Addis Ababa University
School of Graduate studies

Determinants of Unmet Need for Family Planning Among Currently Married Women in Kobbo Woreda, North-East of Amhara

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A Thesis Submitted to the School of Graduate Studies of Addis Ababa University in Partial fulfillment of the requirements for the degree of Master of Science in Population Studies

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Approved by the Examining Board

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Acronyms

ARSBOFED- Amhara Regional State Bureau of Finance and Economic Development
CBD- Community Based Distribution
CSA- Central Statistical Agency
CPS- Contraceptive Prevalence Survey
CPR- Contraceptive Prevalence Rate
DHS- Demographic and Health Survey
FGAE- Family Guidance Association of Ethiopia
FGD- Focus Group Discussion
FP- Family Planning
IUD- Intra Uterine Device
KAP- Knowledge, Attitude and Practice
NGO- Non Government Organization
SPSS- Statistical Package for Social Science
TFR- Total Fertility Rate
TV- Television
UN- United Nations
UNFPA- United Nations Population Fund
USAID- United States Agency for International Development
WFS- World Fertility Survey
WHO- World Health Organization

Table of Content

Page

List of Tables

List of Figures

Abstract

The level of unmet need for FP for Africa is the highest of all continents of the world. Besides its importance in meeting demographic goals, meeting the need of women with unmet need is believed to protect women from the health risk of unwanted pregnancy and provides them the opportunity to improve their own lives.

The objective of the study was to examine the underlying factors of unmet need for family planning among currently married women of reproductive age in Kobbo woreda. A community based cross sectional study was employed. A multi-stage sampling procedure was carried out to interview 692 women in the study area. Quantitative as well as qualitative data were obtained using structured questionnaires, focus group discussions and key informants interview. Univariate, bi-variate and multivariate technique were used in the analysis. Demographic, socio-economic and family planning variables were used as explanatory variables while the dependent variable is unmet need for family planning.

Most women 681(98.4%) knew at least one modern FP method. Around 58% of women have never discussed with husbands about issues concerning family planning. It is also indicated that 52.6% of women have never discussed with health workers and 47.4% of women have discussed with health workers at least once in the past three months. Regarding the need status for family planning, 47.3% of women have unmet need for family planning and 38% of women have met their need (currently using contraceptives). Unmet need for family planning is highest among women who are in the early reproductive age (15-24), who have no education, live in rural areas, who got married before the legal age at first marriage (<18), have more number of living children (5 and above), have no or little knowledge of FP and have never discussed FP issues with their husband and health workers. Age at first marriage, number of living children, spousal discussion and discussion with health workers about family planning were found to be the most important determinants of unmet need for family planning in the study area.

The study recommends that integrated family planning information, education and communication programs and strategies aiming at encouraging communication between couples, changing husband's attitude and their active involvement in the program; expand access to family planning services in rural areas and improve contraceptive method mix could possibly help to address women with unmet need. Moreover, discussion of women with health workers, particularly health extension workers, and improving age at marriage could effectively reduce the level of unmet need.

Chapter One: Introduction

1.1 Background of the study

In recent decades fertility has declined at a rapid pace in a majority of developing countries. Overall, the total fertility rate of the developing world dropped from 6.0 births per woman in the late 1960s to 2.9 in 2000-2005 (United Nations 2007). Declines have been most rapid in Asia, North Africa, and Latin America, regions where social and economic development has also been relatively rapid. Sub-Saharan Africa also experienced significant declines despite its lagging development (Ashford, 2003).

Fertility is influenced by different socio-economic and demographic factors. However, contraceptive use is the most important proximate determinants of fertility. Studies have shown that use of effective family planning methods is the major reason for the recent fertility decline in Kenya, Botswana and Zimbabwe (PRB, 1992).

Studies conducted in developing countries have shown that rate of contraceptive prevalence for some countries rose from 9% in the early 1960s to 51% in 1990 (Fathalla, 1994). During the same period it has been also stated that contraceptive prevalence has increased for some countries in East Asia (from 13% to 70%) and Latin America (from 14% to 60%). But in Africa the change is insignificant (from 5% to 17%) and it has not produced a significant impact on fertility (Bongaarts et al., 1990; Fathalla, 1994)

In Ethiopia, total fertility rate did not show any marked decline between the mid 1950s and mid 1980s (UN, 2001). According to the 1990 National Family & Fertility Survey and the 2000 & 2005 EDHS, the fertility rate began to decline from 6.4 children per woman in the late 1980s (CSA, 1993) to 5.9 births in 2000 and it further declined to 5.4 in 2005.

Although FP services have been provided for a prolonged time, in Ethiopia, contraceptive prevalence rate has not reached a level whereby it will have an impact on fertility. This was mainly attributed to the service delivery system, which was carried out through the

network of general health facilities that are available mostly in urban and semi-urban communities, the bulk of the rural population remained without access to family planning services (Assefa et al, 2006). The recent EDHS conducted in 2005 revealed that contraceptive prevalence rate was only 15% (CSA and ORC Macro, 2005).

A study conducted in Ghana reported that more than 100 million married women throughout the developing world want to postpone or avoid pregnancy but are not using contraceptive method (Govindasamy et al, 2000). This condition depicted that there is a gap between their fertility preference and contraceptive practice. This group of women is considered as having unmet need for family planning.

Unmet need for family planning as a concept has evolved since the 1960's when surveys of contraceptive knowledge, attitude and practice (KAP) showed a discrepancy between women's reproductive intention and their contraceptive behavior (Bongaarts, 1991; Westoff, 1994; Westoff and Bankole, 1995a). Since then, the measurement of unmet need for FP has undergone various modifications although the fundamental concept remained unchanged. The standard formulation of unmet need which has been utilized by various researchers basically focuses on fecund women who are either formally married or living in union, who either do not want to have any more children or want to space their next birth for at least two years, and are not using any contraception (Casterline and sinding, 2000).

Recently, there was an estimated 105.2 million married women in developing countries who have unmet need for contraception (55.4 million for spacing and 49.8 million for limiting). From this, Sub-Saharan Africa constitutes 24 million (22% of married women with unmet need for FP in developing countries) (Ross and Winfrey, 2002). In Sub-Saharan African countries, the level of unmet need for FP is very high. For instance in Senegal, Togo, Comoros, Rwanda and Uganda, the level has reached approximately one-third of all married women. In contrast, in some countries, (for instance Egypt and Ghana), an impressive decline in the level of unmet need for FP has been observed. In Egypt, unmet need declined from 25% to 11% and in Ghana, it declined from 35% to

23% (Westoff, 2001). In Ethiopia, it is estimated that 34% of married women had unmet need for family planning (CSA and ORC Macro, 2005).

Unmet need can be a powerful concept for FP programs. First of all, it is based on women's own statements in answering survey questions. Second, it identifies the group most likely to be interested in contraception. Third it poses a clear challenge to reach and serve these women (Population Report 1996:1)

1.2 Statement of the problem

The level of unmet need for FP for Africa is the highest of all continents of the world. Among African countries, Sub-Saharan Africa has the highest level of unmet need. In most of these countries the proportion of unmet need is even more than contraceptive prevalence rate (Ashford, 2003).

In Ethiopia, the extent of unmet need is around 34% of which 20% constitute unmet need for spacing and 14% for limiting (CSA and ORC Macro, 2005). The same study indicated that in Amhara region, the prevalence of unmet need among married women is high; though decline from 41% in 2000 to 30% in 2005. In 2000, it was the highest among the regions in Ethiopia, but is placed third next to Oromiya (41%) and Southern Nation, Nationality and People Region (SNNPR) (37%) in 2005. The rate of contraceptive prevalence of the region increased from 7.7% in 2000 to 16% in 2005, where as the proportion of total demand satisfied increased from 15% in 2000 to 35% in 2005 (CSA and ORC Macro, 2000; CSA and ORC Macro, 2005).

The fact that a substantial proportion of women have an unmet need for family planning has important demographic implications. If the unmet need for FP were reduced, fertility would decline substantially (Casterline, 1995). Besides its importance in meeting demographic goals, meeting the need of women with unmet need is believed to protect women from the health risk of unwanted pregnancy and provides them the opportunity to improve their own lives.

In population with high unmet need for FP, maternal morbidity and mortality also tends to be very high. Women with unmet need have a high probability of becoming pregnant and thus exposed to the risk of pregnancy related illness and even death (Taylor et al., 1999). About 500,000 women lose their lives every year during pregnancy and labor, of these 99% of the deaths occurs in developing countries (Murray and Lopez, 1998). In Ethiopia, the maternal mortality ratio is among the highest in the world (673 per 100.000 live births) (CSA and ORC Macro, 2005).

In addition, infant and child mortality is very high among women with unmet need. The chance of survival for the new born are increased as the birth interval increases (Barbara, 1994). A study suggests that satisfying unmet need can directly contribute to reductions in maternal and child mortality-averting an estimated 16, 877 maternal and 1.1 million child deaths world wide by the year 2015 (USAID Health Policy Initiative, 2006). In Ethiopia infant and under five mortality rates are estimated at 77 and 123 per 1000 live births respectively (CSA and ORC Macro, 2005).

Study on unmet need for family planning for the study area is not readily available and therefore study is needed to estimate the level and find out the important determinants of unmet need, so that government and non government organization working on the provision of family planning services would have information on the different factors and their contributions to the unmet need for family planning which enable them to design interventions or set appropriate strategies to address the problem of unmet need in the study area.

1.3 Significance of the study

Understanding the size of unmet need and the characteristics of women with unmet need can help planners strengthen programs. Survey data on unmet need can provide overall direction by helping to pinpoint the obstacles in society and weakness in services that need to be overcome (Ashford, 2003).

Addressing unmet need for family planning provides an opportunity for policy makers in all sectors to respond to the expressed fertility preferences of their population while simultaneously improving health, slowing the rate of population growth, and contributing to achievement of national goals (Casterline and Sinding, 2000).

The findings obtained from this study will be very useful in many ways. Since the study estimates the level and identifies the factors that contribute to unmet need for family planning, government and non-government organization could design interventions or set appropriate strategies to address the problem of unmet need in the study area.

