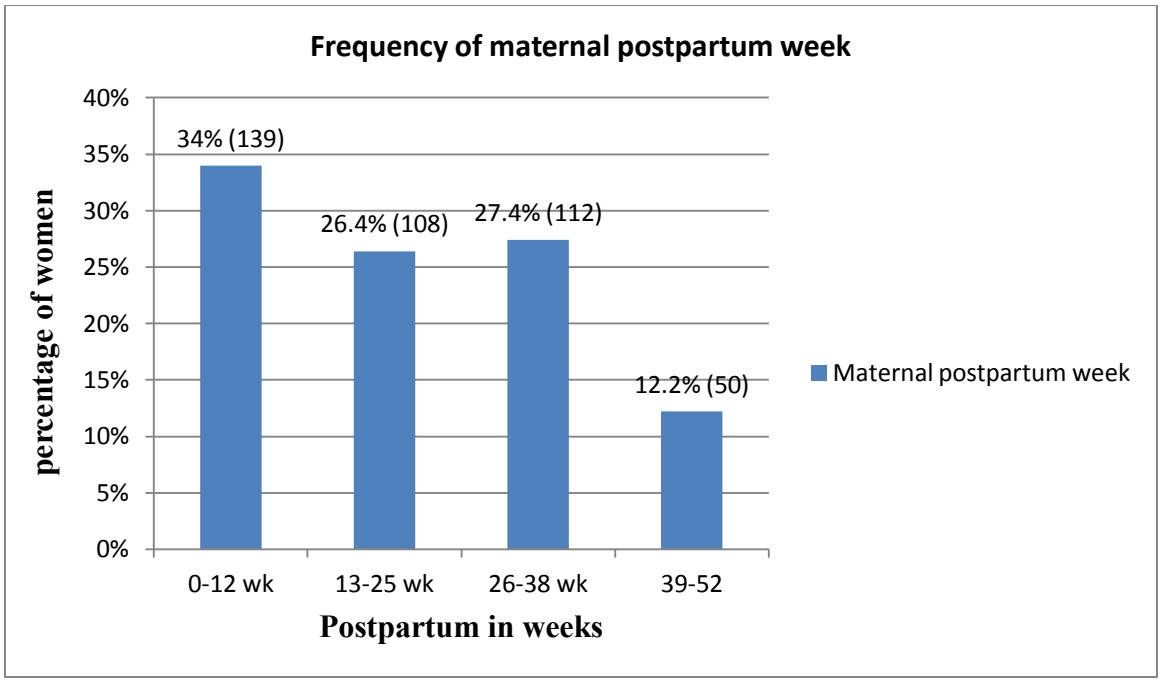


Figure 3 Percentage of women with respect postpartum week in Tahtay Koraro, Ethiopia, April 2014

5.4. Knowledge, attitude and approval of family planning characteristics

Three hundred ninety eight (97.3%) of the study participant know at least one method of family planning. Two hundred seventy nine (68.2%) women discussed about family planning with their husbands and 258 (92.5%) of them were supported to use FP by their husbands.

Table 3 knowledge, attitude and husband approval of FP in EPPP in Tahatay Koraro Woreda, Ethiopia, April 2014

Variables	Frequency	Percent (%)
Knowledge of at least one FP method		
Yes	398	97.3
No	11	2.7
Total	409	100%
FP discussion with husband		
Yes	279	68.2
No	130	31.8
Total	409	100%
Husband's approval		
Yes	258	92.5
No	21	7.5
Total	279	100%

5.5. Unmet need and reasons for non-use of Family planning practice during the postpartum period

The table below has shown the retrospective and prospective unmet needs for FP among the study participants. Ninety three (22.7%) of current births were unwanted or mistimed and 81 (87.1%) of them were not using family planning method (retrospectively). The major reason for not using family planning method was fear of side effects 30 (37%), followed by infrequent sex 14 (17.3%) and non- menstruating since last birth 11 (13.6%). Regarding the most important part of this result which is the current status of postpartum unmet need (prospective unmet need); 257 (62.8%) of women were not using family planning despite they need to space or limit their births. However 107 (26.2%) women were practicing lactational amenorrhea unknowingly (table. Thus 150 (36.7%) women had actual unmet need with 121 (29.6%) for spacing and 29 (7.1%) for limiting. Only one hundred twenty (29.3%) of women were using family planning and, 94 (78.3%) and 19 (15.8) of them were using injectable and implant respectively (figure 6). The dominant reason for current non-use of family planning were, non-menstruating since last birth 201 (69.5%), fear of side effects/ health concerns 39 (13.5%), infrequent sex 22 (7.6%) and husband's opposition 15 (5.2%) (Table 4).

Table 4 unmet need for FP, FP use and reasons for non-use of FP in EPPP, in Tahtay Koraro, Tigray, Ethiopia. April 2014.

Variables	Frequency	Percentage (%)
Unmet need (retrospective)		
Spacing	72	17.6
Limiting	9	2.2
Total	81	19.8%
Reasons for non-use of FP (retrospective) (n=81)		
Fear of side effects/ health concerns	30	37
Infrequent sex	14	17.3
Non-menstruating since last birth	11	13.6
Up to God	11	13.6
Husband opposition	6	7.4
Others	11	13.6
Current FP use		
Yes	120	29.3
No	289	70.7
Total	409	100%
Unmet need without LAM exclusion (prospective)		
Spacing	207	50.6
Limiting	50	12.2
Total	257	62.8%
Unmet need (prospective)		
Spacing	121	29.6
Limiting	29	7.1
Total	150	36.7%
Reasons for current none use of FP (n=289)		
No-menstruating since last birth	201	69.6
Side effects/health concerns	39	13.5
Not having sex	25	8.7
Infrequent sex	22	7.6
Husband opposition	15	5.2
Breast feeding	13	4.5
Want another child	8	2.8
Up to God	7	2.4
Others	11	3.8

Figure 4 shows the disaggregate proportion of postpartum unmet need across maternal age. The overall unmet need and unmet need for spacing was high among the study women of the age group 20-24 and 25-29. Whereas postpartum unmet need for limiting increased as the age of the mother increased. But no mother was found to have unmet need for limiting at age above 35 (Figure 4).

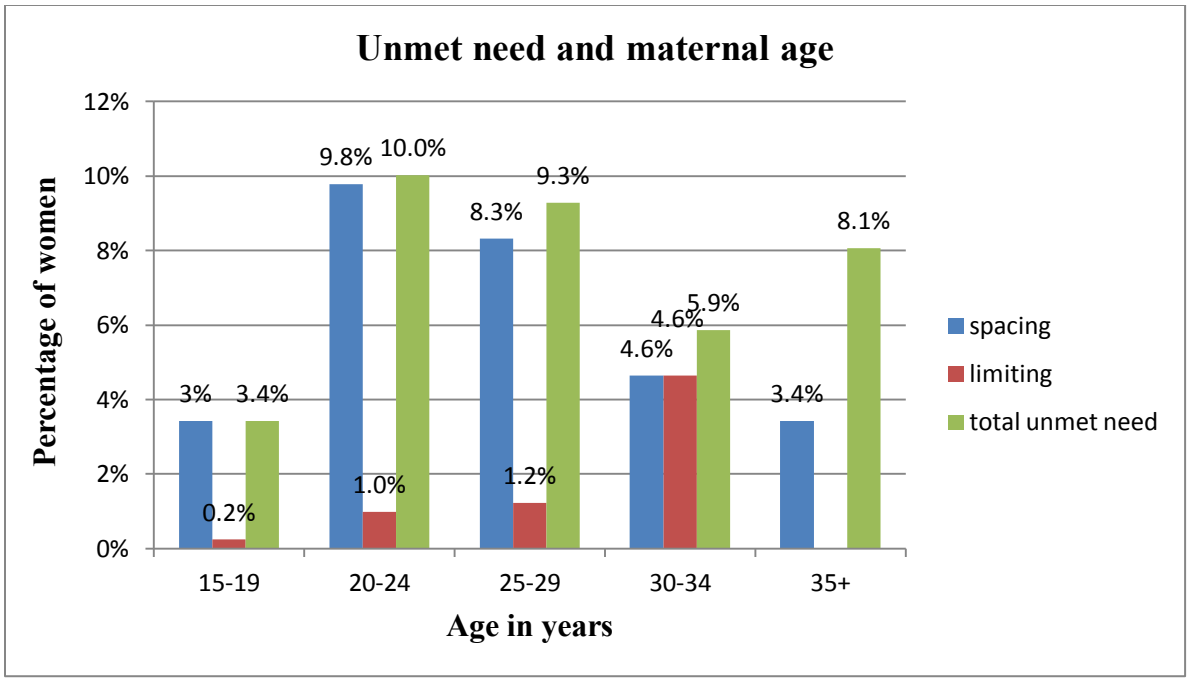


Figure 4 Postpartum unmet need for FP across maternal age in years, in Tahtay Koraro Woreda, Ethiopia, April 2014

Figure 5 illustrates postpartum unmet need for spacing and limiting. Total unmet need remained high throughout the postpartum period. It tends to increase as the number of weeks post-delivery increases up to 38 week. From 0-12 week postpartum total unmet need 5.6% and increased to 15.4% at the end of 26- 38 week PP, and then it dropped to 7.1% at 39-52 week PP (Figure 5).

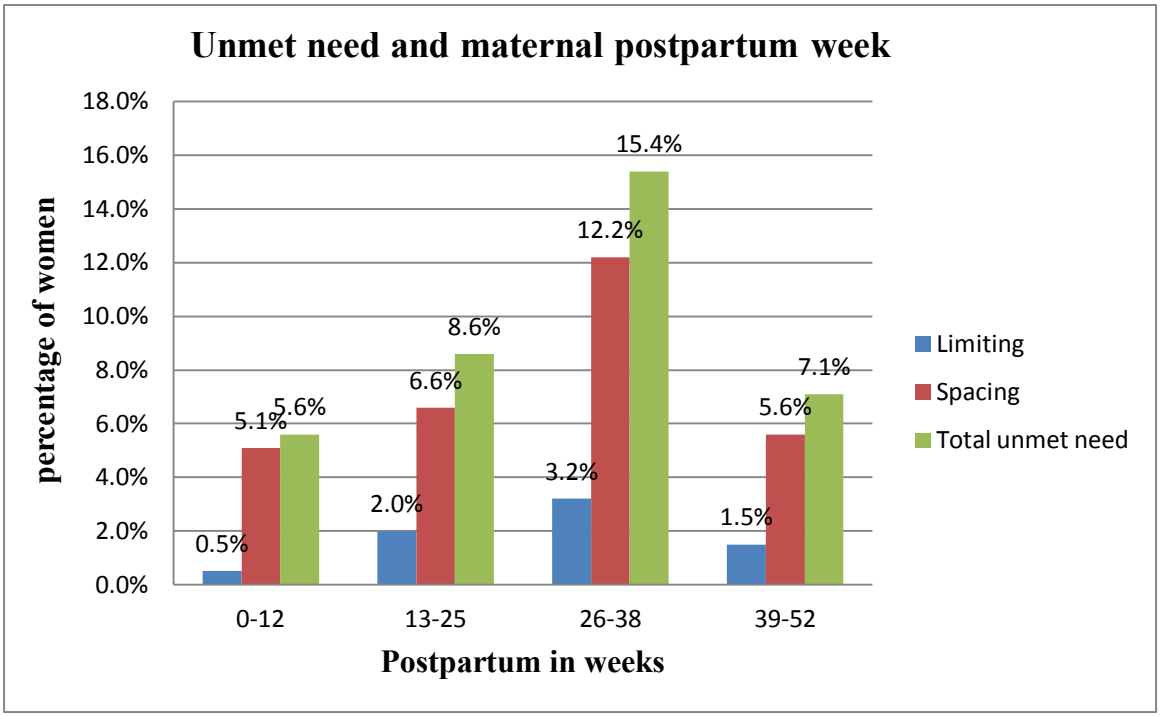


Figure 5 Postpartum unmet needs for FP across weeks of postpartum period, in Tahtay Koraro, Ethiopia, April 2014

5.6. Unmet need for FP across different maternal characteristics characteristic of PP women

Ninety two (62%) of women with unmet need for FP had 4 and above ANC visits during their last pregnancy and 100 (34.2%) of women with unmet need for FP gave their delivery at the health facility. One hundred seventeen (78%) of mothers with unmet need for FP had less than 5 number of living children. Of all the unmet needs 100(66.7%) women had discussion about FP with their husbands. On top of this, 79 (%) of women with unmet need had ever used FP before (Table 5).

Table 5 unmet need for FP across different maternal characteristics of PP women in Tahtay Koraro Woreda, Tigray, Ethiopia, April 2014.

Variables	Unmet need	
	Yes	No
No ANC visits		
No ANC visits	10 (6.7%)	9 (3.5%)
1-3	48 (32%)	90 (34.7%)
4 and above	92 (61.3%)	160 (61.8%)
Total	150 (100%)	259 (100%
Delivery place		
Health facility	100 (66.7%)	192 (74.1%)
Home	50 (33. %)	67 (25.9%)
Total	150 (100%)	259 (100%)
Number of living children		
<5	117 (78%)	219 (84.6%)
5 and above	33 (22%)	40 (15.4%)
Total	150 (100%)	259 (100%)
Parity		
1	36 (24%)	85 (32.8%)
2-3	56 (37.3%)	89 (3.4%)
4 and above	58 (38.7%)	85 (32.8%)
Total	150 (100%)	259(100%)
FP discussion with husband		
Yes	100 (66.7%)	179 (69.1%)
No	50 (33.3%)	80 (30.9%)
Total	150 (100)	259 (100%)
Ever use of FP		
Yes	79 (52.7%)	160 (61.8%)
No	71 (47.3%)	99 (38.2%)
Total	150 (100%)	259 (100%)
FP counseled		
Yes	110 (73.3%)	202 (78%)
No	40 (26.7%)	57 (22%)
Total	150 (100%)	259 (100%)

5.7. Unmet need for FP with perceived risk of pregnancy and FP use characteristics of PP women

The table below showed that there 211 (51.6%) of all the study participants were non users of FP with low perceived risk of pregnancy (women who thought that pregnancy would not happen unless menses is resumed). One hundred eight (51.2%) of non-user of FP with low perceived pregnancy had unmet need for family planning (Table 6).

Table 6 unmet need for FP in relation to perceived risk of pregnancy and FP use in Tahtay Koraro Wored, Tigray, Ethiopia, April 2014.

FP use and perceived risk of pregnancy	Unmet need for FP		
	Yes	No	Total
Non FP users with low perceived risk of pregnancy	108 (51.2%)	103(48.8%%)	211
Non FP users with high perceived risk of pregnancy	42 (53.8%)	36 (46.2%)	78
FP users with low perceived risk of pregnancy	0	31 (100%)	31
FP users with high perceived risk of pregnancy	0	89 (100%)	89
Total	150	259	409

5.8. Unmet need with respect to maternal residence and perceived risk of pregnancy

Of the overall unmet need for family planning 95 (63.3%) of them were rural women with low perceived risk of pregnancy and only 13 (8.7%) of them were urban women with low perceived risk of pregnancy (Table 7).