Few study on unmet need for family planning are available both at national and regional levels. However, detailed studies to point out the major determinants of the problem in different regions, zones and woredas of the country are lacking. This study, therefore, attempts to estimate the level and identify determinants of unmet need for family planning among married women in Kobbo woreda in order to give recommendations for strategies that will help family planning programmes to address unmet need.

1.4 Objective of the study

1.4.1 General Objective

The main objective of this study is to asses the determinants of unmet need for family planning among currently married women of reproductive age in Kobbo woreda.

1.4.2 Specific Objectives

1. To estimate the level of unmet need for family planning among currently married women in the study area.
2. To identify factors that contributes to unmet need for family planning in the study area.

1.5 Limitation of the study

- Since the study included only currently married women, the results may not be inferable to all women.
- In the analysis, income of the respondent is not included because information is not available for the majority of cases (87%).
- Attitude of husband towards use of contraceptive was collected from the perception of women. Some women may not correctly reflect husband's attitude.

1.6 Operational Definition

Women with unmet need: These group of women include (i) those women who are neither pregnant nor amenorreic but fecund and who want to space or limit their fertility, but were not using contraceptive method at the time of the survey, (ii) those pregnant women whose pregnancy was mistimed or unwanted at the time when they became pregnant and (iii) all amenorrheic women whose last birth was mistimed or unwanted (CSA and ORC Macro, 2005).

Unmet need for spacing includes pregnant women whose pregnancy was unwanted, postpartum amenorrheic women whose last birth was mistimed, and fecund women who were neither pregnant nor postpartum amenorrheic, who were not using any method of family planning (modern or traditional) and wanted to wait for two or more years to have a (another) child (CSA and ORC Macro, 2005).

Unmet need for limiting includes pregnant women whose pregnancy was unwanted, postpartum amenorrheic women whose last birth was unwanted and fecund women who were neither pregnant nor postpartum amenorrheic, who were not using any family planning method but do not want to have any more children (CSA and ORC Macro, 2005).

Women with met need: Includes all women who want to space or limit their fertility and were using contraceptive method at the time of the survey.

Fecund women: Refers to women who had physiological capacity to reproduce (Bongaarts and Potter, 1983). In the study, self reported fecundity status was used.

Postpartum Amenorrhea: Refers to the time interval between childbirth and resumption of menstruation, a period during which a woman is temporarily infecund (Bongaarts and Potter, 1983).

Exposure to Mass Media: Refers access to message through radio and television. Those who never had access to at least one of the two mass media are considered as never exposed to mass media. But those who had access to one of the two media are considered as exposed to mass media.

Housewife: Women whose main occupation is caring for her family and running the household.

Woreda: Government administrative hierarchy that exist above the lowest administrative structure in Ethiopia.

Kebele: The lowest administrative structure in Ethiopia.

Sub-Kebele (Sefer): The sub-division of kebele.

Chapter Two: Literature Review

Different literatures are available concerning factors underlying unmet need for family planning. The following literature review focuses on the demographic, socio-economic and family planning factors determining unmet need for family planning.

2.1 Demographic Factors

2.1.1 Age of women

Age of women is an important determinant of contraceptive use. Women are less likely to use contraceptives in their early reproductive ages. This might be due to the fact that young women have not achieved their expected number of children (Ahmadi, 2005).

Most young women have unmet need for spacing and most old women have unmet need for limiting. The reason behind this pattern is that young women still want to have more children but want to space and older women have achieved their desired family size and thus want to stop child bearing (Westoff and Ochoa, 1991; Antenane, 2002). Similarly, a recent study in Ethiopia suggested that unmet need for spacing decrease with ages while the opposite is truc for unmet need for limiting, with the exception of women age 45-49 (CSA and ORC Macro, 2005).

In most parts of Sub-Saharan Africa, the percentage of women with unmet need for spacing is greater than the percentage of women with unmet need for limiting. This is because; it is not only young women but also old women who want to space than to limit their pregnancy (Hernado, 1999 as cited in Mekides, 2003). For instance in Ethiopia, the level of unmet need for spacing (20%) is greater than unmet need for limiting (14%) (CSA and ORC Macro, 2005).

2.1.2 Number of living children

Another important demographic factor identified as determinants of unmet need for family planning is the number of living children. The likelihood of having unmet need seemed to increase with the number of living children. Couples who have more living children are more likely to have unmet need than the ones who have fewer children or

none at all (Omwago and Khasakhala, 2006). Couples with more children have a greater desire to stop child bearing which may not be translated in to actual practice, because of other factors affecting the decision to use family planning, or those that affect the supply and accessibility of family planning (Pasha et al., 2001). The family planning program, therefore, may be most effective in concentrating on couples who have completed their desire family size.

A study in Nepal also showed that unmet need increases with the increase in the number of children. The reason may be that the women do not end up child bearing below 2-3 children, but they starts thinking of spacing or limiting after fourth or more children (Bhandari et al., 2006). Similarly, a study in Iran suggested that women with higher number of living children are more likely to have an unmet need (Ahmadi, 2005). In addition, a study in Ethiopia using the 2000 EDHS suggested that the proportion of women who have demand for family planning but not using contraception increased with the number of living children (Antenane, 2002).

2.1.3 Age at first marriage

Age at first marriage is found to be significant predictors of unmet need for family planning. In many sub-Saharan African countries, age at first marriage marks the beginning of sexual intercourse and child bearing. Rising age at marriage has played a significant role in the fertility decline of many countries (Govindasamy and Boadi, 2000). A study made in a district of eastern region of Nepal, Women with age at marriage of 17-18 years were 2.3 times more likely to have unmet need than those who married after age 18 (Bhandari et al, 2006).

2.2 Socio economic Factors

2.2.1 Education

Education is basic socio economic factor with well-documented effects on fertility and contraceptive use (Chaudhury, 2001). The most educated women have the lowest level of unmet need, presumably because they are most able to act on their intentions (Ashford, 2003).

A study in Kenya also showed that wives with higher level of education had low levels of unmet need. Those who are more educated are more likely to reside in the urban areas where contraceptive are more accessible, are more informed about the available methods and are more likely to prefer smaller families than their less educated counterparts (Omwago and Khasakhala, 2006).

In Ethiopia, women with no education are twice as likely to have an unmet need for family planning as women with secondary or higher level of education (CSA and ORC Macro, 2005). Similarly, a study in Amhara regional state using the 2000 EDHS suggested that among women with no formal education and who have demand for contraception, 89% have unmet need and among those with secondary or higher education and who have demand for contraception, only 19.2% have unmet need for contraception (Mekides, 2003).

2.2.2 Place of Residence

The potential demand for contraception differs by place of residence. In a study which took place in a district of Ghana a prominently rural setting characterized by a low prevalence of modern contraceptive use, almost one third of married women have an unmet need (Govindasamy et al., 2000). In most Sub-Saharan Africa, unmet need in the rural areas exceeds the estimates for urban areas (Westoff, 2006). In a study conducted in Iran women who live in rural areas have the highest tendency towards unmet need, while those who live in urban areas were most likely to be currently using contraception (Ahmadi, 2005).

The 2005 EDHS showed that rural women have twice the unmet need of urban women and less than one in four rural women have the demand for family planning satisfied, compared with three in four urban women. Another study in Amhara region depicted that among women with demand for family planning and who reside in rural areas, 89% had unmet need and in urban areas out of the total women who had demand for contraception, only 37% had unmet need.

2.2.3 Religion

Religion of a woman is also found to have an impact on the current status of women's contraceptive use. The various religious groups are known to differ in fertility level and use of family planning (Devi et al., 1996). A study by Cleland in Indonesia and Thailand in comparison with Philippines identified religion as contributing factor for the low CPR in Philippines and for the high CPR in other two countries (PRB, 1992). According to the 1990 National Family and Fertility Survey Report, in Ethiopia, the unmet need for contraceptive is found to be slightly higher for Christians than for Muslims (CSA, 1993).

2.2.4 Exposure to Mass Media

Exposure to family planning message in the mass media widens the horizon of understanding on issues related to contraceptive use and helps in the realization of its importance in achieving desired family size (CSA and ORC Macro, 2005). A study in Iran revealed that the more the accesses to mass media, the lower the probability of having unmet need (Ahmadi, 2005). A study by Antenane (2002) also depicted that the percentage of women who have been exposed to the media are 80 percent less likely to have unmet need for spacing than women with no exposure.

2.3 Family Planning Factors

2.3.1 Knowledge about contraception

Acquiring knowledge about family planning is an important step towards gaining access to and using a suitable contraceptive method in a timely and effective manner (CSA and ORC Macro, 2005). Women who are a ware of many contraceptive methods, know whether they can be obtained, understand their side effects, and know how to use them are less likely to have unmet need. For instance, DHS finding in Dominican Republic revealed that the extent of unmet need among women who knew less than four methods was twice (35%) as high as that of women who knew six methods or more (14%) (Bhushan, 1996)

Studies in Sub-Saharan countries also revealed that lack of knowledge is a critical cause of unmet need (Westoff and Bankole, 1995). A study in Iran also suggested that women

2.3.4 Spousal Communication

Spousal communication regarding issues about family size and contraceptive use has an important influence on the prevalence of unmet need for family planning. Exchange of information related to family size and contraception is likely to motivate couples to use contraception (CSA and ORC Macro, 2005).

Lack of communication between wives and husbands creates barriers contraception use (Casterline and Sinding, 2000). These barriers come in to existence because either wives frequently misperceive their husband's attitude or husbands are more strongly opposed to contraception than wives (Bhushan, 1997).