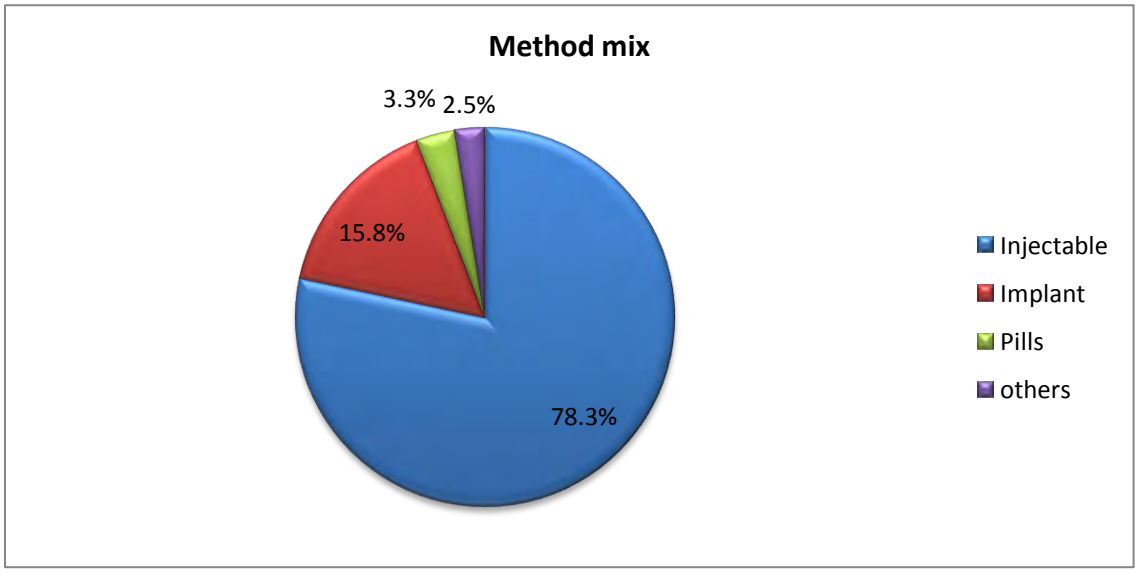
Table 7 unmet need for FP with respect to maternal residence and perceived risk of pregnancy in Tahtay Koraro Woreda, Tigray, Ethiopia, April 2014.

Residence and perceived risk of pregnancy	Unmet need for FP		
	Yes	No	Total
Rural with LPRP	95 (49.5%)	97 (50.5%)	192
Rural residents with HPRP	31 (37.8%)	51 (62.2%)	82
residents with LPRP	13 (26%)	37 (74%)	50
Urban residents with HPRP	11 (12.9%)	74 (88.1%)	85
Total	150	259	409

Where LPRP= low perceived risk of pregnancy, HPRP= high perceived risk of pregnancy

5.9. Method mix among women in extended postpartum period

The contraceptive prevalence rate in the study women was 29.5%.As shown in figure 6 out of the 120 FP users, 94 (78.3%) respondents were using injectable while 19 (15.8%) were using long acting FP.



Where n=120

Figure 6 method mix of extended postpartum women in Tahtay Koraro, Ethiopia, April 2014.

5.10. Factors affecting unmet need in women who are in extended postpartum period

According to the bivariate analysis the socio-demographic variables i.e. maternal age, residence, education, occupation, husband education and occupation, monthly household income were significantly associated with the postpartum unmet need. And reproductive health characteristic of the respondents' such as ideal number of children, maternal postpartum week and perceived risk of pregnancy were significantly associated with outcome variable relative to their respective reference group.

Table below indicated that postpartum women aged 35 and above were 2.4 times more likely to have unmet need compared to those of women aged 15-19 years (p-value.031; COR 2.36; 95% CI (1.08-5.15)). Those rural residents were 3.9 times more likely to have unmet need compared to those urban dwellers (p-value .000; COR 3.94; 95% CI (2.39-6.45)). As to educational status women who completed secondary education and above were 64% less likely to have unmet need compared to those who had no education (p-value .001; COR .36; 95% CI (.20-.65)). Besides, women farmers were 2 times more likely to have unmet need compared to housewives (p-value .004; COR 2.03; 95% CI (1.25-3.29)) (Table 8)

Women who were married to those with secondary education and above were 54% less likely to have unmet need in relation to those women married to non-educated (p-value .013; COR .46; 95% CI (.27-.85)). In addition to this postpartum women who had governmental employed husband were 65% less likely to have unmet need compared to those whose husbands were farmers (p-value .008; COR .35; 95% CI (.16-.75)) and those who were wives of merchants were also 64% less likely to have unmet need with respect to those whose husbands were farmers (p-value .004; COR .36; 95% CI (.18-.72)). Those women who reported greater than 663 EBR monthly household income were 35% less likely to have unmet need compared to those who gained 663 and lesser EBR (p-value .039; COR .65; 95% CI (.44-.98)).

With regard to the reproductive health characteristics, women with 5 and above number of ideal children were 2.2 times more likely to have unmet need in relation to those who had less than 5 number of ideal number of children (p-value .000; COR 2.19; 95% CI (1.42-3.37)). Women who were at 39-52 weeks of postpartum were 7 times more likely to have unmet need compared to

those who were on their 0-12 weeks postpartum (p-value.000; COR 6.97; 95% CI (3.40-14.28)). Moreover, postpartum women who had low perceived risk of pregnancy were 2.4 times more likely to have unmet need compared to those who had high perceived risk of pregnancy (p-value .000; COR 2.40; 95% CI (1.56-3.69)). That is, those who thought pregnancy would not occur unless menses resumed had high unmet need compared to women who did think pregnancy would occur despite menses is not resumed

In multivariate analysis maternal residence, maternal postpartum week and perceived risk of pregnancy were the only determinant factors of postpartum unmet need (Table 7). Accordingly, having all variables controlled the odds of women who resided in rural area had 7 times more likely to have unmet need compared to those who are urban dwellers (p-value .000; AOR 7.16; 95% CI (2.57 -19.95)). Those women who were in their 39-52 postpartum week were 8.7 times more likely to have unmet need compared to those who were at their 0-12 week of postpartum (P-value .000; AOR 8.71; 95% CI (3.90-19.44). And women who had low perceived risk of pregnancy were 1.8 times more likely to have unmet need in relation to those who had high perceived risk of pregnancy (p-value .037; AOR 1.79; 95% CI (1.04-3.09)).

Table-8: The Association between unmet need for FP and different characteristics of women who are in EPPP in Tahtay Koraro Woreda, Tigray, Ethiopia April 2014

Variables	Total unmet need		Crude odd ratio 95% CI	Adjusted odds ratio 95% CI
	Yes	No		
Maternal age				
15-19	14	35	1	1.00
20-24	41	74	1.39 (.67-2.87)	1.77 (.75-4.20)
25-29	38	68	1.40 (.67-2.92)	2.28 (.94-5.56)
30-34	24	47	1.28 (.58-2.82)	1.54 (.59-4.02)
35-49	33	35	2.36 (1.08-5.15)*	1.82 (.68-4.88)
Maternal residence				
Urban	24	111	1.00	1.00
Rural	126	148	3.94 (2.39-6.50)**	7.16 (2.57-19.95)**
Maternal education				
No education	78	99	1.00	1.00
Primary	52	90	.73 (.47-1.15)	1.15 (.62-2.13)
Secondary and above	20	70	.36 (.20-.65)*	.79 (.33-1.88)
Maternal occupation				
Housewife	32	80	1.00	1.00
Farmer	108	133	2.03 (1.25-3.29)*	.47 (.80-2.80)
Merchant	8	28	.71 (.294-1.73)	.78 (.25-2.48)
Others[#]	2	18	.28 (.06-1.27)	.27 (.05-1.61)
Husband's education				
No education	42	63	1.00	1.00
Informal education	11	17	.97 (.41-2.28)	.68 (.26-1.80)
Primary	69	87	1.19 (.72-1.97)	1.41 (.78-2,57)
Secondary and above	27	85	.46 (.27-.85)*	1.44 (.63-3.30)
Husband's occupation				
Farmer	110	135	1.00	1.00
Govn't employee	9	32	.35 (.16-.75)*	1.10 (.15-7.97)
Merchant	12	41	.36 (.18-.72)*	.89 (.14-5.83)
Daily laborer	19	51	.46 (.26-.82)*	.67 (.10-4.31)
Household income				
Low income	24	111	1.00	1.00
High income	126	148	.65 (.44-.98)*	1.16 (.67-2.02)
Maternal PP week				
0-12	23	116	1.00	1.00
13-25	35	73	2.42 (1.32-4.42)*	2.78 (1.43-5.40)*
26-38	63	49	6.49 (3.62-11.61)**	8.16 (4.24-15.71)**
39-52	29	21	6.97 (3.40-14.28)**	8.71 (3.90 -19.44)**
Ideal No of children				
Less than 5	42	119	1.00	1.00
5 and above	108	140	2.19 (1.42-3.37)**	1.18 (.66-2.13)
Perceived risk of pregnancy while menses absent				
Yes (high perceived risk)	42	125	1.00	1.00
No (low perceived risk)	108	134	2.40 (1.56-3.69)**	1.79 (1.04-3.09)*

Where * for p-value < .05 and ** for p-value < .001, # Students, government employee and daily laborer

5.11. Qualitative result

The six key informants were comprised of religious leader, long serving FP provider, health extension workers, and governmental officials from Woreda health office and women's affairs office (Table 9).

Table 9 Socio-demographic characteristic of respondents for in-depth interview in Tahtay Koraro Woreda, Ethiopia, April 2014

Respondent	Facility	Age	Sex	Position
R1	*Beles* health center	56	M	Priest
R2	*Woreda*	36	F	BA in management (Woreda women's affairs office)
R3	*Selam* health center	28	F	Clinical nurse (Health extension worker
R4	*Woreda*	46	M	Clinical nurse and BA in management (Woreda health office)
R5	*Semema* health center	30	F	Long serving provider
R6	*Shire-Indasilassie*	36	M	Public health officer

5.11.1. Analysis of qualitative data

The table below showed the codes, categories and theme developed during the qualitative data analysis (Table10).

Table 10 Theme, Categories and codes identified from the qualitative data.

Theme	Opinions, attitude and socio-cultural factors affecting FP use in among women in EPPP		
Categories	Opinions and attitude of FP of informants	Practice of FP in postpartum women	Socio-cultural factors affecting FP use in postpartum women
Codes	Accepted Advantageous Economic crisis Economic strength Growth failure Happy family Harmful consequence Helpful Knowledgeable Malnutrition Mortality Self-reliance Susceptible to pregnancy Understood Well protected	Aware Changed Commonly used Counsel Good supply Good uptake Low uptake Prevalent Refuse Research is needed Supportive culture	Complains Condemn Contradiction Disappointment Fear of being found Harmful belief Husband objection Incompetence Interrogate Lack of knowledge Loss of trust Misconception Misunderstanding Mother in-law objection Provider's negligence Rare objections Rumors Service denial Side effects Untrained

5.11.2. The opinions, attitudes, behavioral and cultural aspects that contribute to unmet need for FP

1. Opinions and attitude of family planning

Respondents were able to give appreciable ideas regarding what FP mean and its advantages. They mentioned the most common available family planning methods in the study area. Despite guidelines recommend initiation of family planning right after delivery considering the health status and preference of method, practically they are not receiving it. Respondents were able to support the initiation of family planning as early as 45 days postpartum.

A 28 years old health extension worker said *"FP is a method taken by the consent of the family to space and determine the number of children they want*". With respect to when a PP mother should start FP, a 46 year old male long serving personnel from the Woreda health office said "*As I understand women in postpartum should use contraceptive method. This is because pregnancy can happen after 45 days of delivery. It benefits for the mother, baby and the whole family as whole*". Logically the reason why she is supposed to take on this postpartum period another, 28 years old health extension worker spoke as follows:

"*According to our knowledge, a mother should start contraceptive immediately after 45 days of delivery. This is because uterus will return to its normal position and will be ready for pregnancy*".

Interviewees were aware of the advantages of family planning. In general, they said that family planning was advantageous for the mother, children and the whole family as well. It gives time mothers to care and up bring their children appropriately. Moreover would help mothers recuperate from their recent birth. On top of this, FP use could help in sustaining the economic strength of families, thereby it would enable them to rear their children and send them to school accordingly. As a whole they described FP as a helpful mechanism in strengthening the development of a country if the society is able to space and limit number of children using the different methods of FP. A 30 year old female midwife said;

"*Ah ah ah, a mother should use a FP method after 42 days of delivery. If she uses she will be strong enough and the child will get enough time to grow properly, and the family will be a*

happy family as well. They will have a sustainable economy to afford education, health service and food. It will also help the country at large in strengthening its economy if its people are able to space their births. If she fails to use FP, she will get pregnant before her uterus to its normal position. As a result, she will face cervical incontinence, which in turn causes hemorrhage. The other thing is if the child doesn't breastfeed properly, the child's mental and physical development will be questionable". On top of this respondent 3 added that **"***if she persistently gives birth over and over, her children will not have time to grow properly. And this will expose them to malnutrition, which is one of the most common causes of mortality in under five children."*

2. Practice of family planning in postpartum women

Participants were able to raise concerns of utilization of FP in extended postpartum. And most agreed that uptake of FP is not satisfactory. They said that from time to time there was good progress in awareness and knowledge of FP in their respective community. However, women who are in postpartum did not seem to use contraceptives. They reported that the injectable one is the most commonly used type of method. A 28 years old health extension worker said:

"*Despite the good knowledge of FP in our community, if we see the practical utilization in the postpartum period, it is not good enough. On the contrary, in this critical period, mothers refuse to use FP for different reasons. Most commonly used FP is injectable even though other options are available in our facility. We counsel them about every method, but they prefer injectable. I think this is because of being familiar with it".*

Even though the interviewees were not clear about mothers' preference for injectable, a 46 years old, long serving personnel from Woreda health office speculated as follow: "… *as I understand injectable are the first available and prevalent prior to the long acting methods, and they have also lack of knowledge of the long acting as it is recently introduced".* His idea was supported by recommendation of another 36 year old male health personnel programmer who said: "… *in addition to this, professionals usually stick to injectable as it is most commonly used and preferred method. When you come to IUCD it is only given to those who had aborted. I do not know why. I believe such studies may bring solutions to overcome the above mentioned challenges. The community has no any other problem".*

3. Socio-cultural factors affecting family planning use in postpartum women

Factors that hinder FP utilization in extended postpartum mothers were discussed thoroughly. Different challenges were raised as dominant factors that affect FP. Among those, low perceived risk of pregnancy, fear of side effects, misunderstandings of contraceptive use and side effects, objections from different groups of the community, incompetence of health extension workers, refusal of removal and service denial were major reasons.

A 46 years old male long serving personnel from the Woreda health office said: "*The most prevalent reason is that they don't know when pregnancy can happen to them. They say 'as long as menses is not resumed and we are breastfeeding for one or two years pregnancy can't happen. So why we suffer by taking drugs while we are breastfeeding our children and preventing pregnancy through that"*".

A 28 years old health extension worker also added another important factor and she said:

"Another factor is about the long acting Implanon. We are trained to insert but not to remove. When we refer mothers to a health center or hospital for possible removal after complaints of side effects or others, they refuse to remove before its time frame (required time) which is 3 years. Then they return back to our facility for complaining and shout at us why we insert it if we can't remove it. And they say 'they can only insert but they can't remove'. This issue has created some sort of disappointment in using long acting FP in our community".

A 36 years old male health personnel programmer complemented the above with the idea:

"….. After insertion of Implant some providers refuse to remove for complaining mothers. This is simply to meet their targets of decreasing removals, set by their facility as it is a criterion for evaluation of their performance. These in turn make mothers to refrain from using it".

Moreover, another 46 years old male long serving personnel from the Woreda health office raised the existence of misconception and misunderstanding of Implant in postpartum women who reside in the rural areas and he said:

"*Another important factor is about the long acting. Most women who reside in the rural area refuse to use implants. As it is inserted in the upper arms, they think that it will prevent them*

from their daily working on their farms and think that it poses them pain. And beside these its long acting duration threatens them of infertility".

Additional further barriers of using FP among the extended postpartum mothers were raised. The 30 years old female midwife provider said that husband opposition, religious prohibition and mother in-laws opposition were common obstacles to the uptake of FP by postpartum mothers. This kind of opposition and denial was strengthened by what a 28 years old health extension worker narrated a tragic story. She said:

"*… Even though it is rare, there is a religious issue. Let me tell you one pity story. There was a mother whose husband is a priest. She had around 10 births and I was trying to counsel her to use FP in my routine activity. But she was not willing to start for religious reasons. Finally, the mother died while she was giving another birth, despite she had antenatal care and delivery was attended."*

The above religious concern was tried to be discussed with 56 years old priest and responded as follows**:**

"To antagonize birth, which is predetermined by God is forbidden. We also say it. Just leave my opinion alone, most women know are aware and knowledgeable. There are some who say 'we are going to accept what God give us'. But we do not prohibit people". Issues concerning, the incompetence of providers, misunderstanding of FP use and side effects were also raised by the interviewees. A 36 years old female personnel from Women's affairs office said that considering contraceptive induced amenorrhea as protective method and incompetence of health extension workers were commonly raised issues, as barriers to use FP by the PP women. Besides, a 28 years old female extension worker added that side effects like bleeding, weight gain, and abdominal upsets were other triggering factors that prevent PP women from using FP.

This analysis has shown different socio-cultural and behavioral factors that contribute to the postpartum unmet need. Those factors were; low perceived risk of pregnancy, fear of side effects, misunderstandings of contraceptive use and side effects, objections from different groups of the community, the incompetence health extension workers and refusal of removal of long acting FP.

6. Discussion

This study has investigated the magnitude and factors affecting postpartum unmet need among married women during the extended postpartum period. Based on women's fertility preference and future FP use, the prevalence of unmet need for FP was 36.7%. Those women, who were practicing lactational amenorrhea method without understanding that it would prevent pregnancy, were excluded. On top of this, it also showed the usual unmet need prevalence (retrospective unmet need) was found to be 19.8%. Maternal residence, postpartum week and perceived risk of pregnancy were found to be factors associated with postpartum unmet need. In addition to this, non-menstruating since last birth, fear of side effects, refusal of implant removal by providers, misunderstanding of FP use and side effects, opposition from their community and incompetence of health extension workers were some of the issues that affect unmet need for FP raised by key informant involved in this study.

Accordingly, the study revealed that unmet need for family planning in women who were in the 1st year after delivery in the study area was 36.7% with 29.6 % for spacing and 7.1% for limiting. This study was lower than the study done in Ethiopia, Nigeria and Tanzania [18, 43, 44]. The possible reasons for the variations might be due to the expanding health services coverage and increased awareness of FP and maternal health services. The Nigerian study calculation was based on the intentions to postpone childbearing by at least 6 months from the time of the survey, while this study did on the wish to delay next pregnancy for a minimum of two years. The Ethiopian study was based on DHS analysis for which the variations might be attributed to its multi-cultural and regional inclusion which could possibly increase unmet need. In addition, it was higher than the study done in Bahr Dar, Ethiopia [30]. The variation was due to setting difference, as the study from Bahir Dar was done in urban setting where unmet need in urban of Ethiopia is lower than the rural [12, 30]. But this study has included both urban and rural population. In addition to this, the magnitude of retrospective unmet need for FP was assessed in these women. Thus 81 (19.8%) women were not using any contraceptive method despite they wanted to space or limit their recent births, being 72 (17.6%) and 9 (2.2%) for spacing and limiting respectively. This finding was slightly lower than the magnitude of total unmet need of the study region reported by EDHS 2011 [12]. The prospective result of unmet need for FP was

almost twice of the retrospective unmet need. This was comparable with the analysis done based on DHS analysis of 17 countries[24]

Rural residents were 7 times more likely to have unmet need compared to those urban dwellers (AOR 7.16; 95% CI (2.57-19.95)). This is consistent with the EDHS, 2011. This discrepancy might be due to low education level, low socio-economic and infrastructure status, and limited access to FP services of rural residents in Ethiopia. The higher postpartum insusceptibility of rural women than urban women to pregnancy associated with longer duration of breast-feeding in rural women [46], could also be another factor. Because the delaying effect of breastfeeding on menses could make them feel insusceptible to pregnancy. This could further, be strengthened by the finding that 95(63.3%) of mothers who had unmet need were women from the rural areas who thought pregnancy would not happen unless menses is resumed and only 13 (8.7%) of urban women had unmet need who had similar perception too (Table 6). The above ideas can be supported by what the 30 years old female midwife provider said; *"Sizeable proportion of mothers in this rural community don't want to use FP because they are breast feeding and their menses is not resumed".*

Postpartum unmet need was more likely to increase as the postpartum week increased. Women in their 26-38 weeks of postpartum were 8.2 times more likely to have unmet need compared to those who were on their 0-12 weeks postpartum (AOR 8.16; 95% CI (4.24-15.71)). The result also showed that unmet need for FP remained high throughout the 1st year after delivery. This finding was more or less consistent with the EDHS 2005 based analysis done on postpartum women[18]. This can be explained by the fact that the contribution of LAM to protect pregnancy is diminished as postpartum period increases. By 7-9 months after birth, most women become exposed to pregnancy but don't want to become pregnant again so soon, yet they still do not obtain contraceptive protection, which lead them to have high unmet need [17]. Moreover prolonged breast-feeding could possibly delay menses for which many women make it as benchmark to utilize contraceptive. As a result of this it might increase the unmet need. A central factor behind this is that many women believe they can't get pregnant unless their menses have returned, which is not true [41]. The occurrence of this high unmet need could also be explained by the findings of the qualitative data. That the cumulative effect of low perceived risk of pregnancy among postpartum women, fear of side effects, misunderstandings of

contraceptive use and side effects, objections from different groups of the community, incompetence of health extension workers and refusal of removal of implant could possibly contribute to it.

Women with low perceived risk of pregnancy (LPRP) (i.e. women who thought that pregnancy would not happen if menses is not resumed) were 1.8 times more likely to have unmet need compared to those who had high perceived risk of pregnancy (HPRP) (i.e. women who thought that pregnancy could happen though menses is not resumed) (AOR 1.76; with 95 CI (1.04-3.09)). This could be explained by the result that, of the 289 non-users of FP, 211 (73%) of them had the perception that pregnancy wouldn't happen if menses is not resumed (Table 5). And study has shown that for some women low perceived risk of pregnancy is the main reason for unmet need [5]. This result can be complemented by what a 46 years old male long serving health personnel from the Woreda health office said: that PP women did not feel the risk of pregnancy if their menses is not resumed.

Although most respondents were able to know at least one method of FP, less than 1/3rd of all participants were using FP. This was consistent with the study from Nigeria and Democratic Republic of Cong [43, 47]. This low uptake of family planning could be explained by the fact that resumption of menses was a strong factor affecting utilization of contraceptive in postpartum period[48]. This idea was supported by what a 36 years old female personnel from women affairs office said;

"They didn't want to use FP while their menses is absent and they thought that they were not at risk of pregnancy".

Majority of the non-user of FP mentioned non-menstruating since their last birth 201(69.9%) as dominant factor for their non-use of FP. However, a women may ovulate before the 1st menstruation following a birth and the risk of pregnancy preceding 1st menstruation increases as the postpartum duration increases[24]. A Study done in Egypt confirmed this fact that out of the 4.4% pregnancy occurred in the first 6 months, 15.1% of pregnancy occurred before resumption of menses and 28.1% occurred while they were exclusively or almost exclusive breastfeeding [31]. Other reasons were fear of side effects 39 (13.5%), not having sex 25 (8.7%) and infrequent sex 22 (7.6%). This finding was consistent with the study done in Rwanda [42]. In addition,

plenty of factors were raised by the key informant of the qualitative study: low perceived risk of pregnancy, opposition from religious leaders, husbands and mother in-laws, refusal of Implant removals, misunderstanding of FP and health extension worker incompetence were other important factors mentioned that hindered postpartum women from using family planning.

A 30 years old female midwife said that the major obstacles of FP using among PP women were husband opposition, religious prohibition and mother in-laws opposition. On top of this, a 28 years old health extension worker complemented that their lack of skill and mandate to remove long acting FP was another factor that created a disappointment among PP women to use FP.

7. STRENGTH

This study has tried to complement the quantitative data by a qualitative method. So the implementation of mixed method could be the strong side of the study.

8. LIMITATION

There were a number of limitations of this study. Non-randomization of study participants due to the mentioned reason was a drawback of the study. Since the study was facility based generalization of the findings to the overall population of the study area is difficult. Women who were on LAM were excluded from the unmet calculation and the proportion of exclusive breastfeeding was assessed using previous day recall. This would probably cause the proportion of exclusively breastfed infants to be overestimated, which in turn may increase LAM users. The inability of identifying the actual users of LAM was also a weakness of this study. Failure to include women as key informant can also be considered as drawback.

9. CONCLUSION

This study has revealed that the prevalence of unmet need during the extended postpartum period was significantly high. The sizeable proportion of women who wanted to space or limit their births in this critical period were not using a contraceptive method, even though some were protected by lactational amenorrhea unintentionally**.**

Urban residence, maternal postpartum week and low perceived risk of pregnancy were found to be the determinants of the postpartum unmet need during the extended postpartum period. And all were associated with increased occurrence of unmet need.

Though most study women had the knowledge of at least one FP method, only 29.3% of them were using FP. The dominant reason for none use of family planning was being non-menstruated since last birth, followed by fear of side effects, infrequent sex and having no sex respectively. As the same time qualitative findings of key informants this study revealed that low perceived risk of pregnancy, fear of infertility, opposition from different parts of the community, provider negligence, refusing removal of implants, misunderstanding of FP use and side effects, and poor competence of health extension workers were among the dominant factors raised that hinder FP use of women who are in the extended postpartum period.

10. RECOMMENDATION

With respect to the findings and objectives of the study, some recommendations have been made at different levels.

Government level

Empowerment of rural women with knowledge of the risk of pregnancy and FP use during the postpartum period should be enhanced. This can be achieved by capacity building and task shifting at different levels of providers. So that they able to address the needs of these women at community level. Particularly, knowledge on FP use and risk of pregnancy in extended postpartum period should be emphasized. In addition to these a specific way of evaluating postpartum FP utilization should be developed**.** Women in extended postpartum period should be given a special attention in providing family planning service to increase utilization. Capacity building of HEWs in provision of insertion and removal of long acting FP should be strengthened.

Community level

Communities at different levels should able to support the FP utilization and preferences of postpartum women. Every oppositions or prohibitions from religious leaders, mother in-laws and husbands towards the use of FP should be avoided. And women should be aware of the risk of pregnancy during the postpartum period.

Facility level

Providers should counsel postpartum women on FP use, risk of pregnancy during the extended postpartum period and on the appropriate use of the LAM method up to six months of postpartum. Mothers should particularly be assessed and counseled about the above things during their possible contacts in antenatal care, postnatal care, immunization and child health services. They should make them understand that fertility precedes the return of menses. Moreover, they should communicate with the health extension workers to provide FP service to extend their services up to the grass-root level to include the religious leaders, husbands and mother in-laws. Particularly, they have to remove long acting FP methods when women wanted

to. At the same time, removal of implants should not be considered as a failure of facility plan and should not be used as an evaluation method of performance.

Researchers

Nationally representative study involving diversified communities in the country is recommended. Especially community based comparative study complemented with qualitative data would be helpful.

11. REFERENCES

1. United Nations, Department of Economic and Social Affairs, Population Division. World Population Prospects: The 2012 Revision, Highlights and Advance Tables. Working Paper No. ESA/P/WP.228. 2013

2. United Nations Department of Economic and Social Affairs, UN Population Division Policy Brief No. 2009/1, March 2009

3. WHO/Family planning, May 2013; *www.who.int/mediacentre/factsheets/fs351/*

   Accessed on November 12, 2013

4. Darroch J, Singh S: Guttmacher Institute, New York, NY, USA, Trends in contraceptive need and use in developing countries in 2003, 2008, and 2012: an analysis of national surveys, May 18, 2013, Vol. 381, Issue 9879, Pages 1756-1762.

5. John Cleland, Stan Bernstein, Alex Ezeh, Anibal Faundes, Anna Glasier and Jolene Innis: Family planning: the unfinished agenda, 2006; 368: 1810–27

6. Singh S and Darroch J, Adding It Up: Costs and Benefits of Contraceptive Services—Estimates for 2012, New York: Guttmacher Institute and United Nations Population Fund (UNFPA), 2012, www.guttmacher.org/pubs/AIU-2012-estimates.pdf>

7. WHO, UNICEF, UNFPA and The World Bank Estimates, Trends in Maternal Mortality: 1990-2010. 2012.

8. Jane Cottingham, Adrienne Germain, Paul Hunt, Use of human rights to meet the unmet need for family planning, 2012; 380: 172–80.

9. Ethiopia Overview- World Bank; www.worldbank.org/en/country/ethiopia/overview
   Accessed on October 28/ 2013
10. Central Statistics Agency (CSA), Population and Housing census of Ethiopia, 2007.