Studies in different parts of Sub-Saharan Africa have indicated that the level of unmet need is lower among women who discussed about family planning with their husbands. For instance, studies in Ghana shows that women with unmet need do not communicate as well with their husbands about contraception as women who use contraceptives. (Govindasamy et al., 2000)

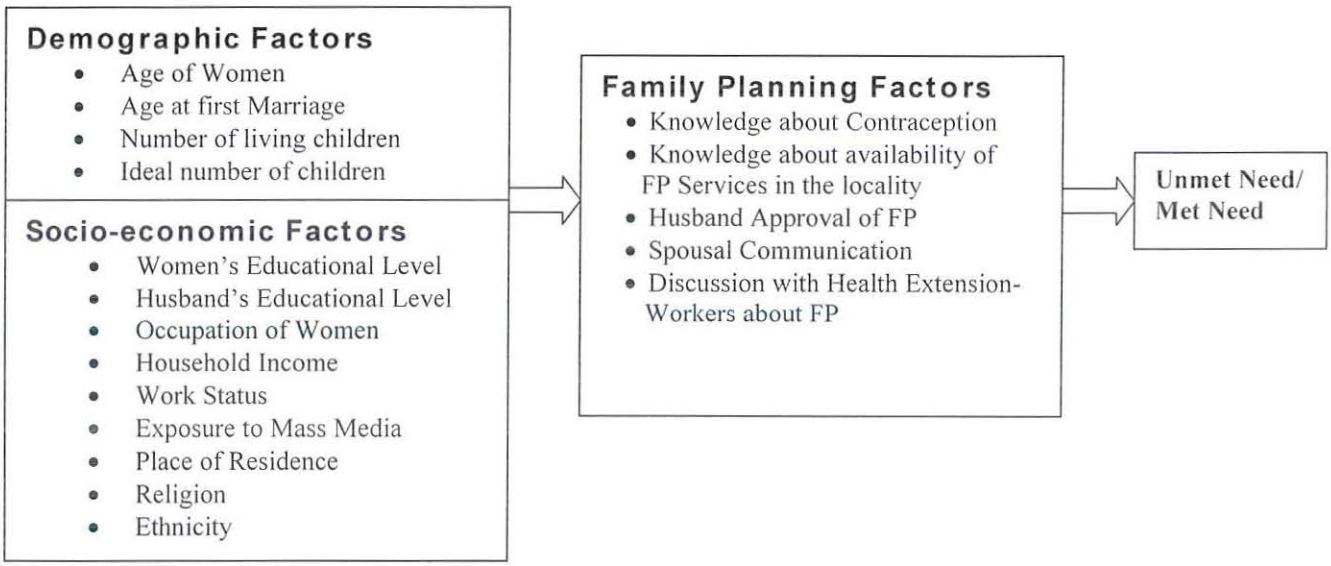
2.3.5 Visited in Family Planning Workers

Community based distribution, particularly in rural areas and underserved communities to provide family planning service is believed to be an effective family planning service outlet. The system is the best way to communicate with women about the type of the methods, their advantage, and how they are appropriately used and their side effects (Antenane, 2002). A study conducted in Lemu also showed that CPR increased from 1.3% to about 15% during the five years of implementation of a CBD Project (Path Finder International, 2000). A DHS finding in Zimbabwe also indicated CBD as an important service outlet that contributed to a significant reduction in unmet need (ZDHS, 1984).

2.4 Conceptual Framework

The framework is conceptualized by using two groups of variables. These are the dependent and independent variables. The independent variables are those that influence unmet need for family planning which include demographic, socio-economic and family planning factors. The third factor (family planning) is the set of proximate determinants, which include those variables that are much related with family planning issues. The dependent variable is a dichotomous variable, unmet need for family planning. It is expected that the demographic and socio-economic factors affect the ultimate dependent variable through the proximate variables.

Figure-1. Conceptual Framework of the Study



Source: Modified from Kaushik's model (Kaushik, 1999)

2.5 The Study Hypotheses

1. Unmet need for family planning is negatively associated with women's level of education.
2. Unmet need for family planning is positively associated with number of living children in the household.
3. Spousal communication is negatively associated with unmet need.
4. Discussion of women with health extension worker about family planning decreases the likelihood of unmet need for FP.

Chapter Three: Source of Data and Methods of data Analysis

3.1 The Study Area and Population

Kobbo woreda is located in the northern part of the country, and north-eastern part of Amhara region. It is one of the nine woredas of north wollo administrative zone bordering with Gidan woreda in the west, Gubalafto woreda in the south, Afar region in the east and Tigray region in the north. Kobbo town (the woreda capital) is found on the main Addis-Mekele road, approximately 520 km from the capital. According to the Amhara Regional State Bureau of Finance and Economic Development (ARSBOFED), the woreda has an area of about 2,570 sq. km and it is divided in to 32 kebele administrations, of which 28 are rural and 4 are urban kebele administrations. The urban kebeles are located in Kobbo town (ARSBOFED, 2004).

According to the 2007 census report of Population Census Commission of Ethiopia, population size of the woreda is 221,894, out of which 110,323 are female (50%). Females in the reproductive age group (15-49) accounts 43% of the total female population. Young age structure characterizes the woreda's population with 41% of the population under 15 years of age and only 2.8% of the population aged 65 years or over. The woreda is predominantly rural with 86 percent of the population are living in rural kebeles (CSA, 2008). The number of households is estimated at 44,552 and the average household size is 5 (ARSBOFED, 2004).

3.2 The Study Design and Data Source

A community based cross sectional study was conducted based on primary data generated through a household survey of married women aged 15-49 living in Kobbo woreda. The quantitative data from household survey was collected using structured questionnaires. To strengthen the information obtained by quantitative data, qualitative data was also collected through FGDs and Key informants interview.

3.3 Sample size determination and Sampling procedure

3.3.1 Sample size determination

The sample size was determined based on the estimates of prevalence of unmet need for contraception among currently married women in Amhara region which is 30% (CSA and ORC Macro, 2005). The underlying assumption here is that the population proportion of currently married women who have unmet need for contraception (P) in the study area is the same as the region (30 %).

By fixing the level of confidence at 95% and the error to be tolerated at 5%, the sample size was determined by the following formula (Woodward, 1992).

$$n = \frac{[Z_{a/2}]^2 P [1-P]}{e^2}$$

Where, **n** – sample size

$\mathbf{Z_{a/2}}$ – the standard normal value at the required confidence level ($Z_{a/2} = 1.96$ at 95% confidence level).

P – population proportion of currently married women assumed to have unmet need for family planning in the study area.

e – margin of error.

$$n = \frac{[Z_{a/2}]^2 P [1-P]}{e^2}$$

$$n = \frac{[1.96]^2 (0.30) (0.70)}{(0.05)^2}$$

$$n = 322.69 \approx 323$$

The survey is designed as a stratified sample, not a simple random sample. To correct for the difference in design, the sample size is multiplied by the design effect (**D**). The design effect is generally assumed to be **2.** As a result the required sample size can be obtained by **n x D** = 323 x 2 = 646 Plus 10% for non response (64.6) ≈ **710**

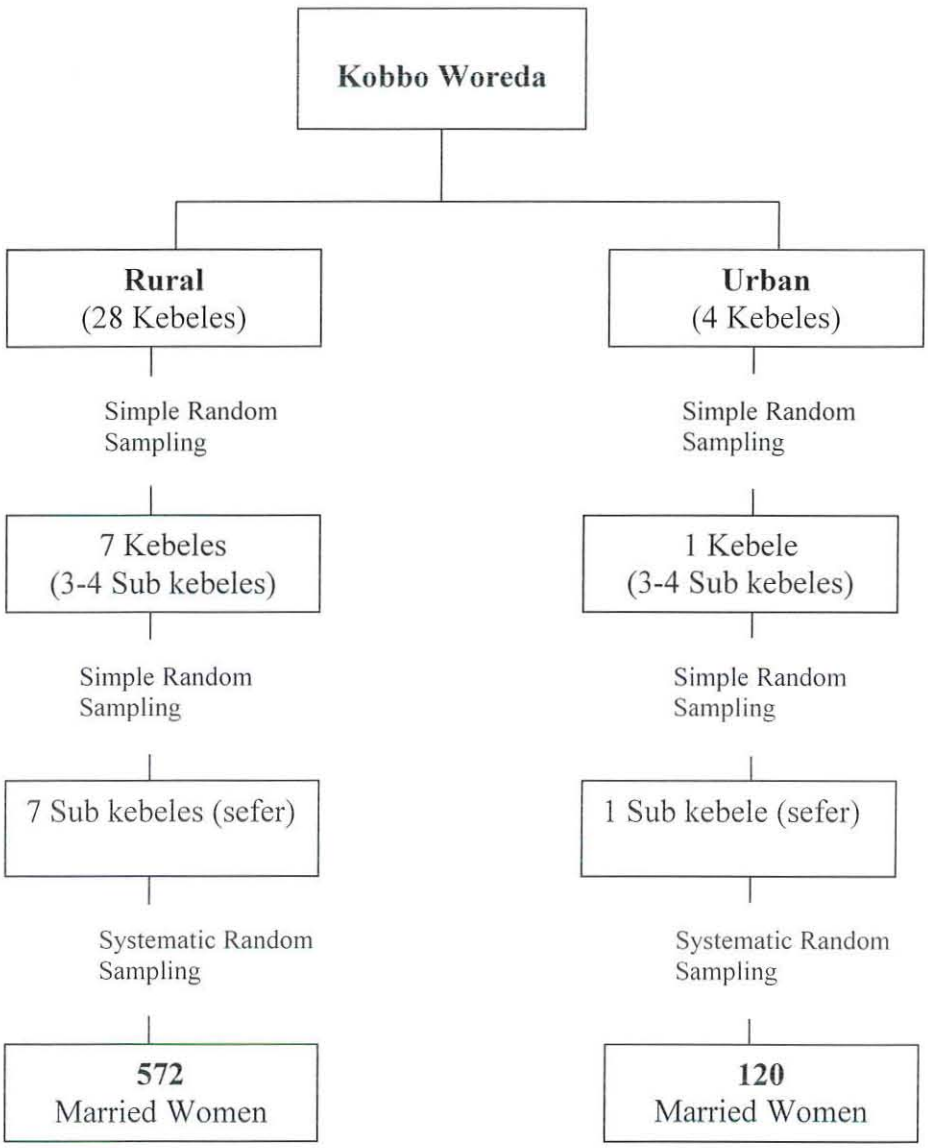
Accordingly, 710 questionnaires were prepared and distributed. Out of these, 692 eligible respondents were interviewed. Non-response and absentees accounted for the remaining 18 (2.5%).