11. Federal Democratic Republic of Ethiopia Ministry of Health: National Guideline for Family Planning Services in Ethiopia, October, 2011

12. Central Statistical Agency [Ethiopia] and ICF International, Ethiopia Demographic and Health Survey 2011. Addis Ababa, Ethiopia and Calverton, Maryland, USA Central Statistical Agency and ICF International. 2012.
13. United Nation for Development (UNDP) Ethiopia, Analyzing regional performance and disparities in health outcomes in Ethiopia. 2012
14. Unmet need for Family Planning-WHO: http// www.who.int/gho/.../family_planning/en/

    Accessed on November 3, 2013
15. Rhonda Smith, Lori Ashford, Jay Gribble and Donna Clifton: Family Planning Saves Lives, fourth edition. Population Reference Bureau1875 Connecticut Ave., NW, Suite 520 Washington, DC 20009 USA. 2009.
16. All Party Parliamentary Group on Population, Development and Reproductive Health: Return of the Population Growth Factor and Its impact upon the Millennium Development Goals, January 2007.
17. John A. Ross and William L. Winfrey: Contraceptive Use, Intention to Use and Unmet Need during the Extended Postpartum Period, Vol. 27, No. 1 (Mar., 2001), pp. 20-27.
18. ACCESS-FP, USAID; Family planning needs during the extended postpartum period in Ethiopia. 2009.
19. Extending Service Delivery, USAID: Postpartum Family Planning for Healthy Pregnancy Outcomes, February 2009.
20. Family Health International (FHI) 360: Postpartum Family Planning New Research Findings and Program Implications, July 19, 2012. www.fhi360.org/sites/default/.../Postpartum%20Family%20Planning.pdf
21. ACCESS- FP, USAID: Statement for Collective Action for Postpartum Family Planning, 2012. www.fphighimpactpractices.org/sites/fphips/files/**fp**_imz_brief.pdf
22. Federal Democratic Republic of Ethiopia, Ministry of Health: National Reproductive Health Strategy 2006 – 2015

23. Measure Evaluation Population and Reproductive Health; Family planning and Reproductive Health Indicators Database. www.cpc.unc.edu/measure/prh/rh
Accessed on October 20, 2013

24. Maria Borda and William Winfrey Postpartum Fertility and Contraception: An Analysis of findings from 17 countries, March, 2010.

25. Gilda Sedgh, Rubina Hussain, Akinrinola Bankole and Susheela Singh:
Women with an Unmet Need for Contraception in Developing Countries and Their Reasons for Not Using a Method, Report No. 37 June 2007.

26. The knowledge for health (k4hHealth), USAID: Postpartum family planning (PPFP) TOOLKIT, September 2013. http://www.k4health.org/toolkits/ppfp

27. Maternal and Child Health Integrated Program (MCHIP), USAID: Family planning needs during the first two year of postpartum period in Kenya.

http://www.k4health.org/sites/default/files/Kenya%20200809%20DHS%20Reanalysis%20for%20PPFP_Final.pdf).

28. Charlotte E Warren, Timothy Abuya, Ian Askew and On behalf of the Integra Initiative: Family planning practices and pregnancy intentions among HIV-positive and HIV-negative postpartum women in Swaziland: a cross sectional survey, 2013.

29. Maternal and Child Health Integrated Program (MCHIP), USAID; Family planning needs during the first two years of postpartum in Rwanda, 2010.
http://www.k4health.org/sites/default/files/Rwanda%202010%20DHS%20Reanalysis%20for%20PPFP_Final_0.pdf)

30. Shegaw Mulu: Assessment of the contraceptive needs and practice of women in the extended postpartum period in Bahir Dar, Ethiopia, July 2007.

31. Shaaban OM, Glasierr A. Pregnancy during breastfeeding in rural Egypt. Contraception. 2008; 77(5):350–354.

32. DaVanzo J, Hale A, Razzaque A, Rahmand M; Effects of inter-pregnancy interval and outcome of the preceding pregnancy on pregnancy outcomes in Mat lab, Bangladesh, 2007; 114:1079–1087.

33. Ricardo Vernon: Meeting the Family Planning Needs of Postpartum Women, September 2009; 40(3): 235-245.

34. Rose Wilcher, MPH and Willard Cates, MD, MPH: Spotlight on Prevention-The Astonishing Neglect of an HIV-Prevention Strategy: The Value of Integrating Family Planning and HIV Services.
http://aidstarone.com/sites/default/files/additional_resources/026_000_AIDStar_Spotlight_Family_Planning_r6.pdf

Accessed on November 20/2013

35. Susan A. Cohen: The World at Seven Billion: Global Milestone a Reflection of Individual Needs, Guttmacher Policy Review Policy review, 2011; 14(3).

36. Sarah E.K. Bradley, Trevor N. Croft, and Joy D. Fishel: Revising unmet need for family planning DHS Analytical Studies 25 -, ICF International and Charles F. Westoff of the Office of Population Research, Princeton University, 2012.

37. Genene Bizuneh, Solomon Shiferaw and Yilma Melkamu:Unmet Need and Evaluation of Program Options to Meet Unmet Need for Contraception in Ethiopia,2000 and 2005; Further Analysis of the 2000 and 2005 Ethiopia Demographic and Health Surveys, September 2008.

38. Korra, Antenane. Attitudes toward Family Planning, and Reasons for Nonuse among Women with Unmet Need for Family Planning in Ethiopia. Calverton, Maryland USA: ORC Macro, 2002.

39. Bhattacharya S. K., Ram R, Goswami D., Gupta U. D., Bhattacharyya K., and Ray S.: Study of Unmet Need for Family Planning among Women of Reproductive Age Group Attending Immunization Clinic in a Medical College of Kolkata, Indian Journal of Community Medicine, April - June 2006; 31 (2).

40. Tesfaye Gebreselassie, Shea O. Rutstein, and Vinod Mishra Contraceptive use, Breast feeding, Amenorrhea and Abstinence during the Postpartum Period: An analysis of for Countries- DHS Analytical Studies 14, Macro International Inc., August 2008.

41. Family Health International (FHI) 360: Family Planning Information and Referrals at Child Immunization Clinics: Study in Ghana and Zambia Highlights Implementation Challenges, December 2010.

42. Aurelie Brunei: Expanding Contraceptive Use in Rwanda, Family Health International (FHI) 360, 2010. http://www.k4health.org/toolkits/ppfp

43. Adebanjo B. Adeyemi, Kayode T. Ijadunola, Ernest O. Orji O. Kuti and Marie M. Alabi The unmet need for contraception among Nigerian women in the first year post-partum, European Journal of Contraception and Reproductive Health Care December 2005;10 (4): 229–234.

44. Sarah C. Keogh, Mark Urassa, Yusufu Kumogola, Basia Zaba: Dynamics of postpartum contraceptive use, and their relationship to antenatal intentions, in Northern Tanzania. http://www.uaps2011.princeton.edu/papers/110161

45. Performance Monitoring and Accountability 2014, Ethiopia (PMA2014/ETHIOPIA); Family planning indicator brief. www.pma2020.org, Accessed on May 12, 2014

46. Central Statistical Authority [Ethiopia] and ORC Macro. Ethiopia Demographic and Health Survey 2000. Addis Ababa, Ethiopia and Calverton, Maryland, USA: Central Statistical Authority and ORC Macro, 2001.

47. Jeff K Mathe, Kennedy K Kasonia and Andre K Maliro. Barriers to Adoption of Family Planning among Women in Eastern Democratic Republic of Congo African journal of reproductive health, 2011; 1(15): 69-77.

48. Shruti Verma, Kaushalendra K. Singh and Shilpi Tanti. Timing of Initiation of Contraceptives in extended postpartum period among Indian women. 2010. www.iussp.org/sites/...call.../extended%20abstract%20C%20iussp4.pdf Accessed on May 02/ 2014

12. ANNEXES

Annex-I conceptual framework

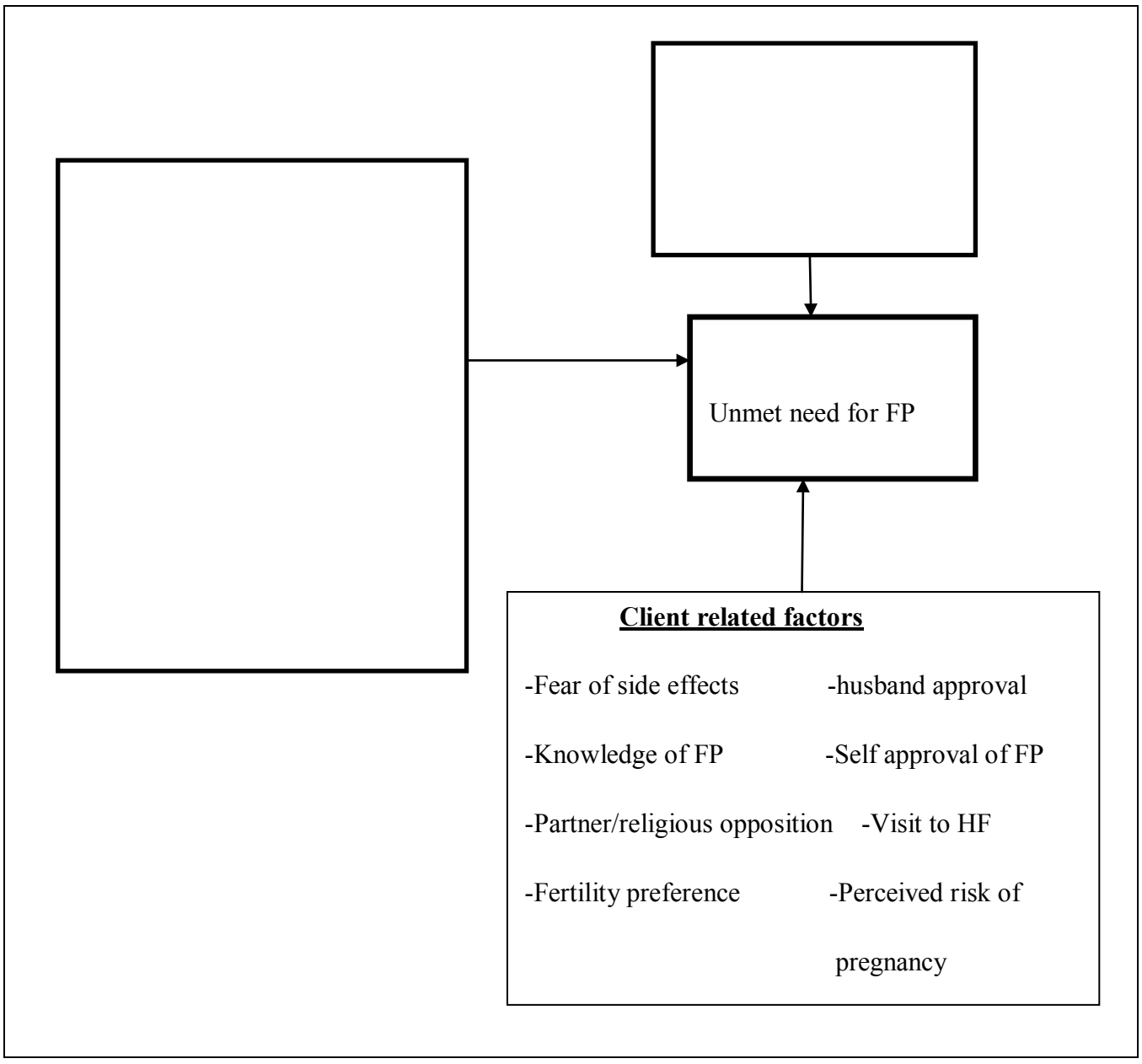


Figure 7 Conceptual framework of factors affecting unmet need for family planning adopted with modification from; Genene Bizuneh, Solomon Shiferaw, and Yilma Melkamu; Further Analysis of the 2000 and 2005 Ethiopia Demographic and Health Survey, 2008. [37]

Annex-II Postpartum unmet needs calculation

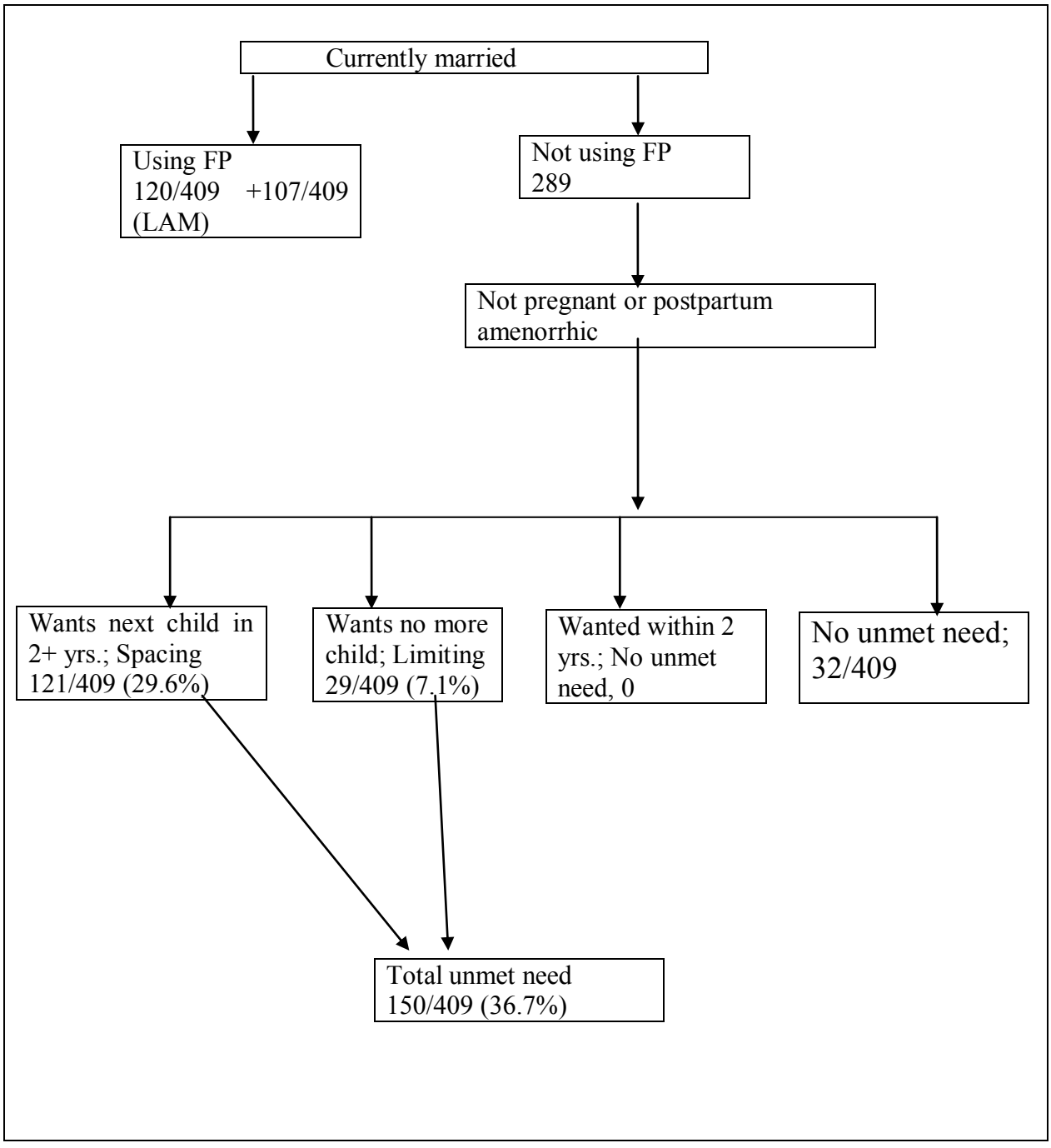


Figure 8: Unmet need calculations of women who are in an extended postpartum period in Tahtay Koraro Woreda, Tigray regional state, Ethiopia, April 2014

Annex-III Structured questionnaires English version

I-Information sheet

Greeting: Good morning/afternoon!

Hello. My name is _____. I am a data collector for master of public health student project in Addis Ababa University. I am conducting a survey with the aim of identifying the magnitude and factors associated with unmet need for family planning among women of reproductive age group (15-49) who are in an extended postpartum period in your Woreda. The information I collect will help to your Woreda and the government at large to plan health services. Now you are randomly selected for the survey. The questions usually take about 15 to 20 minutes.

The objective of the study: To assess the magnitude and factors associated with unmet need in women of reproductive age who are in an extended postpartum period in Tahtay Koraro North West of Tigray regional state, Ethiopia.

The benefit of the study: there is no direct benefit to the participant of the study. However the results of this study will help in identifying the obstacles of meeting the unmet need for family planning in postpartum women and contributes an input in considering a convenient programmatic approach to solve the problem. The result of the study will be disseminated to concerned bodies, including to Tahtay Koraro Woreda Health Office.

The risk of the study: Participating in this study will not have any risk or harm.

Rights of Participants: You have full right either to Participate or decline participation in this study as a participant. You may respond to all the questions or you may not answer to questions you don't want to and you may end the interview at any time you want. You can ask any question which is not clear for you.

Confidentiality: Any information forwarded will be kept confidential and names will not be written or specified.

II-Informed Consent

As to the information given ahead, Participating in this study has no any risk. Your name will not be written on this form and the information you give will never be shared to others. You may

not answer any questions that you don't want to answer and you may end this interview at any time you want. Now I would like to tell you that you are selected randomly to be a participant of the study. Your genuine response to the interviews will be very important for the purpose of the study. At the same time we would like to appreciate your voluntary participation in the survey after a thorough understanding of the information given to you.

I have read this form or it has been read to me in the language I comprehend and understand all conditions stated above.

Are you willing to participate in this study?

1- No (say thank you) 2- Yes (continue interviewing)

Name of principal investigator: Gurja Embafrash

Cell phone No - 0913463703

E-mail: gurjaw@yahoo.com.

Name of health facility……..

Name of interviewer_____ signature_____

Date of interview (Ethiopian calendar) _____/_____/_____

Result of interview:

1- Completed…… 2- Refused…….

3- Respondent not available…….. 4- Partially completed…….

Checked by supervisor;

Name…….. Signature…… Date……...

A. IDENTIFICATION

Q.No	Questions	Response	Remark
001	Questionnaire Id number		
002	Kebele		
003	Would you tell me about the time since giving birth to your recent child?	…… Months. (Enter complete months). If **>11** Months stop here.	

B. Demographic and socio-economic Characteristics

Q.No	**Questions**	**Response**	**Skip**
101	How old were you at your last birthday?	Age in complete years……..	
102	What is your current marital status?	1. Married 2. In unison	
103	Can you read and write simple sentences in any language you speak?	1. Yes 0. No	**If no, skip to Q. 105**
104	What is the highest level of education you attained?	Non formal education=00 (circle) ……. (Write in grades)	
105	Where is the type of your residence?	1.Urban 2.Rural	
106	What is your religion?	1. Orthodox 2.Muslim 3.Protestant 4.Catholic 5.Others (Specify) ……	
107	To which ethnic group do you belong?	1.Tigre 2.Kunama 3.Amhara 4.Oromo 5. Gurage 5. Others (specify) ____	
108	What is your current main occupation?	1.Housewife 2.Private employee 3.Farmer 4.Government employee 5.Daily laborer 6.Merchant 7. Student 8.Others (specify)……	
109	Can your husband read and write simple sentence in any language he speaks?	1.Yes 2.No 88. I don't know	**If no /don't know skip to Q. 111**
110	What is your husband's highest attained level education?	Non formal education=00 (circle) …….. (write in grades) I don't know=88	
111	What is the current main occupation of your husband?	1. Private employee 2.Government employee 3.Farmer 4.Daily laborer 5.Merchant 6, Student 7.Handcrafts man	

		8. Others (specify)…….	
112	What is your household total monthly income?	……(write the amount in Birr)	

C. Reproductive health Characteristics

Q.No	Question	Response	Skip
201	What was your age at first marriage?	……. (Enter age)	
202	What was your age when you first gave birth?	…….. (enter age)	
203	How many sons and daughters live with you/elsewhere? (IF NONE, RECORD '00')	a)Sons at home…..(Enter number) b)Sons elsewhere…(Enter number) C) Daughters at home… (Enter number) d)Daughters elsewhere…(Enter number)	
204	Have you ever given birth to a boy or girl who was born alive but later died? (**IF NO, PROBE; Any baby who cried or showed signs of life but did not survive?)**	Yes……1 No……..0	**If no skip to 206**
205	How many boys/girls have later died?	a)Boys dead…….(Enter number) b)Girls dead……..(Enter number)	
206	Sum answers to 203, 204 and 205. And enter total.	Total births……. (Enter number and confirm it by asking the interviewee)	
207	How many additional children would you like to have in the future?	----------(enter in number)	
208	If it was possible to resurrect back in time how many children would you like to have?	a) Sons….. b) Daughters…. c) Total ……..	
209	Have you ever had an abortion?	Yes……1 No……..0	**If no skip to 211**
210	If yes to Q, 209, how many times did you have?	a) Induced……. (Enter number) b) Spontaneous…..(Enter number) c) Total …….. (Enter number)	
211	How old is your recent child?	-----weeks (Enter in complete weeks)	
212	Did you give birth that is	1.yes 0.no	**If no skip**

	older than the current child?		**to Q. 214**
213	How much longer have you waited to give the recent birth from the previous birth?	…….. (Enter in months)	
214	When you got pregnant with the recent birth, did you want to get pregnant?	Yes……1 No……..0	**If yes skip to Q. 219**
215	If no, did you want to have a baby later on, or did you not want any (more) child?	Later……1 No more……2	**If no more skip to Q. 217**
216	If later, how much longer did you want to wait?	Months……. I don't know….88	
217	If no to Q 214 or no more to Q 215 did you use a family planning method?	Yes……1 No……..0	**If yes skip to Q. 219**
218	If no to Q no 216, why didn't you use contraceptives? (**circle all reasons mentioned**)	**FERTILITY RELATED REASONS** 1.Infrequent sex 2. Menopausal/Hysterectomy 3.Can't get pregnant/sterility 4.Not menstruated since last birth 5.Breastfeeding 6. Up to God/Fatalistic **OPPOSITION TO USE** 7. Respondent opposed 8. Husband/partner opposed 9. Others opposed 10. Religious prohibition 11.Professional refusal (need menses) **LACK OF KNOWLEDGE** 12.Knows no method 13.Knows no source **METHOD-RELATED REASONS** 14. Side effects/health concerns 15.Lack of access/too far 16.Cost too much 17.Preferred method not available 18. No method available 19.Inconvenient to use 20.Interferes with body's normal process 21. Others (specify)……. 22.Dont know	
219	If you are not pregnant or unsure now, how long would	a)Months ------ b)Years -------	

	you like to wait from now before the birth of (a/another) child?	c)Soon now d) I don't know e)Want no more children f) I cannot be pregnant g)Undecided	

D. Information on breastfeeding status

301	Are you currently breastfeeding your child?	Yes…….1 No……..0……..›	**If no skip to 305**
302	Did your child drink/eat anything from a bottle with a nipple yesterday or last night?	Yes…….1 No……...0	
303	Have you started complementary foods for your child?	1. Yes 0. No **----------›**	**If no skip to 401**
304	If yes to Q no. 303, when did you start (at what age of the child did you started additional foods?)	------- Weeks(Enter in complete weeks)	
305	If you are not currently breastfeeding, up to when did you breast feed your child?	……..weeks (Enter in complete weeks) **if not breastfed since birth write '00'**	

E. Information about menses and sexual activity after birth

401	Is your menses resumed after your recent childbirth?	1. Yes 0. No	**If no skip to 403**
402	If yes to question no 401, when after birth?	**-----**weeks after birth	
403	Have you started sexual intercourse after birth?	1. Yes 0. No ----------›	**If no, skip to Q 501**
404	If yes to 403, when did you start sexual intercourse after birth?	……weeks after birth (Enter in complete weeks)	

F. Knowledge, attitude, discussion and approval of family planning in the postpartum period

501	Do you know any method of family planning that can be used after giving birth?	1.Yes 0.No	**If no skip to 503**

502	If yes to 501, what method? **(First circle self-mentioned and then explain about the method that didn't mentioned and circle the answer**)		Yes (spontaneously)	Yes (after explanation)	No
		a)Pill	1	2	3
		b)Injectable	1	2	3
		c)IUD	1	2	3
		d) Condom	1	2	3
		e) Implant	1	2	3
		f)Emergency contraceptive	1	2	3
		g) Spermicidal	1	2	3
		h)Diaphragm	1	2	3
		i)Sterilization	1	2	3
		j) Rhythm method	1	2	3
		k)Withdrawal method	1	2	3
		l) LAM	1	2	3
		m) Others (specify)		---------	

503	Have you ever discussed about use of contraceptives after delivery with your husband?	1.Yes 0. No	**If no Skip To Q 505**
504	If yes, what is his attitude about use of contraceptives after birth?	1. he approves of use 2. he disapproves use 3. In different	
505	Do you approve use of contraceptives after delivery?	1.Yes 2. No 3. In different	

G. Current pregnancy

601	Are you currently pregnant?	1.Yes 2.No 88.Unsure	**If no or unsure skip to 701**

602	If yes, how many months pregnant are you? (Record number of completed months) ENTER 'P's IN THE CALENDAR, BEGINNING WITH THE MONTH OF INTERVIEW AND FOR THE TOTALNUMBEROF COMPLETED MONTHS	Months**. ...** ☐☐	
603	When you got pregnant, did you want to get pregnant at that time?	YES . . . . . .1 No……..0	**If yes skip to 801.**
604	Did you want to have a baby later on or did you not want any (more) children?	Later . . . . . 1 No more. 2	

H. About practice of modern contraceptives in the extended postpartum period

701	Do you have any source of information for FP method?	1.Yes 0.No	**If no skip to 703**
702	What is your source of information about Family planning?(circle all source mentioned)	A)HEW D)friends B)Radio E)Health center/hospital C) TV F) Newspaper/magazine etc. G) Others (specify)……..	
703	Have you ever used FP before your recent birth?	1.Yes 0.No	
704	After your recent birth, are you currently using a modern family planning method?	1. Yes 0. No	**If YES, kip to 706**
705	If you are not currently using a FP method, why don't you use? **Circle all mentioned**	**FERTILITY RELATED REASONS** 1. Not having sex 2. Infrequent sex 3.Can't get pregnant/Sterility 4.Menopausal/Hysterectomy 5.want another child 6.Not menstruated since last birth 7.Breastfeeding	

		8.Up to God/Fatalistic **OPPOSITION TO USE** 9.Respondent opposed 10.Husband/partner opposed 11.Others opposed 12.Religious prohibition 13.Professional refusal (need menses) **LACK OF KNOWLEDGE** 14.Knows no method 15.Knows no source **METHOD-RELATED REASONS** 16.Side effects/health concerns 17.Lack of access/too far 18. Cost too much 19. Preferred method not available 20.No method available 21.Inconvenient to use 22.Interferes with body's normal process 23. Others (specify) …… 24.Dont know	
706	If yes to 704, what method are you using? **Circle all mentioned**	**A)** Pill B)Injectable C)IUD D)Condom E)Norplant F)Emergency contraceptive G)Diaphragm H)Spermicides I)Sterilization J) Rhythm method K)withdrawal L) LAM M) Others(specify)----	
707	What are your sources of FP method that you are currently using? **Circle all mentioned**	a)government health facility b)private health facility c)HEW (field worker) d) NGO facility e)pharmacies/drug venders **f) Others(specify)---------**	
708	If you are not currently using, do you intend to use a FP method in the future?	1. Yes 2. No 3. I don't know	

I. Information about contact with a health professional

801	Did you have antenatal care for Your recent birth?	1. Yes 0. No	**IF no skip to 804**
802	How many months pregnant were you when you first received ANC	Months... ☐☐	

	for your recent birth?	Don't know……..88	
803	How many visits did you have for your recent birth?	…… (Enter number)	
804	Where was the place of delivery?	1. Government health inst. 2.Private health institution 3. At home 4. Others(specify)-----	
805	Did you have any visit by health worker to your home during your recent birth?	1.Yes 0.No	
806	Did you have any contact with a health professional after giving birth? (For postpartum care, for child immunization or for well child/ sick child clinic visit…)	1. Yes 0. No	
807	If you had contact with health professional and/or if the delivery was in health institution, were you counseled about postpartum family planning?	1. Yes 0. No	

J. Knowledge about breast feeding and pregnancy

901	Can you get pregnant while you are breast feeding your child?	Yes…….1 No……..0	
902	Can you get pregnant If your menses is not resumed?	Yes……..1 No……...0	

THANK YOU!

Key informant in-depth interview guide for health providers

Greeting!

Hello dear participant!

With the aim of assessing the magnitude and factors associated with unmet need among extended postpartum women, having an in-depth interview with you has become an important idea. I hope that the interview I would be having with you is very much helpful to further strengthening the quality, availability and accessibility of contraceptive in general and to explore the possible barriers of contraceptive use among women who are in extended postpartum period while they need it to use and do not wish to become pregnant.

In doing this interview, I will raise some questions concerning family planning service in your Woreda in general and specifically why women in the first year after delivery are not using a contraceptive method even though they want to use and do not wish to become pregnant. Before entering to interview I would like to appreciate you for your voluntary participation in this interview/discussion**.**

Discussion points

1. Could you please tell me the benefits of family planning?
2. What does the family planning practice look like in your community?
    a. Particularly among mothers in postpartum?
3. What are the barriers that inhibit use of family planning in your community?
    a. Related to availability and accessibility methods
    b. Related to friendliness and competence of providers
    c. Related to side effects and misconceptions with regards to modern family planning methods
    d. Cultural, religion and traditions

4. Can you explain your understanding to me on the probability of pregnancy in a woman while she is breastfeeding?

5. Can you explain your understanding to me on the probability of pregnancy in a woman while he menses is not resumed?

Finally, I would like to express my heartfelt thanks for your voluntary participation in this focused group discussion.

You have contributed your best!