3.3.2 Sampling procedure

A total of 692 currently married women with in reproductive age group were interviewed by the following procedure. A multi-stage stratified sampling technique was employed for the selection of the sampling unit. There are four urban and twenty-eight rural kebeles in the study area. First the woreda has been stratified in to two: Urban and Rural. From the total thirty-two kebeles in the woreda, eight kebeles, one from urban and seven from rural, were selected by using Simple Random Sampling methods. Each kebeles has 3-4 sub kebeles (Sefer). One sub kebele (Sefer) from each selected kebeles was selected by the same method.

The sample size was allocated to each sub kebele based on the proportion to the size of the enumeration area. Finally based on the sampling frame of households in each sub kebele, currently married women with in the reproductive age were selected from the selected eight sub kebeles by using Systematic Random Sampling method. The systematic selection was conducted across every $\mathbf{i}^{th}$ household with a random start, where **i** was calculated by dividing number of households of the selected sub kebele by the sample size allocated to the sub kebele. The list of households in each sub kebele was obtained from the kebele administrations.

Figure 2. Sampling Procedure of the Study



3.4 Data Collection

Questionnaires were administered to currently married women in the reproductive age. A total of three focus group discussions were conducted: One FGD with currently married young women (held at Bewa rural kebele), another with currently married old women (held at Gedemeyu rural kebele) and a third with currently married males (held at Kobbo town). Each FGD consists of 8-10 participants. The FGD were tape recorded with the consent of the participants and the complete transcripts were written first in Amharic and then translated in to English. The FGDs were moderated by the principal investigator.

Interview with key informants of the subject was made. The key informants were: Head of the woreda health office, two health extension workers, working in health posts of different rural kebeles and one nurse, working in the health center of the woreda. The interviewer was the principal investigator.

Female interviewers were assigned to collect data in the household survey instead of males because females can easily approach to the given eligible households and may be able to generate more reliable information than males. All enumerators were 12 grade completed.

3.5 Ethical Consideration

The present study has got official approval from the Institute of Population Studies, Addis Ababa University. The study subjects were informed about the purpose of the study. They were also informed that they can skip questions as they do not want to answer fully or partially. After assuring the confidential nature of the response and obtaining informed consent from the study subject, the questionnaire was filled with strict privacy.

3.6 Data Quality Assurance

The quality of data was ensured through proper training of data collectors, pre-testing of the questionnaire and checking each of the filled questionnaires daily by data collectors. Close supervision was done by the principal investigator during the course of data collection. All collected data were checked for completeness, accuracy and consistency by the principal investigator every day. Any thing which was unclear was corrected and communicated to the data collectors on the next day.

3.7 Methods of Data Analysis

Data Analysis was done using the Statistical Package for Social Sciences (SPSS). In analyzing the data univariate, bivariate and multivariate techniques were employed.

Frequency distribution and cross tabulation were made for data cleaning, to check for data consistency and to see the percentage share of background variables. In bivariate analysis, the association of each independent variable, with the dependent variable was examined using chi-square test. In this analysis only the gross (not controlled) effects of the explanatory variables were examined.

In the multivariate analysis, binary logistic regression technique was applied to identify the relative importance of each independent variable by controlling the effect of other variables. The binary logistic regression model was used in the multivariate analysis since the nature of dependent (out come) variable under consideration is dichotomous.

The logistic model to estimate the probability of an event occurring can be written as:

$$P = \frac{e^{Z}}{1+e^{Z}}$$

Where $Z = B_o + B_1 x_1 + B_2 x_2 + \ldots + B_n x_n$ and **Z** is the dependent variable, $\mathbf{x_i s}$ are explanatory variables, $\mathbf{B_i s}$ are logistic coefficients and **e** is the base of the natural logarithm, approximately equal to 2.718. The above equation is equivalent with

$$P/(1-p) = e^{Z} = e^{(B_o + B_1 x_1 + B_2 x_2 + \ldots + B_n x_n)}$$

Where **P** is the probability of having unmet need and $P/(1-p)$ is the odds ratio, the ratio of the probability of having unmet need to the probability of having met need. **e** raised to the power of $\mathbf{B_i}$, **i.e** exp(B), is the odds for a unit change in the i^{th} predictor, the effect of others being controlled. If B is positive, then exp (B) is greater than 1, which means the odds are increased. If B is negative, then exp (B) is less than 1, which means the odds are decreased. When B is zero, then exp (B) is equal to 1, which means the odds are unchanged.

Chapter Four: Results and Discussion

4.1. Background Characteristics of the respondents

4.1.1. Socio-economic characteristics

Table 1 shows the socio-economic characteristics of the respondents. The majority of respondents were rural residents (83%) and Orthodox Christians (93%). Regarding education, 45.1% of women are literate and 54.9% can neither read nor write. Of those who have formal education, 27.9% had primary education, and 9.9% had secondary and above education. Regarding their occupation, the majority of women (81.6%) were house wives. Those respondents employed in government sectors accounts 5.9%. Concerning to exposure to mass media, 40.8% had no exposure to media (Radio & TV). 44.8% of the respondent had the exposure to radio and 12.4% had exposure to both radio and television. (Table 1)

4.1.2. Demographic Characteristics

Table 2 shows the demographic characteristics of the respondents. The proportion of respondents in the early reproductive age (15-24) was 25.3%. The majority of respondents (46.7%) were found in the peak reproductive age (24-34) and those in the late reproductive age (35 and above) accounts 28%. The table also shows that the majority of respondents (75.1%) had experienced first marriage before the age of 18 (minimum age at first marriage). Only 24.9% of women married at the age of 18 and above.

Regarding ideal number of children, the study found that, 85.3% of the respondents wish to have more than 4 children while 14.7% wish to have at most 4 children. Around 54% of women had 3 to 4 living children and 42.2% had more than 4 children. Only 4.3% of the respondent had at most 2 living children. Regarding age at first birth, 71.2% of the respondent gave birth to their first child before the age of 20 while 28.8% of the respondent gave birth to their first child when their age was 20 and above. The average number of children per household was 5. (Table 2)

Table 1. Percentage distribution of the respondents by Socio-economic characteristics, Kobbo woreda, 2009.

Characteristics	No.	%
1. Place of residence		
Urban	120	17.3
Rural	572	82.7
Total	692	100.0
2. Religion		
Orthodox	640	92.5
Muslim	48	6.9
Protestant	4	0.6
Total	692	100.0
3. Education		
Illiterate	380	54.9
Read and Write	50	7.2
Primary	193	27.9
Secondary	46	6.7
Post secondary	23	3.3
Total	692	100.0
4. Occupation		
House wife	565	81.6
Farmer	66	9.5
Merchant	5	0.8
Daily Laborer	15	2.2
Government Employee	41	5.9
Total	692	100.0
5. Ethnicity		
Amhara	678	98
Oromo	2	0.3
Tigre	12	1.7
Total	692	100.0
6. Exposure to mass media (Radio& TV)		
Have no exposure at all	282	40.8
Have exposure to radio	310	44.8
Have exposure to TV	14	2.0
Have exposure to radio & TV	86	12.4
Total	692	100.0

Table 2 Percentage distribution of the respondents by demographic characteristics, Kobbo woreda, 2009.

Characteristics	No.	%
1. Age		
15-24	175	25.3
25-34	323	46.7
35 and above	194	28.0
Total	692	100.0
2. Age at first marriage		
<18	520	75.1
18 and above	172	24.9
Total	692	100.0
3. Age at first birth		
< 20	493	71.2
20 and above	199	28.8
Total	692	100.0
4. Ideal number of children		
0-4	102	14.7
5 and more	590	85.3
Total	692	100.0
5. Number of living children		
0-2	30	4.3
3-4	370	53.5
5 and more	292	42.2
Total	692	100.0

Source: *Field survey, 2009.*

4.1.3 Family planning characteristics

Around 98% of the respondents knew at least one modern method while around 2% of the respondents did not know (heard of) any modern FP methods. Out of 681 women who had heard of at least one method of contraception, the majority (52.6%) of the respondents were heard about FP information from health workers (particularly from health extension workers). Regarding the knowledge of the centers where FP services are available, 97.0% of the respondents knew at least one center and 3.0% did not know any center where FP services are available. In addition, respondents were also asked about the accessibility of the centers as a source of FP methods. Health centers and health posts were the most accessible centers which 78.3% of the respondents reported as the source of the methods. (Table 3)

The study result indicates that 42.3% of the respondents have discussed with their husband about FP issues at least once in the six months prior to the survey. The majority of the respondents (57.7%) have never discussed with their husband on issues concerning FP. Regarding discussion with health workers about FP methods, 52.6% of the respondents have never discussed with health workers while 47.4% of the respondents have discussed with health workers at least once in the last three moths prior to the survey.

Table 3 shows that the majority (93.6%) of respondents have approved the use of FP methods. The study also found that the majority of respondents (61.4%) reported that their husbands have disapproved to use FP. Only 24.3% of the respondents were reported that their husbands have approved to use family planning methods.

Table 3 Percentage distribution of the respondents by knowledge and attitude towards FP, Kobbo woreda, 2009.

Characteristics	No.	%
1 Knowledge of FP methods		
Know at least one modern method	681	98.4
Do not know any modern method	11	1.6
Total	692	100.0
2 Sources of information about FP		
Health workers	358	52.6
Radio	22	3.2
Television (TV)	6	0.9
Friends	130	19.1
Husbands	5	0.7
Schools	4	0.6
Health workers & friends	58	8.5
Health workers and radio	44	6.5
Health workers, radio & TV	54	7.9
Total	681	100.0
3 Knowledge of the centers where FP services available		
Know at least one center	671	97.0
Do not know any center	21	3.0
Total	692	100.0
4 Discussion of FP with husband		
Ever discussed	293	42.3
Never discussed	399	57.7
Total	692	100.0
5 Discussion of FP with health workers		
Ever discussed	328	47.4
Never discussed	364	52.6
Total	692	100.0
6. Respondent's approval of FP		
Approved	648	93.6
Disapproved	44	6.4
Total	692	100.0
7. Husband's approval of FP		
Approval	168	24.3
Disapprove	425	61.4
Do not know	99	14.3
Total	692	100.0

Source: *Field survey, 2009.*

Responses to the question as to whether women who were not using any family planning method intended to use in the future, provide insights in to potential demand for family planning. The study found that, 88.0% of the respondents who were not practicing contraception had the intention to use contraceptive methods at any time in the future. The study also indicates that, 51% of the respondents were ever users of contraceptive methods.