Annex-IV **Tigrigna version Questionnaire**

ዝርዝር መረዳእታ መጽናዕቲ

ስመይ_____ይበሃል፡፡ ኣብዚ ብምትሕብባር ኣዲስኣበባ ዩኒቨርስቲ ኮሌጅ ጥዕናሳይንስ ቤትትምህርቲ ጥዕና ሕብረተሰብ ብዛዕባ ኣብ ድሕሪ ወሊድ ዝርከባ ዕድሜኣን ካብ15-49 ዝኾና ኣዴታት ዘመናዊ መከላኸሊ ወሊድ ከጥቀማ እንዳደለያ ዘይጥቀማን ምስኡ ዝተታሓሓዘ ነገራት ዝምልከት መጽናዕቲ ኣብምክያድ ንርከብ፡፡እዚ መጽናዕቲ እዚ ንወረዳኹም ኮነ ንመንግስቲ ኣብ ዘውጽእዎ ትልሚ ዝርገሐ ኣገልግሎት ጥዕና ኣበርክቶ ዝገብርእዩ፡፡ሕጂንስኺ/ኽን ሓንቲ ካብተ ንተሳተፍቲ ክትኮኒ/ና መሪጽናኪ/ክን ኣለና፡፡ኣብዚ ኩሉ እትህብዮ/ኦ ሓበሬታ ምስጢሩ ዝተሓለወ ኮይኑ ንዝኾነ ሰብ ኮነ ካልእ ኣካል ኣሕሊፍና ከምዘይንህብ ከረጋግጸልኪ/ክን ንፈቱ፡፡

<u>ኣርእስቲ መጽናዕቲ፡</u> መከላከሊ ጥንሲ ምጥቀማ እንዳደለያ ግን ከኣ ዘይምጥቀማን ተተሓዝቲ ነገራትን ኣብ ክሊ ዕድሜ 15-49 ዓመት ኮይነን ኣብ ድሕሪ ወሊድ ዝርከባ ኣዴታት ታሒታይ ቆራሮን ሽረ እንዳስላሴን፡፡

<u>ድሕረ ባይታ መጽናዕቲ፡</u> ኣብ ዓለም መከላከሊ ወሊድ ከጥቀማ እንዳደለያ ግን ከኣ ብዝተፈላየ ምክንያት ዘይጥቀማ ብዙሓት ኣዴታት ኣለዋ፡፡ ብፍላይ ድማ ኣብድሕሪ ወሊድ ዝርከባ ኣዴታት እዚ ሽግር እዚ ጎሊሑ ይረአ፡፡ በዚ መሰረት ኣዴታት ኣብዘይደለያሉ ጊዜ ከወልዳን ከምኡውንተ ዓርሰንን ቆልዕተንን ምስ ወሊድ ዝተኣሳሰረ ሽግርን ሞትን ኪጋጥመን ይረአ፡፡

<u>ዕላማ መጽናዕቲ፡-</u> ንምድህሳስ መጠን ክጥቀማ እንዳደለያ ዘይጥቀማን ምስኡ ዝተታሓሓዘ ነገራትን፤ ኣብ ክሊ ዕድመ 15-49 ዓመት ኮይነን ኣብ ድሕሪ ወሊድ ዝርከባ ኣዴታት ታሒታይ ቆራሮን ሽረ እንዳስላሴን፡፡

<u>ረብሓ መጽናዕቲ፡-</u> ኣብዚ መጽናዕቲ ብምስታፍኪ/ክን ብውልቂ ትረኽብዮ/ኦ ቀጥታዊ ረብሓ የለን። እንተኾነ ግን፡ ውጽኢት እዚ መጽናዕቲ ኣብ ክሊ ዕድመ 15-49 ዓመት ኮይነን ኣብ ድሕሪ ወሊድ ዝርከባ ኣዴታት ወሊድ መከላከሊ ከጥቀማ እንዳደለያ ንከይጥቀማ ዝገብረን ዕንቅፋታት ኣብምልላይን ሽግሩ ኣብምፍታሕን ዕዙዝ ተራ ኣለዎ፡፡ ብተወሳኪ ንካልኦት መፅናቲ ከምመበገሲ ብምካነ ብምግልጋል ውፅኢቱ ንዝምልከቶም ኣካላትን ንቤትፅሕፈት ጥዕና ወረዳ ታሒይ ቆራሮን ሽረ እንዳስላሴን ዝዋሃ፡፡

<u>ሳዕቤን እቲ መጽናዕቲ፡-</u> እዚ መጽናዕቲ እዚ ኣብ ተሳተፍቲ ኮነ ኣብ ኣካየድቲ ቃለ መጠይቕ ዘስዕቦ ዝኾነ ዓይነት ጉድኣት ወይ ጸገም የለን።

መሰል ተሳተፍቲ፡- መሰል ምስታፍን ዘይምስታፍን ምሉእ ብምሉእ ዝተሓለወ ኮይኑ ንኹሎም ሕቶታት ምምላስ ወይ ውን ንገለ ዘይትደልዮም ሕቶታት ዘይምምላስ ይካኣል'ዮ።ንጹር ንዘይኮነ ሕቶ ምሕታት፡ ሕቶን መልስን ኣብ ዝኾነ ጊዜ ምቁራጽን ኣብቲ መጽናዕቲ ብሙሉእ ዘይምስታፍን ፍቑድ'ዮ።

ምስጢራውነት መጽዕናቲ፡- ኩሉ ንዝወሃብ ሓበሬታ ምስጢራውነቱ ዝተሓላወ ኮይኑ ብተወሳኺ ስምኪ/ክን ኣይጽሓፍን'ዮ።

2. ናይ ስምምዕ /ፍቓድ ቅጥዒ ፡- እቲ ኣብ ላዕሊ ዝተገልጸ ዝርዝር ሓበሬታ እዚ መጽናዕቲ ኣንቢበዮ /ብዝርደኣኒ ቋንቋ ተገሊጽለይን ተረዲአዮን እየ።

ስለዚ ኣብዚ መጽናዕቲ ንኽትሳተፈ/ፋ ፍቃደኛ ዲኺ/ኽን፧

1. ኣይኮንኩን ------> ኣመስግን 2. እወ -------> መሕትት ይቕጽል

ዋና ኣካያዲ መጽናዕቲ፡ ጉርጃ እምባፍራሽ

ኣድራሻ፡ ኣዲስ ኣበባ

ቁ.ስልኪ 0913463703

Email- gurjaw@yahoo.com

ስም ጥዕና ጣብያ.....

ስም ሓታቲ .....

ፈርማ ..... ዕለት.....

ውጽኢት መሕትት

1. ተወዲኡ (ሙሉእ) 2. ተሓታቲ ፍቓደኛ ኣይኮነን

3. ተሓታቲ ኣይነበረን 4. ብኽፊል ተወዲኡ

መለለዪ መሕትት

ቁ.ሕቶ	ሕቶ	መልሲ	መብርሂ
001	መሕትት መለለዪ ቁጽሪ		
002	እትነብርሉ ቦታ		
003	እዚ ናይ መጨረሻ ቆልዓኺ ካብትወልዲ ክንደይ ገይርኪ?	_____ወርሒ (ብምሉእ ወርሒ ጸሓፍ) **(ካብ 11 ወርሒ ንላዕሊ ተኾይኑ ደው ኣብል)**	

1ይ ክፍል፡ ህሉው ማሕበረ ቁጠባዊ ኩነታት ተሳተፍቲ

ቁ.ሕ	ሕቶ	መልሲ	መብርሂ
101	ዕድመኺ (ብምሉእ ዓመት)?	_____ዓመት(ብምሉእ ዓመት ፀሐፍ)	
102	ኩነታት ሓዳር?	**1**.በዓል ትሓዳር **2**.ሓቢራ እትነብር (ብዘይ ሕጋዊ መርዓ)	
103	ብዝኾነ እትዛረብሉ ቋንቋ፣ ምንባብን ምፅሓፍን'ዶ ትኽእሊ?	1.እወ 0.ኣይፋል	ኣይፋል እንተኾይኑ ናብ ቁ. 105 ሕለፍ
104	እቲ ዝልዓለ ክፍሊ ደረጃ ትምህርቲ ዝበፃሕኮ ክንደይ ክፍሊ እዩ?	ዘይስሩዕ ትምህርቲ=**00** (ኣኽብብ), _____(ክፍሊ ፀሐፍ)	
105	እትነብርሉ ቦታ?	1.ከተማ 2.ገጠር	
106	ሃይማኖትኪ/ክን?	**1**.ኦርቶዶክስ **2**.ምስልምና **3**.ጴንጤ(ፕሮቴስታንት) **4**.ካቶሊክ **5**.ካልእ (ግለጺ)_____	
107	ብሄርኪ/ክን?	**1**.ትግራይ **2**.ኩናማ **3**.ኣምሓራይ **4**.ኦሮሞ **5**.ጉራጌ **5**.ካልእ (ግለጺ)_____	
108	ኣብዚ እዋን'ዚ ቀንዲ ስራሕኪ እንታይዩ?	**1**.ናይ ገዛ ሰራሕተኛ/እመቤት **2**.ኣብ ውልቂ ተቐጻሪ **3**.ሓረስታይ **4**.ናይ መንግስቲ ሰራሕተኛ **5**.መዓልታዊ ሰራሕተኛ **6**. ነጋዴ **7**.ተመሃሪት **8**.ካልእ (ግለጺ)_____	
109	በዓል ቤትኪ ብዝኾነ ዝዛረበሉ ቋንቋ ምፅሓፍን ምንባብን ይኽእል' ዶ?	1.እወ 2.ኣይፋል 88.ኣይፈልጥን	ኣይፋል/ኣይፈልጥንተኾይኑ ናብ ቁ.111 ሕለፍ
110	ናይ በዓል ቤትኪ ዝልዓለ ክፍሊ ደረጃ ት/ቲ ክንደይ እዩ?	ዘይስሩዕ ት/ቲ=**00** (ኣኽብብ), _____(ክፍሊ ፀሐፍ) ኣይፈልጥን=88	
111	ኣብዚ እዋን'ዚ ናይ በዓል ቤትኪ ቀንዲ ስራሕ እንታይ እዩ?	**1**.ኣብ ውልቂ ተቐጺሩ ዝሰርሕ **2**.መንግስታዊ ሰራሕተኛ **3**.ሓረስታይ **4**.መዓልታዊ ሰራሕተኛ **5**.ነጋዳይ **6**.ተማሃራይ 7. ቀራፂ፣ኣንጥረኛ፤ ፀራቢ **8**.ካልእ (ግለጺ)_____	
112	ሓፈሻዊ ወርሓዊ እቶት ገዛኹም	_____(ወርሓዊ ኣታዊ ብብር ፀሐፍ)	

	ክንደይ'ዩ?		

2ይ ክፍል፡ ኩነታት ወሊድ ተሳተፍቲ

ቁ.ሕ	ሕቶ	መልሲ	መብርሂ
201	ኣብ ክንደይ ዕድሜኺ ንመጀመሪያ ጊዜ ተመርዒኺ?	_____(ዕድመ ፀሓፍ)	
202	ናይ መጀመርያ ቆልዓኪ ኣብ ክንደይ ዕድመኺ ወሊድኪዮ?	_____ (ዕድመ ፀሓፍ)	
203	ምሳኺ ወይ ኣብ ካልእ ቦታ ዝነብሩ ዝወለድክዮም ኣወዳትን ኣጓላትን ክንደይ እዮም? **(ኣወዳት ወይ ከኣ ኣጓላት እንተዘይህሌንኣ"00" ፀሐፍ)**	**a**.ኣወዳት ምስኣ ዝነብሩ _____ (ቁፅሪ ፀሐፍ) **b**.ኣወዳት ኣብ ካልእ ዝነብሩ___ (ቁፅሪፀሐፍ) **c**.ኣጓላት ምስኣ ዝነብራ ___ (ቁፅሪ ፀሐፍ) **d**.ኣጓላት ኣብ ካልእ ዝነብራ___ (ቁፅሪ ፀሐፍ)	
204	ዝኾነ ብሂወት ዘወለድክዮም ወዲ ወይ ከኣ ጓል፤ ደሓር ግን ብሞት ዝተፈለየኪ ኣሎ ዶ?**(የለን እንድሕር ኮይኑ፤ ብኽያት ወይ ከኣ ዝኾነ ብሂወት ምውላዱ ዘርኢ ምልክት ኣርእዩ ሸውንሸው ዝሞተ እንተህልዩ ሕተት)**	1.እወ 0.ኣይፋል	ኣይፋል እንተኾይኑ ናብ ቁፅሪ 206 ሕለፍ
205	ክንደይ ኣወዳትን ኣጓላትን መይቶሙኺ?	**a**)ኣወዳት_____(ቁፅሪ ፀሐፍ) **b**)ኣጓላት-----(ቁፅሪ ፀሐፍ)	
206	ናይ ሕቶ ቁ. 203፤204፤205 ድምር ውፅኢት ፀሐፍ	ድምር--------(ድምር ውፅኢት ብምንጋር ኣረጋግፅ)	
207	ድሕሪ ሕጂ (ኣብ መፃኢ) ክንደይ ተወሳኺ ቆልዑ ክህልዉኺ ትደልዩ? (**ዝተወለዱ ኣያካትትን**)	_____(ቁፅሪ ፀሓፍ)	
208	ቆልዓ ኣብዘይነበረኪ ግዜ (ንዳሓር ተመሊስኪ)፤ ክንደይ ቆልዑ ክህልውኺ ትደልዩ ነይርኪ?	**a**)ኣወዳት_____ (ቁፅሪ) **b**)ኣጋላት_____(ቁፅሪ) **c**)ጠቕላላ_____ (ድምር ቁጽሪ ፀሓፍ)	
209	ምንጻል ጥንሲ ኣጋጢሙኪ ይፈልጥ 'ዶ?	1.እወ 0.ኣይፋል	ኣይፋል እንተኾይኑ ናብ ቁ. 211 ሕለፍ
210	ንቁ.ሕቶ 209 እወ እንተኾይኑ ክንደይ ጊዜ?	**a**)ባዕለይ ንኽንፀል ዝገበርክዎ___ (ቁፅሪ ፀሐፍ) **b**)ባዕሉ ዝኸደኒ (ዝተነፀለ)___(ቁፅሪ ፀሐፍ) **c**)ጠቕላላ..... (ድምር ቁጽሪ ፀሓፍ)	
211	እዚ ናይ ሕጂ ቆልዓኺ ዕድሚኡ/ኣ ክንደይ 'ዩ?	_____ ሰሙን (ብምሉእ ሰሙን ጸሐፍ).	
212	ቅድሚ ናይዚ ሕጂ ቆልዓኺ ካልእ ቆልዓ ኣለኪ ዶ? (**ምዕባዩ/ምዕባያ**)	1.እወ 0.ኣይፋል	ኣይፋል እንተኮይኑ ናብ ቁ. ሕለፍ 214

213	እዚ ናይ ሕጂ ቆላዓኺን ካብቲ ቅድሚኡ ዝተወለደ ቆልዓን ኣብ ክንደይ ጊዜ ተወሊዱ?	_____(ብወርሒ ፅሓፍ)	
214	እዚ ናይ ሕጂ ቆልዓ ናይ ምውላድ ድሌት/ዓላማ ነይርኪ'ዶ?	1.እወ 0.ኣይፋል	እወ እንድሕር ኮይኑ ናብ ቁ. 219 ሕለፉ
215	ንቁ 214 ኣይፋል ተኮይኑ፤ ደሓር ንኽትወልዲ ዲኺ ደሊኽዮ ኔርክስ ወይስ ፈፂምኪ ተወሳኺ ቆልዓ ናይ ምውላድ ሐሳብ ኣይነበረክን?	1.ንድሐር 2.ፍፁም ተወሳኺ ኣይደለኹን	ፍፁም ኣይደለኹን እንተኾይኑ ናብ ቁ. 217 ሕለፍ
216	ንድሐር ደሊኽዮ እንተኔርኪ፤ ክንደይ ዝኣክል ጊዜ ክትፀንሒ ሐሲብኪ ኔርኪ?	ወርሒ_____(ፀሐፍ) 88.ኣይፈልጥን	
217	ንቁ.ሕቶ 214 ኣይፋል እንድሕር ኮይኑ መከላኸሊ ወሊድ ትጥቀሚ'ዶ ነይርኪ?	1.እወ 0.ኣይፋል	እወ እንድሕር ኮይኑ ናብ ቁ. ሕቶ 219 ሕለፉ
218	ንቁ.ሕቶ 217 ኣይፋል እንድሕር ኮይኑ ስለምንታይ ናይ ወሊድ መከላኸሊ ኣይተጠቐምክን? **(ዝሃበቶ ኩሎም መልስታት ኣኽብብ)**	**ምስ ወሊድ ዝተኣሳሰረ ምኽንያት** 1. ዘይተደጋጋሚ/ዘይቅልጡፍ ርክብ 2. ሜኖፖዝ/ናይ ማህፀን ምውጋድ 3.ጥንሲ ዝሕዝ ኣይመሰለንን/መኻንነት 4. ድሕሪ ወሊድ ወርሓዊ ፅግያት ስለዘይነበረኒ 5. ድሕሪ ወሊድ መጥበዊት ስለዝነበርኩ 6. እግዝኣብሄር ይፈልጥ ኢለ **ተቓውሞ** 7.ንባዕለይ ስለዝቃወም 8. ባዓል ቤተይ ስለዝቃወም 9. ካልኦት ስለዝቃወሙ 10. ሃይማኖታዊ ተቃውሞ 11. በዓል ሞያ ወርሓዊ ፅግያት ስለዘይነበረኒ ስለዝኸልኣኒ **ሕጽረት ኣፍልጦ** 12.ዝኾነ ዓይነት መከላኸሊ ስለዘይፈልጥ 13. መከላኸሊ ኣበይ ከምዝርከብ ስለዘይፈልጥ **ምስ መከላኸሊ ዝተኣሳሰረ ምኽንያት** 14.ንድናዊ ሳዕቤን/ናይ ጥዕና ጉዳይ ፈሪሐ 15.ብቐሊሉ ስለዘይርከብ/ራሕቒ 16. ዋግኡ ክቡር ስለዚኾነ 17. ዝመረፅክዎ ዓይነት ስለዘየለ 18. ዝኾነ ዓይነት መከላኸሊ ስለዘየለ 19. ንኽጥቀመሉ ምቹእ ስለዘይኮነ 20. ንናይ ኣካላትና ኖርማል መስርሕ ስለዝፃባእ 21. ካልእ (ጥቐሲ)-------- 22. ኣይፈልጥን	
219	ሕጂ ጥንስቲ ወይ ከኣ ርግፀኛ እንተዘይ ኮንኪ፤ ቅድሚ ካልእ ቆልዓ ምውላድኪ፤ ካብ ሕጂ ክንደይ ግዘ ክትፀንሒ ትደልዩ?	a)ወርሒ _____ b)ዓመት_____ c) ኣብ ቀረባ ግዚ d) ኣይፍልጥን e)ተወሳኺ ቆልዓ ዝበሃል ኣይደልን f)ናይ ምጥናስ ተኽእሎ የብለይን g)ኣይወሰንኩን	

3ይ ክፋል፡ ኩነታት ጡብ ኣደ ምጥባው

ቁ.ሕ	ሕቶ	መልሲ	መብርሂ
301	ኣብዚ ሕጂ እዋን ቆልዓኺ ተጥቡዋ'ዶ ኣለኺ?	1.እወ 0.ኣይፋል	ኣይፋል እንተኾይኑ ናብ ቁ. ሕቶ 305 ሕለፉ
302	እዚ ቆልዓኺ ትማሊ መዓልቲ ወይ ክኣ ምሸት፤ ብጥጦ ኮነ ብካልእ፣ዝኾነ ዝብላዓ ወይ ዝስተ ነገር ወሲዱ/ዳ'ዶ ነይሩ/ራ?	1.እወ 0.ኣይፋል	
303	ንቆልዓኺ ተወሳኺ ምግቢ'ዶ ኣጀሚርክዮ ኣለኺ?	1.እወ 0.ኣይፋል	ኣይፋል እንተኾይኑ ናብ ቁ.ሕቶ 401 ሕለፉ
304	ንቁ. 303 እወ እንተኾኑ ኣብ ክንደይ ዕድሚኡ ኣጀሚርክዮ?	_____ሰሙኑ (ብምሉእ ሰሙን ጸሓፍ)	
305	ኣብዚ ሕጂ ጊዜ ዘይተጥብዩ እንድሕር ኮይንኪ ክሳብ ክንደይ ዕድሚኡ/ኣ ኣጥቢኺ?	_____ሰሙኑ (ዕድመ ብሰሙን ጸሓፍ) **(ካብ ዝውለድ ጀሚሩ እንትዝይ ጠብዩ "00" ፀሓፍ)**	

4ይ ክፋል፡ ኩነታት ወርሓዊ ድግያትን ግብረስጋን

401	ድሕሪ እዚ ናይ ቀረባ ቆላዓኺ ምስወለድኪ ወርሓዊ ድግያት ክትርኢ ጀሚርኪ'ዶ?	1.እወ 0.ኣይፋል	ኣይፋል እንድሕር ኮይኑ ናብ ቁ. ሕቶ 403 ሕለፉ
402	ንቁ. ሕቶ 401 እወ እንተኾይኑ ምስ ወለድኪ ኣብ ክንደይ ሰሙንኪ ክትርኢ ጀሚርኪ?	___ ሰሙነይ (ብምሉእ ሰሙን ፀሓፍ)	
403	ኣብዚ ድሕረ ወሊድኪ ናይ ግብረ ስጋ ርክብ ጀሚርክ'ዶ?	1.እወ 0.ኣይፋል	ኣይፋል እንድሕር ኮይኑ ናብ ቁ. ሕቶ 501 ሕለፍ
404	ንቁ. ሕቶ 403 እወ እንድሕር ኮይኑ ምስ ወለድኪ ኣብ ክንደይ ጊዜኺ ጀሚርኪ?	_____ ሰሙነይ(ብምሉእ ሰሙን ፀሓፍ)	

5ይ ክፋል፡ ኩነታት ኣፍልጦን ምኽሪ ምስባዓል-ቤት

501	ድሕሪ ወሊድ ክትጥቀምዮ ትኽእሊ ዝኾነ ዓይነት ናይ ወሊድ መከላኸሊ ትፈልጢ'ዶ?		1.እወ 0.ኣይፋል	ኣይፋል ተኾይኑ ናብ ቁ.503 ሕለፍ	
502	ንቁ.ሕቶ 501 እወ እንተኾይኑ ኣየናይ ዓይነት መከላኸሊ ትፈልጢ? **(መጀመርታ ባዕላ ዝጠቐሰቶም ኣኽብብ፤፤ ብመቐፃል ዘይጠቐሰቶመ ዓይነት መከላኸሊ ወሊድ**		እወ (ባዕላ ዝጠቐሰቶ)	እወ (ድሕሪ መግለፂ)	ኣይፋል
		a)ከኒና	1	2	3
		b)መርፍእ	1	2	3
		c)ኣብ ማህጸን ዝኣቱ(ሉፕ)	1	2	3

	መብርሂ ድሕሪ ምሃብ ዝሃበቶም መልሲ ኣኽብብ)	d) ኮንደም	1	2	3
		e)ኣብ ጫዋዳ ዝቐበር	1	2	3
		f)ድንግተኛ መከላኸሊ	ነ	2	3
		g)ዝልከ	1	2	3
		h)ዲያፍራም	1	2	3
		i) ምምካን	1	2	3
		j)ብወርሓዊ ጊዘ (ፐርዮድ) ብምጥቃም	1	2	3
		k) ዘርኢ ወድ ተባዕታይ ናብ ደገ ብምፍሳስ	ነ	2	3
		l)ጡብ ጥራሕ ምጥባው (ንዓተ ወርሒ፤ዕግያት ኣብዘይመፃሉ)	1	2	3
		m)ካልእ(ግለጺ)_____			

503	ድሕሪ ወሊድኪ ብዛዕባ መከላኸሊ ወሊድ ምስ በዓል ቤትኪ ተመኻኺርኪ 'ዶ ትፈልጢ?	1.እወ 0.ኣይፋል	ኣይፋል ተኾይኑ ናብ ቁ. ሕቶ 505 ሕለፉ
504	ንቁ.ሕቶ 503 እወ እንተኾይኑ ስለምጥቃም ወሊድ መከላኸሊ ድሕሪ ወሊድ ኣተሓሳስባኡ ከመይ ይመስል?	1.ንኽጥቀም ይፈቕደለይ 2.ንኽጥቀም ኣይፈቅድን 3.ምንም ዓይነት ርእይቶ የብሉን	
505	ንስኺ ንባዕልኺ ድሕሪ ወሊድ ሸዑንሸዑ ናይ ወሊድ መከላኸሊ ክትጥቀሚ ትድግፊ/ትፈቕዲ'ዶ?	1.እወ ይድግፍ 2.ኣይፋል/ኣይድግፍን 3.ምንም ዓይነት ርእይቶ የብለይን	

6ይ ክፋል፡ ኩነታት ነባራዊ ጥንሲ

601	ኣብዚ ሕጂ ጊዜ ጥንሲ ኣለኪ 'ዶ?	1.እወ 2.ኣይፋል 3.ርግጸኛ ኣይኮንክን	ኣይፋል ወይ ርግጸኛ ኣይኮንክን ተኾይኑ ናብቁ.ሕቶ 701 ሕለፉ
602	ንቁ 601 እወ ተኮይኑ፤ናይ ክንደይ ወርሒ ጥንዚ እዩ ዘለኪ? (ክሳብ እዚ ወርሒ ቃለ መሕትት ዝግበረሉ ጊዜ ብምሉእ ወርሒ ይመዝግቡ)	_____ወርሒ (ብምሉእ ወርሒ ፀሓፍ)	
603	ጥንስቲ እንድሕር ኮንኪ እዚ ናይ ሕጂ ጥንሲ ደሊኽዮ (ሓሲብክዮ'ዶ) ነይርኪ?	ነ.እወ 0.ኣይፋል	እወ እንድሕር ኮይኑ ኣብዚ ናብ ቁ. 801 ሕለፍ
604	እዚ ናይ ሕጂ ጥንሲ ንዳሓር ዲዩ ተደልዩ ነይሩስ ወይስ ምንም ተወሳኺ ቆልዓ ኣይደለኽን ነይርኪ?	ነ.ንዳሓር 2.ምንም ተወሳኺ ቆልዓ ኣይደልን ነይረ	

7ይ ክፋል፡ ኩነታት ነባራዊ ዘመናዊ መከላኸሊ ወሊድ፡ ድሕሪ ወሊድ ዝምልከት

701	ብዛዕባ ወሊድ መከላኸሊ ሓበረታ ትረኽቢ'ዶ ?	1.እወ 0.ኣይፋል	ኣይፋል እንተኾይኑ ናብ ቁ. 703 ሕለፍ
702	ብዛዕባ ሓበረታ መከላኸሊ ወሊድ ካበይ ትረኺቢ? (**ዝጠቐሰቶም ምንጪታት ሓበረታ ኣኽብብ**)	**A)**ጥዕና ኣክስተንሽን **B)**ረድዮ **C)**ቴለቭዥን **D)**መሓዛ **E)**ጥዕና ጣብያ/ሆስፒታል **F)** ጋዜጣ/መፅሄት **G)**ካልእ (ግለፂ) _____	
703	ቅድሚ እዚ ናይ ሕጂ ቆልዓኺ ምውላዱ ናይ ወሊድ መከላኸሊ ተጠቒምኪ'ዶ ትፈልጢ?	1.እወ 0.ኣይፋል	
704	ሕጂ ኣብ ድሕሪ ወሊድኪ መከላኸሊ ጥንሲ ትጥቀሚ'ዶ ኣለኺ?	1.እወ 0.ኣይፋል	እወ እንተኾይኑ ናብ ቁ. 706 ሕለፍ

705	ኣብዚ ድሕሪ ወሊድኪ መከላኸሊ ወሊድ ዘይትጥቀሚ እንድሕርሃሊኺ ንምንታይ? **(ዝጠቐሰቶም ኣኽብብ)**	**ሕጽረት ኣፍልጦ** **ምስ ወሊድ ዝተኣሳሰረ ምኽንያት** 1.ርክብ ስለዘይብለይ 2.ዘይተደጋጋሚ/ዘይቅልጡፍ ርክብ 3.ዝጠንስ ኣይመስለንን/መኻንነት 4. ሜኖፖዝ/ናይ ማህፀን ምውጋድ 5.ተወሳኺ ቆልዓ ክወልድ ስለዝደለኹ 6. ድሕሪ ወሊድ ወርሓዊ ፅግያት ስለዘይመፀኒ 7. ድሕሪ ወሊድ መጥበዊት ስለዝኾንኩ 8. እግዝኣብሄር ይፈልጥ ኢለ **ተቓውሞ** 9.ንባዕለይ ስለዝቃወም 10. ባዓል ቤተይ ስለዝቃወም 11. ካልኦት ስለዝቃወሙ 12. ሃይማኖታዊ ተቓውሞ 13. በዓል ሞያ ጥዕና ወርሓዊ ፅግያት የብልካን ኢሉ ስለዝኸለኣኒ 14. ዝኾነ ዓይነት መከላኸሊ ስለዘይፈልጥ 15. መከላኸሊ ኣበይ ከምዝርከብ ስለዘይፈልጥ **ምስ መከላኸሊ ዝተኣሳሰረ ምኽንያት** 16. ጎድናዊ ሳዕቤን/ናይ ጥዕና ጉዳይ ፈሪሐ 17. ብቐሊሉ ስለዘይርከብ/ራሕቂ 18. ዋግኡ ክቡር ስለዚኾነ 19. ዝመረፅክዎ ዓይነት ስለዘየለ 20. ዝኾነ ዓይነት መከላኸሊ ስለዘየለ 21. ንኽጥቀመሉ ምቹእ ስለዘይኮነ 22.ንናይ ኣካላትና ኖርማል መስርሕ ስለዝፃባእ 23. ካልእ (ጥቐሲ)_____ 24. ኣይፈልጥን	
706	ንቁሕቶ 704 እወ እንተኾይኑ ኣየናይ ዓይነት መከላኸሊ ትጥቀሚ ኣለኺ? **(ዝጠቐሰቶም ኣኽብብ)**	**A)**ከኒና **B)**መርፍእ **C)**ኣብ ማህፀን ዝቐበር(ሉፕ) **D)**ኮንዶም **E)**ኣብ ጭዋዳ ዝቐበር **F)**ናይ ድንገተኛ መከላኸሊ **G)**ዲያፍራም **H)**ዝልከ **I)**ምምካን **J)**ብወርሓዊ ጊዘ (ብፐርዮድ) ምጥቃም **K)**ዘርኢ ወድ ተብዓታይ ናብ ደገ ብምፍሳስ **L)**ጡብ ጥራሕ ብምጥባው (ንዕተ ወርሒ፤ፅግያት ኣብዘይመፀሉ) **M)**ካልእ (ግለጺ)_____	
707	እዚ ዝወሰድኪዮ መከላኸሊ ወሊድ ካበይ ረኺብክዮ? **(ዝጠቐሰቶም ኣኽብብ**)	**a)** ሆስፒታል/ጥዕና ጣብያ **b)** ናይ ግሊ ክሊኒክ **c)** ጤናኤክስተንሽን (ፊልድ ሰራሕትኛ) **d)**ካብ ናይ ገበርቲ ሰናይ ጥዕና ጣብያ **e)** ካብ ፋርማሲ/መድሃኒት ዘዝውሩ **f)** ካልእ (ጥቐሲ)_____	
708	ኣብዚ ሕጂ ግዜ፤ወሊድ መከላኸሊ ዘይትጥቀሚ እንድሕ ኮንኪ፤ ኣብ መጻኢ ናይ ምጥቃም ሓሳብ ኣለኪ'ዶ?	**1**.እወ **2**.ኣይፋል **3**.ኣይፈልጥን	