The study also indicates the reasons for not using modern contraception. Those non-users were asked about the reasons that hindered them from using contraceptive methods. The most common reason reported by non-users was fear of side effects (particularly fear of twin births: Most of them were convinced by the rumor that the likelihood of giving twin birth is high for those who were users) (37.3 %). This was followed by husband disapproval to FP (20.5%).). Another principal reason cited were the desire for more children (17.7%), and religious prohibition (7.7%).

The study also indicates the need status of women. 38% of the respondents had met their needs (are currently using contraception), 47.3% of them had unmet need. The total demand for FP and the proportion of total demand satisfied in the study area are 85.3% and 44.6% respectively. Among those who were using contraception, 27.5% of them are using for spacing and 10.5% using for limiting. Among women in the unmet need group, 34.4% of them have an unmet need for spacing and 12.9% have an unmet need for limiting. (Table 4)

Table 4 Percentage distribution of the respondents by intention to use, ever-use, need status, & reason for non use of FP methods, Kobbo woreda, 2009.

Characteristics		No.	%
Intended to use modern FP methods			
	Yes	378	88.0
	No	51	12.0
	Total	429	100.0
Ever use of FP methods			
	Yes	353	51.0
	No	339	49.0
	Total	692	100.0
Met need for FP (Current Use of FP)			
	For spacing	190	27.5
	For limiting	73	10.5
	Total	**263**	**38.0**
Unmet need for FP			3
	For spacing	238	4.4
	For limiting	89	12.9
	Total	**327**	**47.3**
No need for FP		**102**	**14.7**
Reasons for not using FP methods			
	Fear of Side effects	160	37.3
	Lack of knowledge	13	3.0
	Little pregnancy risk	31	7.2
	Husband disapproval	88	20.5
	Religious prohibition	15	7.7
	Breast feeding	46	6.6
	Desire for more children	76	17.7
	Total	429	100.0

***Source**: Field survey, 2009*

4.2 Determinants of Unmet Need for Family Planning

4.2.1 Bi-variate Analysis

The study examines the presence of statistical association between unmet need and each independent variable at ρ value less than 0.05. (See table 5, 6 & 7)

4.2.1.1 Unmet need and Socio-economic characteristics

Unmet need differs by place of residence. As contraceptive use is much higher in urban area compared to rural, unmet need in urban area is lower. The study found that, in urban area, 34.3% of women have unmet need for FP. In contrast, the level of unmet need in rural areas is 60%. The availability of services and better awareness about family planning may have contributed to relatively lower unmet need in urban area. The bi-variate results also showed that place of residence was significantly associated with unmet need ($p<0.05$). (Table 5)

The level of unmet need varies with the educational level of respondents. As shown in table 5, among women with no formal education, 60.2% had unmet need, among those with primary education, 58.6% had unmet need. 25% of women had unmet need among those with secondary or higher education. This differential in level of unmet need may be due to the indirect effect of education on contraceptive use through knowledge of contraceptive methods and awareness to the source of supply. This was further supported by the findings of focus group discussions. Most educated participants were free to discuss and explained their approval of contraceptive use. Regarding knowledge of contraceptive methods, most of them could state the names of various contraceptive methods. In contrast, most uneducated or less educated participants know only pills and injection.

The study result reveals that among women who were working at home (house wife) 62% have unmet need and 47% those who were working out side home have unmet need for family planning. Those working outside home are assumed to be educated, more exposed to the outside world; as a result they can share ideas with others and

have knowledge of modern contraceptive methods. Hence, they are expected to be users of contraception more likely than their counterparts.

Access to mass media may play an important role in couples' decision towards number of children and contraceptive use. The study found that among women who have no exposure to mass media 63.3% have unmet need and among those who have exposure to media 48% have unmet need for FP. (Table 5)

Table 5 Percentage distribution of currently married women who have unmet need for FP by socio-economic characteristics, Kobbo woreda, 2009.

Characteristics	Unmet need				Total	%	χ^2	ρ-value
	Yes	%	No	%				
Place of residence								
Urban	41	34.3	79	65.7	120	100.0	27.19	0.000
Rural	344	60.0	228	40.0	572	100.0		
Level of education								
No schooling	259	60.2	171	39.8	430	100.0	31.25	0.000
Primary	113	58.6	80	41.4	193	100.0		
Secondary	17	25	52	75	69	100.0		
Religion								
Orthodox	355	55.4	285	44.6	640	100.0	0.002	0.241
Others	29	55.8	23	44.1	52	100.0		
Exposure to mass media *(Radio and TV)*								
Have no exposure at all	178	63.3	104	36.7	282	100.0	15.32	0.002
Have exposure	197	48.0	213	52.0	410	100.0		
Occupation								
Working at home	350	62.0	215	38.0	565	100.0	9.22	0.001
Working out side home *(Trade, Gov't employee & other)*	60	47.0	67	53.0	127	100.0		

Source: *Field Survey, 2009.*

4.2.1.2 Unmet need and Demographic characteristics

The study result indicates that unmet need is highest (74.8%) among women in the early reproductive age (15-24). The level of unmet need is higher among those who were found in the late reproductive age (35 and above) than in the peak reproductive age (25-34).

During the focus group discussion, different reasons were given for not using contraceptive methods. Majority of the participants, both in the younger and older women discussion groups raised, side effect of contraceptive and husband opposition as reasons. In the discussion with younger women husband opposition was the most common reason for not using contraceptive methods. Moreover most of them fear the side effects of contraceptives, such as saying "Yameknal" (make women sterile) and "Menta Yasweldal" (followed by twin birth). This fear was shared by several discussants of the two groups (young & old). Older women also perceived that the risk of pregnancy is very low because of their less fecundity status.

Women who married too early are exposed to longer duration of reproductive period and more likely to have larger number of children than those who marry in their late age (PRB, 1992). As a result age at first marriage has the influence on the level of unmet need. As shown in table 6, unmet need decreased as increasing age at first marriage. The level of unmet need was higher (60%) among women who got married before age 18 than among those who got married at age 18 and above. The bi-variate result shows that age at first marriage is significantly associated with unmet need ($\rho<0.001$).

The study result reveals that unmet need decreased as increasing age at first birth. The level of unmet need was higher (82.8%) among women who gave their first birth in the age group less than 20 (Teen mothers) than among those who gave birth in the 20 and above age group (32.9%). The bi-variate result indicates that age at first birth is significantly associated with unmet need ($\rho<0.001$).

In Ethiopia, studies show that number of living children is a decisive factor for a woman to have demand for FP services (Antenane, 2002). As the number of living children increases, women are more likely to be motivated either to space or limit their pregnancy. Table 6 shows that among women, who had at most 2 living children, 40% have unmet need, among those who had 3 to 4 living children, 48.2% have unmet need and among those who had 5 and more children, 61.8% have unmet need for contraception. As shown in the table, the level of unmet need increases with the number of living children. In the bi-variate analysis, number of living children is found to be a strong determinants of unmet need for FP ($\rho<0.001$). (See table 6)

4.2.1.3 Unmet need and Family planning characteristics

The study found that 90.9% of women have unmet need among those who did not know (hear) any method, among those who new at least one method 65.1% have unmet for FP. As shown in table 7, among women who were ever used contraceptive method, only 16.5% have unmet need for family planning. Women who have ever used contraception are less likely to have unmet need. These women are believed to have a better knowledge about various methods and their effectiveness and also where services are provided (Yonas, 2005).

Open and free discussion about the number of children they want to have and use of family planning may encourage women to arrive in decision to use an appropriate contraceptive methods. Respondents were asked about discussion of FP issues with their husband during the six months prior to the survey. The data in table 7 show that among women who did not discussed FP issues with their husband, 76.9% have unmet need, while among women who discussed at least once, 30.7% have unmet need for contraception. The bi-variate result shows that spousal discussion is significantly associated with unmet need ($\rho<0.001$).

The study result indicates that among women who did not discus about FP with health workers, 88.6% have unmet need while among those who discussed with health workers, 27.0% had unmet need for family planning. In the interview with key

informants, they reported that besides providing contraceptive methods, the health extension workers have been teaching the society about advantage of FP, providing counseling regarding side effects and effectiveness of the methods. As a result we have observed that the numbers of user are increasing from time to time.

Concerning the attitude of husbands towards FP, the proportion of women who have unmet need for FP was 76.7% among women whose husband disapproved FP. While the corresponding figures for women whose husband approved FP was found to be 41.1%. (Table 7)

The present study also tries to asses the various reasons for disapproval of contraceptive use. Some of these are fear of side effects, desire for more children, husband's disapproval, and religious prohibition. The focus group discussion which was conducted among males in Kobbo town also revealed that most husbands disapproved the use of contraception. The desire for more children and fear of side effects were their reasons for the disapproval.

Table 6 Percentage distribution of currently married women who have unmet need for FP by demographic characteristics, Kobbo woreda, 2009.

Characteristics	Unmet need				Total	%	χ^2	ρ-value
	Yes	%	No	%				
Age of respondent								
15-24	131	74.8	44	25.2	175	100.0	40.89	0.000
25-34	146	45.2	177	54.8	323	100.0		
35 and above	102	52..4	92	47.6	194	100.0		
Age at first marriage								
<18	312	60%	208	40.0	520	100.0	31.99	0.000
18 and above	43	25.0	129	75.0	172	100.0		
Age at first birth								
<20	408	82.8	85	17.2	493	100.0	56.75	0.002
20 and above	65	32.7	134	67.3	199	100.0		
Ideal number of children								
0-4	61	59.8	41	40.2	102	100.0	2.00	0.123
5 and more	301	51.0	289	49.0	590	100.0		
Number of living children								
0-2	12	40.0	18	60.0	30	100.0	15.05	0.000
3-4	178	48.2	192	51.8	370	100.0		
5 and more	181	61.8	111	38.2	292	100.0		

Source: *Field Survey, 2009*

Table 7 Percentage distribution of currently married women who have unmet need for FP by knowledge and attitudes towards FP methods, Kobbo woreda, 2009.

Knowledge & Attitudes towards FP methods	Unmet need				Total	%	χ^2	ρ-value
	Yes	%	No	%				
Knowledge of FP methods								
Don't know any method	10	90.9.0	1	9.1	11	100.0	116.92	0.000
Know at least one method	443	65.1	238	34.9	681	100.0		
Knowledge of the centers where FP services available								
Don't know any center	19	90.5	2	9.5	21	100.0	64.64	0.000
Know at least one center	416	62.0	255	38.0	671	100.0		
Ever use of modern contraceptive methods								
Never used	275	81.1	64	18.9	339	100.0	290.05	0.000
Used at least one method	58	16.5	295	83.5	353	100.0		
Discussion of FP with husband								
Never discussed	307	76.9	92	23.1	399	100.0	147.68	0.000
Ever discussed	90	30.7	203	69.3	293	100.0		
Discussion of FP with health worker								
Never discussed	322	88.6	42	11.4	364	100.0	269.02	0.000
Ever discussed	89	27.0	239	73.0	328	100.0		
Husband's approval of FP								
Disapproved	129	76.7	39	23.3	168	100.0	108.60	0.000
Approved	175	41.1	250	58.9	425	100.0		
Don't know	87	87.5	12	12.5	99	100.0		

***Source**: Field survey, 2009*

4.2.2 Multi-variate Analysis

At the earlier section of the chapter, the study has tested whether the various types of independent variables were associated with unmet need for FP. As it is shown, all variables except ideal number of children and religion have significant association at 5% and 1% significance level. However, the chi-square test does not consider

confounding effect. A multi-variate statistical analysis was employed to determine independent effects of each predictor variable on unmet need after controlling the effect of other variables.

The multivariate model is presented in Table 8. The model is designed to examine the factors determining unmet need. In the model, the response variable is dichotomized: Women with an unmet need are coded as 1 and all other women as 0. This model uses a binary logistic regression model to estimate the effects of respondent characteristics on unmet need. Results are presented as odds ratios (ORs) with ρ values.

The analysis are made using SPSS 14. The goodness of fit test is performed to the model by using classification table. A classification table shows the number of cases, which are correctly classified and incorrectly classified. A classification table with more than 50% correctly classified cases represents a good model (SPSS Inc, 1990). The result of the study revealed that 88.0% of women who either had met need or no need were correctly classified. Similarly 86.3% of women who had unmet need were classified correctly. Overall, 87.1% of women were classified correctly. This shows that the model can predict more than 85% of the outcomes correctly.

The result of the logistic regression model for socio-economic, demographic and family planning factors are presented in table 8. In the model, as indicated in table 8, four variables were identified as significant variables that had influenced unmet need for FP. The interpretation of the result and possible explanation are discussed as follows.

4.2.2.1 Age at first marriage

Age at first marriage is found to be negatively associated with unmet need. As age at marriage increases the likelihood of having unmet need decreased. Age at first marriage is categorized in two groups: those who married before age 18 (<18) and those who married at age 18 and above. The last group is taken as a reference category. In table 8, the odds ratio, Exp(B)= 2.075 for the first category shows that,

those who married before age 18 were twice more likely to have unmet need than those who have married at age 18 and above.

4.2.2.2 Discussion of FP with husband

Discussion of FP with husband is found to be strongly and negatively associated with unmet need. Discussion with husband about FP in the previous six months is categorized in to two groups: those respondents who have never discussed about FP with their husband and those who discussed at least once in the past six months. The last group (those who have discussed at least once) is taken as a reference category. In table 8, the odds ratio, Exp(B)= 2.737 for those who have never discussed FP with their husband, indicates that women who had never discussed FP issue were 2.737 times more likely to have unmet need than those who have discussed at least once about FP with their husband. The result of the logistic regression supports the result obtained in the previous section of the chapter (Bi-variate Analysis), that confirmed the importance of discussion between couples about FP to reduce unmet need.

4.2.2.3 Discussion of FP with health workers

Discussion of women with health workers about FP is found to be strongly and negatively associated with unmet need. It is categorized in to two groups: those who have never discussed and those who discussed at least once in the three months prior to the survey. The last group is taken as a reference category. The odds ratio, Exp(B)= 7.546 for those who have never discussed indicates that, women who had never discussed with health workers about FP were 7.546 times more likely to have unmet need than those who have discussed at least once with health workers. The finding supports the result obtained in the bi-variate analysis. Moreover, as indicated in the previous section of the chapter, the head of woreda health office reported that contraceptive use has been increasing from time to time in areas where health extension workers are assigned than the time when they were not assigned.

4.2.2.4 Number of living children

Number of living children also emerged as one of the significant demographic variables ($\rho<0.05$). Number of living children is categorized in to two groups: those who have at most 4 children and those who have 5 and more children. The last one is taken as a reference category. In table 8, the odds ratio, Exp(B)= 0.292 shows that women who have at most 4 children were 71% less likely to have unmet need than the reference category (those who have 5 and more children).

Table 8 Results of The multivariate Logistic Regression Analysis on Unmet Need for Family Planning Among Currently Married Women, Kobbo Woreda, 2009.

Independent Variable	N	B	SE	Sig	Exp(B)
Knowledge of FP Methods					
know at least one modern method	681	-0.012	0.311	0.887	0.988
do not know any modern method (RC)	11		-	-	1.000
Discussion about FP with husband					
never discussed	399	1.007	0.324	0.002	2.737
ever discussed (RC)	293		-	-	1.000
Discussion about FP with health workers					
never discussed	364	2.021	0.338	0.000	7.546
ever discussed (RC)	328		-	-	1.000
Respondent's Occupation					
house wife	565	0.702	0.648	0.279	2.017
other (RC)	127		-	-	1.000
Place of Residence					
rural	572	0.503	0.761	0.508	1.654
urban (RC)	120		-	-	1.000
Women education					
Illiterate	430	0.166	0.463	0.719	1.181
Literate (RC)	262		-	-	1.000
Age of women					
15-24	175	-0.020	0.299	0.873	0.980
25-34	323	-0.341	0.371	0.271	0.711
35 and above (RC)	194		-	-	1.000
Age at first marriage					
<18	520	0.730	0.614	0.024	2.075
18 and above (RC)	172		-	-	1.000
Number of living children					
0-4	400	-1.230	0.299	0.001	0.292
5 and more (RC)	292		-	-	1.000

***Source**: Field Survey, 2009*

***Note**: RC-Reference Category*

4.3 Qualitative study result

4.3.1 Key Informants Interview

The key informants were: Head of the woreda health office, two health extension workers, working in health posts of different rural kebeles (Bewa and Abwarie rural kebeles) and one nurse, working in the health center of the woreda.

In the interview with the head of woreda's health office, she reported that family planning is one of the services provided by our health center and health posts. The health center is found in Kobbo town and each rural kebele has its own health posts. Two health extension workers are assigned in each health post. Besides providing contraceptive methods, the health extension workers have been teaching the society about FP, provide counseling regarding the methods. As a result we have observed that the numbers of user are increasing from time to time.

Information obtained from the interview with health extension workers also support the above report. One of the health extension workers in Bewa rural kebele explained that we have a community meeting twice a month. In this meeting, we have been discussing with the community on issues regarding HIV/AIDS, FP and hygiene. Moreover, we have been discussing with mothers at home in person about FP (type of methods, how to use, where to obtain the service), as a result the number of users are increasing from time to time.

Regarding the reasons for not using contraceptives by women who want to postpone or avoid pregnancy as perceived by the key informants include fear of side effects (particularly saying "makes women sterile" and "it causes twin births"), religious prohibition, and husband opposition. Among young women, most of them are using contraceptive with out the knowledge of their husbands by fearing the opposition.

In the interview with the nurse working in the health center, she reported that young women are interested to use contraceptive method. Most of them had come to me three or two days before their marriage ceremony. They asked me to take pills. They explained to me that they had not wanted to have children soon after marriage. Because, they wanted

to wait for at least some time until they are sure about their marriage stability, which is arranged by their parents.

Concerning the supply and demand of family planning methods, all of the key informants reported that the supply and demand is not balanced in health institutions (particularly, health center and health posts). Some constraints were observed between clients and the methods; clients and service providers). Limited range of methods (Pills and Injectables) is available in the health center and health posts.

In the interview with health extension worker, working in the health post in Abwarie rural kebele, regarding the availability of contraceptive methods said that irreversible contraceptive method, Vasectomy, are not available at the health center (found at Kobbo town). Clients who want to get this service should go to Woldia hospital (on average 75 kilometers away from their residence).

4.3.2 Focus group discussions

A total of three focus group discussions were conducted: One FGD with currently married young women (held at Bewa rural kebele), another with currently married old women (held at Gedemeyu rural kebele) and a third with currently married males (held at Kobbo town).

Women in the two focus groups (young and old) were asked about the number of children that they would like to have regardless of the number that already have. A majority of them reported that they would like to have 3 or 4 children, although the average number of living children is 5. Women in both focus groups were able to state why they desired 3 or 4 children. Their responses were the decline in per capita land availability and its productivity, increase cost of living, and the poor quality of life they can provide to their children in terms of education, clothing and food, by their low income. Some of their responses are quoted below.

Children need to be clothed, fed, and educated. From where does one get the money to satisfy all these needs? The fewer the children, one has, the more one can give to each one.

We have to take care of them, which we can not when there are too many children. They have to be educated, fed, married. When they fell sick, we have to take them to health institution. It all costs money. Where does one get money for these?

Now days, schools are built near by and all our children are attending classes. They spent more time at school, so no one would help the family. Moreover, we have no capacity to buy all what they need because of their number.

The question of the ideal interval between children and the need to use some contraceptives to space the children was also discussed with the groups. The FGDs among both young and old women on this issue are quoted as follows.