8ይ ክፋል፡ ኩነታት ተሳታፊ ምስ ርክብ በዓል ሞያ ጥዕና

801	ነዚ ናይ ቀረባ ቆልዓኪ ኣብትወልድሉ ግዜ፤ ጥንስኺ ክትትል ቅድመ ወሊድ ገይርኪ'ዶ?	1.እወ 0.ኣይፋል	ኣይፋል እንተኾይኑ ናብ ቁ.ሕ 804ሕለፍ
802	ን ቁ 801 እወ ተኾየኑ፤ ናይ ወሊድ ቅድመ ክትትል ኣብ ክንደይ ወርሕኺ ጀሚርኪ?	___ ወርሒ (ብምሉእ ወርሒ ፀሓፍ) 88.ኣይፈልጥን	
803	ክንደይ ዝኣክል ቅድም ወሊድ ክትትል ገይርኪ ንይርኪ?	_____ (ቁፅሪ ጽሓፍ)	
804	ኣበየናይ ቦታ ወሊድኪ/?	1.መንግስታዊ ትካል 2.ውልቃዊ ትካል 3.ኣብ ገዛይ 4.ካልእ (ግለጺ)_____	
805	ኣብዚ ናይ ቀረባ ቆልዓኪ ኣብዝወለድክሉ ግዜ፤ ብበዓልሞያ ጥዕና ኣብ ገዛኺ ብምምጻእ ተራኢኺ 'ዶ ነይርኪ?	1.እወ 0.ኣይፋል	
806	ድሕሪ ምውላድኪ ንምኽሪ ድሕረ ወሊድ፤ንኽትባትን ንቆላዓኺ ንምሕካምን ምስ ጥዕና በዓል ሞያ ተራኺብኪ'ዶ ነይርኪ?	1.እወ 0.ኣይፋል	
807	ምስ በዓል ሞያ ጥዕና ተራኺብኪ እንድሕርነይርኪ ወይ ከኣ ኣብ ትካል ጥዕና ጣብያ እንድሕር ወሊድኪ ብዛዕባ ወሊድ መከላኸሊ ምኽሪ ተዋሂብኪ'ዶ ነይሩ?	1.እወ 0.ኣይፋል	

9ይ ክፋል፡ ኩነታት ብዛዕባ ኣፍልጦ ጡብ ምጥባውን ጥንስን

901	ቆልዓኺ ኣብ ተጥብውሉ ጊዜ ጥንሲ ክፍጠር ይኽእል 'ዶ ይመስለኪ?	1.እወ 0.ኣይፋል	
902	ድሕሪ ወሊድ ወርሓዊ ጽግያት ኣብዘይርኣኽሉ ጊዜ ጥንሲ ክፍጠር ይኽእል'ዶ ይመስለኪ?	1.እወ 0.ኣይፋል	

የመስግን!

ሰላምታይየቐርብ!

ጥዕና ይሃበለይ ናይዚ ዘተ ተሳተፍቲ!

ንመጻኢ ኣብቀበሌኹም ወይ ከኣ ወረዳኹም ናይ ቤተሰብ ምጣነ ስድራ ኣገልግሎት ከማሓያሽይ ኽእልእዩ ኢልና ብዝሓሰብናዮ ጉዳይ ዘተኪንብር ሓሲብና ኣለና፡፡ኣብዚ ዘተና ብዛዕባ እዘን ወሊደን ክሳብ ሓደ ዓመት ድሕሪ ወሊድ ዘለዋ ኣዴታት ዝምልከት ኮይኑ መከላኸሊ ወሊድ (ጥንሲ) ክጥቀማ እንዳደለያ ግን ዘይጥቀማ ዘለወ ንኣተሓሳስባን ከምኡ 'ውን ኣብ ምሃብ ግልጋሎት ጽሬት ዘለኩም ሓሳብ ክንለዋወጥ ኢና፡፡

ቅድሚ ናብዚ ዘተ ምእታውና ብፍቓደኝነትኩም ክትሳተፉ ብምውሳንኩም ካብ ልቢ ነመስግን፡፡

ናይ መዘተይ ነጥብታት

1. ናይ ወሊድ መከላኸሊ ጥቕሚዶ ክነግሩኒ ምኻአሉ/ላ?

    a. ብፍላይ ድማ ንሓንቲ ኣብ ድሕሪ ወሊድ እትርከብ ኣደ

2. ኣብ ከባቢኹም ናይ ጥንሲ መከላኸሊ ከመይ ይመስል?
    a. መብዝሕትኣን ዝጥቀማሉ ዓይነት ኣየናይ እዩ?
3. ኣብከባቢኹም ንኣብ ድሕሪ ወሊድ ንዝርከባ ኣደታት ናይ ጥንሲ መከላኸሊ ንኽይጥቀማ ምኽንያት ወይ ከኣ ዕንቅፋት ዝኾንን እንታይ እዮም
        a. ምስ ኣቀረብ መከላኸሊ ጥንሲ ዝተተሓሓዘ
        b. ምስ ምሕዝነታዊ ኣቀራርባ በዓል ሞያ ዝተተሓሓዘ
        c. ምስ ነድናዊ ሳዕቤን ዝተተሓሓዘ
        d. ምስ ባህሊ፤ እምነትን (ሃይማኖት) ግጉይ ኣተሓሳስባ ዝተተሓሓዘ
4. ሓንቲ ኣብድሕሪ ወሊድ እትርከብ ኣብተጥብወሉ ግዜ ዘለዋ ናይምጥናስ ተኽእሎ ከመይ ይመስልን/ ይመስሎም?
5. ሓንቲ ኣብድሕሪ ወሊድ እትርከብ ወርሓዊ ፅግያት ኣብዘይረኣየትሉ ግዜ ዘለዋ ናይምጥናስ ተኽእሎ ከመይ ይመስለን/ ይመስሎም?

ኣብ መወዳእታ ኣብዚ ዘተ ብፍቓደኝነትኩም ስለ ዝተሳተፍኩም ብጣዕሚ የመስግን።

DECLARATION

I the undersigned, declare that this thesis is my original work, has never been presented in this or any other university, and that all the resources and materials used for the thesis development, have been acknowledged as complete references.

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Date of submission: _____

This thesis work has been submitted for examination with my approval as University primary advisor.

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Signature: _____

Date: _____

1. **United Nations Department of Economic and Social Affairs, P.D., *World Population Prospects: The 2012 Revision, Highlights and Advance Tables*. 2013.**
2. **Affairs, U.N.D.o.E.a.S., *UN Population Division Policy Brief*. March 2009.**
3. **WHO, *Family Planning Factsheets*. May 2013.**
4. **Singh, J.E.D.a.S., *Trends in contraceptive need and use in developing countries in 2003, 2008, and 2012: an analysis of national surveys.* May 8, 2013. 381(9879): p. 1756-1762.**
5. **John Cleland, S.B., Alex Ezeh, Anibal Faundes, Anna Glasier and Jolene Innis, *Family planning: the unfinished agenda.* 2006. 368: p. 1810-27.**
6. **JE, S.S.a.D., *Adding It Up: Costs and Benefits of Contraceptive Services-Estimates for 2012.* 2012.**
7. **WHO, U., UNFPA and The World Bank, *Estimates and Trends in Maternal Mortality: 1990-2010***

2012.

8. **Jane Cottingham, A.G.a.P.H., *Use of human rights to meet the unmet need for family planning.* 2012. 380: p. 172-80.**
9. **.**
10. **(CSA), C.S.A., *Population and Housing census of Ethiopia*. 2007.**
11. **(FMoH), F.D.R.o.E.M.o.H., *National Guideline for Family Planning Services in Ethiopia*. 2011.**
12. **International, C.S.A.E.a.I., *Ethiopia Demographic and Health Survey 2011*. 2012.**
13. **United Nation for Development (UNDP)-Ethiopia, *Analyzing regional performance and disparities in health outcomes in Ethiopia*. 2012.**
14. **WHO. *unmet need for family planning* Available from: www.who.int/gho/.../family_planing/en/.**
15. **Rhonda smith, L.A., Jay gribble and Donna Clifton, ed. *Family Planning Saves Lives*. fourth edition ed. 2009, Population Reference Bureau.**
16. **All Party Parliamentary Group on Population, D.a.R.H., *Return of the Population Growth Factor and Its impact upon the Millennium Development Goals*. January,2007.**
17. **Ross, J.A. and W. L.Winfrey, *Contraceptive Use, Intention to Use and Unmet Need during the Extended Postpartum Period.* 27(1): p. 20-27.**
18. **ACCESS-FP, U., *Family planning needs during extended postpartum period in Ethiopia.* 2009.**
19. **Extending Service Delivery (ESD) , U., *Postpartum Family Planning for Healthy Pregnancy Outcomes*. February 2009.**
20. **360, F.H.I.F., *Postpartum Family Planning New Research Findings and Program Implications*. July 19, 2012.,**

.

21. **ACCESS- FP, U., *Statement for Collective Action for Postpartum Family Planning*.**
22. **Federal Democratic Republic of Ethiopia, M.O.H., *NATIONAL REPRODUCTIVE HEALTH STRATEGY 2006 - 2015*. March 2006.**
23. **Health, M.E.P.a.R., *Family planning and Reproductive Health Indicators Database*.**
24. **Borda, M. and W. Winfrey, *Postpartum Fertility and Contraception: An Analysis of findings from 17 countries.* March, 2010.**

25. **Sedgh, G., et al., *Women with an Unmet Need for Contraception in Developing Countries and Their Reasons for Not Using a Method.* June,2007.**
26. ***PPFP TOOLKIT*. Available from: http://www.k4health.org/toolkits/ppfp.**
27. **Maternal and Child Health Integrated Program (MCHIP), U., *Family Planning Needs during the First Two Years Postpartum in Kenya.***
28. **Warren, C.E., T. Abuya, and I. Askew, *Family planning practices and pregnancy intentions among HIV-positive and HIV-negative postpartum women in Swaziland.* 2013.**
29. **Maternal and Child Health Integrated Program (MCHIP), U., *Family Planning Needs during the First Two***

Years Postpartum in Rwanda.

30. **Mulu, S., *Assessment of the contraceptive needs and practice of women in the extended postpartum period in Bahir Dar, Ethiopia*. July 2007.**
31. **Shaaban, O. and A. Glasierr, *Pregnancy during breastfeeding in rural Egypt. Contraception.* 2008. 77(5): p. 350-354.**
32. **DaVanzo, J., et al., *Effects of inter-pregnancy interval and outcome of the preceding pregnancy on pregnancy outcomes in Mat lab, Bangladesh.* 2007. 114: p. 1079-1087.**
33. **Vernon, R., *Meeting the Family Planning Needs of Postpartum Women.* September,2009. 40(3): p. 235-245.**
34. **Wilcher, R. and W. Cates, *Spotlight on Prevention-The Astonishing Neglect of an HIV-Prevention Strategy: The Value of Integrating Family Planning and HIV Services.***
35. **Cohen, S.A., *The World at Seven Billion: Global Milestone a Reflection of Individual Needs*. 2011.**
36. **Sarah E.K. Bradley, T.N.C., and Joy D. Fishel, *Revising unmet need for family planning DHS Analytical Studies 25,*. 2012.**
37. **Genene Bizuneh, S. Shiferaw, and a.Y. Melkamu, *Unmet Need and Evaluation of Program Options to Meet Unmet Need for Contraception in Ethiopia,2000 and 2005; Further Analysis of the 2000 and 2005 Ethiopia Demographic and Health Surveys.* September 2008.**
38. **Korra, A., *Attitudes toward Family Planning, and Reasons for Nonuse among Women with Unmet Need for Family Planning in Ethiopia*. 2002, ORC Macro.: Calverton,Maryland USA.**
39. **S. K. Bhattacharya1, R.R., D. N. Goswami, U. D. Gupta, K. Bhattacharyya, and S. Ray, *Study of Unmet Need for Family Planning among Women of Reproductive Age Group Attending Immunization Clinic in a Medical College of Kolkata, India.* Indian Journal of Community Medicine, 2006. 31(2).**
40. **Tesfaye Gebreselassie, Shea O. Rutstein, and a.V. Mishra:, *Contraceptive use, Breast feeding, Amenorrhea and Abstinence during the Postpartum Period: An analysis of for Countries- DHS Analytical Studies 14,*. August 2008.**
41. **360, F.h.I.F., *Family Planning Information and Referrals at Child Immunization Clinics: Study in Ghana and Zambia Highlights Implementation Challenges.* December 2010.**
42. **Brunie, A., *Expanding Contraceptive Use in Rwanda*. 2010, Family health International (FHI) 360.**

43. **Adebanjo B. Adeyemi, K.T.I., Ernest O. Orji, O. Kuti and Marie M. Alabi *The unmet need for contraception among Nigerian women in the first year post-partum.* European Journal of Contraception and Reproductive Health Care, December 2005. 10(4): p. 229-234.**
44. **Sarah C. Keogh, M.U., Yusufu Kumogola and Basia Zaba: , *Dynamics of postpartum contraceptive use, and their relationship to antenatal intentions in Northern Tanzania.***
45. **Addis Ababa University School of Public Health, E.C.S.A., *Performance, Monitoring and accountability 2020*. 2014.**
46. **Macro2000., C.s.a.E.a.O., *Ethiopia demographic and health survey 2000, Addis Ababa, Ethiopia and Calverton, Maryland, USA: CSA and ORC Macro.* 200.**
47. **Jeff K Mathe, K.K.K.a.A.K.M., *Barriers to Adoption of Family Planning among Women in Eastern Democratic Republic of Congo* African journal of reproductive health, 2011. 1(15): p. 69-77.**
48. **Shruti Verma, K.K.S., Shilpi Tanti, *Timing of Initiation of Contraceptives in Extended Postpartum Period Among Indian Women.* 2010.**