If one has children quickly, it would be so difficult for the mother. By the time you feed one, the next one would start crying. One would be washing their clothes all the time.

It is better to have the second child when the first one can walk. If the second child is born before the first has grown up, it is very difficult to raise two small babies. We have to feed both of them. Frequent and short interval create burdens and do not allow us to give adequate care for our children.

Women in the two discussion groups were asked about the supply of family planning methods (availability of contraceptive methods). A majority of women in both discussion groups were reported that most FP services are not sufficient. They want to use different

methods. But only few methods are being provided at the woreda's health institutions. The discussions of this issue are quoted below.

In our health post, the supply is only injectables and pills. Permanent methods are not available here and even in the health center.

Women may know or have heard about IUD, but no one has seen or used them. We know about Norplant but one has to go to the hospital or health center to use it. The method should be available here in our health post.

Pills, Depo-provera and condom are the only accessible methods which are provided by health extension workers working in the health post of our kebele. Other methods such as IUD, Norplant are provided in urban areas far away. There is no transportation facility to go and obtain the service at the nearest town.

Communication between husband and wife on issues related to family planning and decision to use contraceptives were point of discussion among women in the different group. During the discussion, majority of the women indicated that there is few or no discussion between husband and wife on planning the number and timing of their children. Particularly young women lack communication with their husbands on matters related to the avoidance of pregnancy. The discussions of this issue are quoted as follows.

We do not at all talk to each other about the number of children we should have or when we should have. One would be too shy to talk such things. In towns, women may be talking but not here in rural area.

I want to use contraception after three children, but my husband did not allow me. Here I am getting pregnant again. I can use contraceptive method only when my husband approve. Husband and wife should decide together on the use of contraceptive methods, but if he can not be convinced, the wife should accept his idea, because he is the head.

Our parent gave us to husband at the age of 15 or less. Now, our husbands want to have a Child soon after marriage. But, we want to wait at least one year. We have a fear that early pregnancy may suffer us at the time of delivery. We are afraid to discuss about contraceptive with my husband.

Majority of women in the focus group discussions indicated that the opinion of their husband mattered.

During the focus group discussions, different reasons were given for not using contraceptive methods. Majority of the participants, both in the younger and older women discussion groups raised fear of side effects, husband opposition, religious prohibition and the desire for more children as the main reasons. The discussions of this issue were quoted below.

We heard a lot about contraceptives side effect and we had fear that the method may expose us to "blood pressure" and " heart attack".

Moreover, most of the old women perceived that the risk of pregnancy is very low because of their less fecundity status. In the discussion with young women the same reason (fear of side effects) is cited for not using contraceptive methods.

We heard about the side effect of contraceptive methods that the likelihood of giving twin birth is high for those who were users of contraception when they desire to give birth.

In addition, contraceptive side effect was stated by males during the discussion for the disapproval of contraceptive methods. One male participant who has five children said that

We discussed and knew more about contraceptive use. But we do not approve it. You see, my wife was using an injection but now she discontinued it. Because her body weight was increasing from time to time and also caused "blood pressure". Having seen her, some of our neighbors also stopped to use it.

The discussion with young women revealed that husband opposition is also among the main reasons for not using contraceptive methods. Focus group discussion with men in kobbo town showed that men's desire more children. The discussions of this issue were quoted below.

I want to have a gap at least two years between my last child and the next one. Now, I have one child who is three years old. But now, I would like to have a new baby very soon. But still my wife could not be conceived to have another baby. Due to this reason we were quarrelling. I was asking her why she could not conceive. Her friends go conceived for the second and third times. I could not understand what happened to her? And what problem she has? She tells me that 'It is God who gives a child. Like you I need a child too.' But I suspected that she might have been using injection.

I am a 33 years old man. Large family is an indicator of power and blessing. In our locality, if a person is killed by somebody, the family who lost the man would take revenge. This situation is locally named "Dem". In this situation, large family is desired to take revenge and to defend the revenge; as a result I want to have many children.

However, some male participants of the discussion wanted to wait at least two years and had also a positive attitude towards contraceptive use.

4.4 Discussion

The study result revealed that 47.3% of currently married women have unmet need for FP, 34.4% for spacing and 12.9% for limiting. 38% were using contraception and 14.7% of currently married women had no need. The level of unmet need was much higher than the average level of unmet need in Sub-Saharan African countries (24 %) (Casterline and Sinding, 2000). It is also observed that the level of unmet need in the study area is higher than the regional (Amhara) and national level of unmet need for FP (30 % and 34% respectively) (CSA and ORC Macro, 2005). This may be due to the fact that in the study area more women want to control their fertility but are not able to act on their intentions due to various reasons.

With high rate of unmet need in the study area, it is important to know why women who want to delay or avoid a future birth are not using contraception. Among currently married women with an unmet need for FP, the most frequently cited reasons for not currently using a method were fear of side effects (37.3%), followed by husband's opposition (20.5%) and religious prohibition (7.7%). The focus group discussions also reveals that husband opposition, fear of side effects and religious prohibition as the main reasons for not using contraceptive methods.

The results yielded by both the bivariate and multivariate logistic regression analysis have underscored the fact that unmet need for FP is high in Kobbo woreda and is affected by different factors. Although socio-demographic factors (religion, place of residence, age and women education) were important in determining unmet need, as shown in the multivariate logistic analysis of the study, most of them were rather insignificant.

Age at first marriage had an influence on the level of unmet need. The study result reveals that the proportion of women with unmet need decreases as age at first marriage increases. About 60% of women among those who married before age 15, and 40% among those who married between the age of 15 and 19 and 25% among those who married after age 19 have unmet need for FP. The study done in a district of eastern region of Nepal by Bhandari and et al., (2006) also disclosed that women with age at

marriage of 15-18 years were 2.3 times more likely to have unmet need than those who married after age 18. Antenane (2002) also found unmet need to be high among women who married early. Early age at first marriage exposes women to begin child bearing too early and to spend more of their reproductive period in marriage. Frequent pregnancy and repeated child births together with domestic activities (fetching water, collecting firewood, preparing meal and caring children) increases the burden on women's day to day activities, which limit their exposure to the outside environment and communication with others.

Discussion of women with husband about FP was found to be significantly associated with unmet need. Women who had never discussed with their husband about FP have higher unmet need than those who have discussed at least once. The survey result reveals that among women who did not discussed FP issues with their husband, 76.9% have unmet need, while among women who discussed at least once, 30.7 have unmet need. The study made in Amhara region by Mekdes (2003) also indicated that among women who had demand for FP, the proportion of women with unmet need is highest (94.7%) for those who had never discussed family planning with their husband, while those who discussed at least once have comparatively lower unmet need (70.6%). Open and free discussion about FP may encourage couples to arrive at decision to use an appropriate contraceptive method.

The finding that husband-wife discussion about family planning significantly affects the level of unmet need is of fundamental importance for future strategies. As highlighted by other researchers (Ahmadi, 2005; Govindasamy et al, 2000; Bhushan, 1997), husband-wife communication on matters pertaining to family planning and reproductive health provides an enabling environment for couples to implement their fertility desires and contraceptive needs.

Discussion of women with health extension workers about FP was found to be strongly associated with unmet need. The result shows an interesting and encouraging outcome. It is also a promising activity for family planning programmer to note that visiting women

in their home is an effective approach to raise contraceptive use. The study result indicates that women who have never discussed with health extension workers about family planning were 7.546 times more likely to have unmet need than those who have discussed at least once. The study done in Amhara region by Nega (2008) also revealed that women who discussed with health extension workers about family planning at least once were 44% less likely to have unmet need for contraception than those who have never discussed family planning with health extension workers When women were visited by health extension worker, they may feel respected, familiar and they become more open to tell their need and their fear to health extension workers.

The focus group discussions in the present study also revealed that the close relationship of health extension workers with the community initiated women to use contraceptive methods. In addition, head of the woreda health office also explained that health service extension program could significantly contribute to raising contraceptive use in the woreda.

Number of living children was found to be one of the factors for a woman to have demand for family planning services. Large number of living children is a factor to encourage women to space or to limit their fertility. The finding showed that number of living children was significantly & positively associated with unmet need. Women who have more living children are more likely to have unmet need than those who have fewer or none. The study done in Iran by Ahmadi (2005) also showed that unmet need increases with the increase in the number of living children. The reason may be that the women do not end up child bearing below 3-4 children, but they start thinking to space or limit after 4 or more children. Similarly, the study made in Nepal also disclosed that women with higher number of living children are more likely to have unmet need (Bhandari et al, 2006).

Chapter Five: Summary, Conclusion and Recommendation

5.1 Summary

In population with high unmet need, maternal and infant morbidity & mortality also tends to be very high. In Ethiopia, the mortality ratio is among the highest in the world (673 per 100,000 live births), infant and under five mortality rates are estimated at 77 and 123 per 1000 live births respectively.

The main objective of the study is to identify the most important socio-economic, demographic and family planning factors that influence unmet need for family planning in Kobbo woreda. The study used both quantitative data and qualitative information. The quantitative data was collected through structured questionnaire. 692 randomly selected married women of reproductive age (15-49) were interviewed. The qualitative information was generated through focus group discussion and interview with key informants.

About 75% of women had experienced first marriage before the age of 18 (<18). Around 25% of women married at the age of 18 and above. Regarding ideal number of children, about 85% of women wish to have more than 4 children and about 15% wish to have at most 4 children. As far as number of living children is concerned, about 42% of women had more than 4 living children, about 54% of women had 3 to 4 living children and only 4% had at most 2 living children. About 71% of women gave birth to their first child before the age of 20.

Regarding knowledge of FP, about 98% of women knew at least one modern method and only 2% did not know any modern method. Concerning source of information about FP, about 53% of women were heard about FP information from health workers. The second source of information mentioned were friends (19%). As far as knowledge of the centers where FP services are available, 97% of women knew at least one center and only 3% did not know any center. Health center and health post were the most accessible sites which about 78% of women stated as a source of FP methods. As far as spousal discussion about FP is concerned, about 42% of women

have discussed at least once in the six months prior to the survey with their husband about FP methods. The majority of women (58%) have never discussed with their husband on issues concerning FP. Regarding discussion with health workers about FP, about 53% of women have never discussed with health workers in the last three months prior to the survey.

About 94% of women have approved the use of FP methods and the rest 6% did not approved the use of FP methods. As far as husband's approval of FP is concerned, about 24% of women were reported that their husbands have approved to use FP method. About 61% of them reported that their husbands have disapproved to use FP and 15% did not know about their husband's feeling towards the use of contraception. A round 88% of women who were not currently practicing contraception had the intension to use contraceptive methods. Around 51% of women were ever user of contraceptive methods.

Regarding the need status of women, 38% of women had met their need (currently using contraceptives) and about 47% of women had unmet need. This unmet need accounts 56% of the total demand for FP. Among those who were using contraception, about 28% of women are using for spacing and 11% are using for limiting. Among women in the unmet need group, about 34% of them have an unmet need for spacing and 13% have an unmet need for limiting. Regarding the reasons for not using FP methods, the most common reasons reported by non users (37%) was fear of side effects. This was followed by husband disapproval, the desire for more children, and religious prohibition, which accounted about 21%, 15% and 8% respectively.

Unmet need declined as educational level of women increases. About 60% with no education, 59% with primary education and 25% with secondary or higher education had unmet need for FP. Unmet need various by place of residence. In urban areas around 34% and in rural areas around 60% of women had unmet need for FP. Unmet need also differs by mass media exposure. Among women who have no exposure to

mass media about 63% have unmet need and among those who have exposure to mass media, about 48% have unmet need for FP.

As far as age of women is concerned, unmet need is highest (about 75%) among women in the early reproductive age (15-24). Regarding age at first marriage, the study result reveals that the proportion of women with unmet need decreases as age at marriage increases. 60% and 25% of women have unmet need for FP among those who got married before age 18 and at age 18 and above respectively. The level of unmet need was higher (about 83%) among women who gave birth in the age group less than 20 than among those who gave birth in the 20 and above age group (about 33%). Concerning the number of living children, the level of unmet need increases with the number of living children. Among women who had at most 2 living children, 40% have unmet need, among those who had 3 to 4 children, about 48% have unmet need and among those who had more than 4 children, about 62% have unmet need for FP.

Among those who knew at least one method about 65% and among those who did not know any method about 91% have unmet need for FP. Concerning discussion with husband, among women who did not discussed FP issues with their husband, around 77% have unmet need, while among women who discussed at least once, about 31% have unmet need for FP. As far as discussion with health workers is concerned, among women who did not discussed about FP with health workers, about 89% have unmet need and among those who discussed with health workers, 27% had unmet need for FP.

In the bi-variate analysis, chi-square test was employed to see the association between each independent variable under study and unmet need for FP. The result of the bi-variate analysis showed that all the independent variables are significantly associated with unmet need except ideal number of children and religion. Ideal number of children and religion were found to have no association with unmet need.

In order to investigate the relative effect of each independent variable on unmet need logistic regression analysis was employed. The analysis identified some variables as determinants of unmet need. These are: Age at first marriage, number of living children, spousal discussion and discussion with health workers about FP.

5.2 Conclusion

The study set out to estimate the level of unmet need and to determine the significant factors affecting women's unmet need in Kobbo woreda, with particular focus on the extent to which socio-cultural, demographic and family planning factors exert independent influence on contraceptive use. The study has shown that:

- The level of unmet need for family planning among currently married women of reproductive age in Kobbo woreda was 47.3%
- Contraceptive prevalence in the study area was 38%
- The study identified the following as determinants of unmet need for FP: Age at first marriage, number of living children, spousal discussion and discussion with health workers about FP.
- The major reasons for not using FP methods among women with unmet need were fear of side effects, husband disapproval, religious opposition and lack of wide range of methods (particularly in rural areas).
- The study have confirmed the validity of all the hypothesis except the first one, that is unmet need for FP is negatively associated with women's level of education

5.3 Recommendations

Based on the conclusion of the study, recommendations are given as follows:

- The need for intensive effort to the expansion of FP services in to the place where clinic-based services are inadequate. Through discussion, health workers can assist women by providing information about the importance and side effects of contraceptive, when and how to use. This enables women to have choice of an appropriate method and changing of the negative attitudes

on the contraceptive methods. As a result house to house services can make dramatic changes in knowledge and practice of contraceptive use.

- Efforts should be made that family planning programs should include IEC scheme that can promote discussion between couples since it enhances couples understanding of each other attitude towards family planning and hence raise contraceptive use. It can also avoid the major impediments for not using contraceptives among women with unmet need such as side effects, husband disapproval and religious prohibition.
- Effort should be made to raise age at first marriage, particularly in rural areas where early marriage is still common. Hence women can get the opportunity to go to school and to reduce health risks due to early pregnancy. So, legal age at marriage should be strictly implemented.
- Efforts should be made in improving women's status through improving their access to education, particularly in rural areas where female school enrollment is low and school drop out is high.

Generally, since the highest level of unmet need is observed for women with less frequent discussion with health workers and husbands, large number of living children and early age at first marriage, family planning programs need to target these women in order to reduce unmet need for FP.

Further similar study in other areas in the region is required to have a full picture on determinants of unmet need for family planning.

References

Ahmadi, A. (2005). Unmet Need for Family Planning in Iran, XXV IUSSP International Population Conference, Tours, France, July 2005

Amhara Regional State Bureau of Finance and Economic Development (ARSBFED)(2004). Woreda and Zonal Population Projection in Single and Five Year Age Group in Amhara Region, Bahir Dar.

Antenane, Korra (2002). Reproductive Health Knowledge, Attitude and Practice: A Base Line Survey Report in Debremarkos Town, Addis Ababa.

Ashford, L. (2003). The unmet need for family planning: Recent Trends and Their Implications for program. Population Reference Bureau, Washington DC, USA.

Assefa Hailemariam, Tekleab Mekbib and Misganaw Fantahun (2006). "Family Planning in Ethiopia" In Epidemiology and Ecology of Health and Disease in Ethiopia. Yemane B., Damene H. and Kloos H. (eds.) Addis Ababa Shama Books.

Bhandari, G.P. and et al., (2006). Prevalence and determinants of unmet need for family planning in a district of eastern region of Nepal. Kathmandu University Medical Journal 2006, Vol. 4, No. 2, issue 14, 203-210

Bhushan, I. (1997). Understanding unmet need, Johns Hopkins School of Public Health, Center for Communication Programs, Working Paper No. 4, November 1997.

Bongaarts, J. (1991). The KAP-GAP and the Unmet Need for Contraception: Population and Development Review, Vol. 17, No. 2, PP. 293-313

Bongaarts, J. and J. Bruce (1995). The causes of Unmet Need for Contraception and the Social content of services. Studies in Family Planning, Vol.26, No.2, PP.57-75

Casterline J.B. and S.W. Sinding (2000). Unmet Need for Family Planning in Developing Countries and Implications for Population Policy, Population and Development Review, Vol. 26, No. 4, PP. 691-723

Casterline J.B., Perez E.A., and Biddlecom E.A. (1997). Factors Underlying Unmet Need for Family Planning in the Philippines. Studies in Family Planning, Vol.28, No.3, PP. 173-191.

Central Statistical Agency (2008). Summary and Statistical Report of the 2007 Population and Housing Census, Federal Democratic Republic of Ethiopia Population Census Commission, December 2008, Addis Ababa.

Central Statistical Authority (CSA) (1993). The 1990 National Family and Fertility Survey Report, Addis Ababa

Chaudhury, R.H. (2001). Unmet Need for Contraception in South Asia: Levels, Trends and Determinants. Asia-Pacific Population Journal, Sep. 2001.

CSA and ORC Macro (2001). Ethiopian Demographic and Health Survey 2000. Addis Ababa, Ethiopia and Calverton, Maryland, USA: Central Statistical Agency and ORC Macro.

CSA and ORC Macro (2006). Ethiopian Demographic and Health Survey 2005. Addis Ababa, Ethiopia and Calverton, Maryland, USA: Central Statistical Agency and ORC Macro.

Devi, D.R., S.R. Rastogi and R.D. Retherford (1996). Unmet Need for Family Planning in Uttar Pradesh, India. National Health Survey Subject Report No.1. International Institute for Population science, Mumbai May, 1996.

Govindasamy, P. and E. Boadi (2000). A Decade of Unmet Need for Contraception in Ghana. Macro International Inc. Calverton, Maryland, USA

Kaushik, S. (1999). Unmet Need for Family Planning: A Comparative Analysis of Northern and Southern States of India Based on NFHS data. Millennium Conference on Population, Development and Environment Nexus.

Korra, A. (2002). Attitudes towards family planning, and reasons for non use among women with unmet need for family planning in Ethiopia. Calverton, Maryland, USA: ORC Macro.

Mekdes Getaneh (2003). Factors Associated with unmet need for family planning in Amhara Region, Ethiopia, MSC. Thesis presented to the school of Graduate Studies of Addis Ababa University, Ethiopia. (Unpublished)

Murry, C. andf A. Lopez (1998). Health Dimensions of Sex and Reproduction. Vol. 3, Global Burden of Disease. Bolton: Harvard University Press, 1998, PP. 280.

Nega Mihret (2008). Determinants of Unmet Need for Contraception Among Currently Married Couples in West Belesa Woreda, North Gondar, Amhara Region, MSC. Thesis presented to the school of Graduate Studies of Addis Ababa University, Ethiopia. (Unpublished)

Pasha, O., F. Fikree and S. Vermund (2001). Determinants of Unmet Need for Family Planning in Squatter Settlements in Karachi Pakistan. Asia-Pacific Population Journal, June 2001.

Population Report (1996). Meeting Unmet Need: New Strategies, series J, No. 43.

Ross, J.A. and W.L. Winfrey (2002). Unmet Need for Contraception in the Developing World and the Former Soviet Union: An Updated Estimates. International Family Planning Perspectives, Vol. 28, No. 3, PP. 138-143.

United Nations (2007). World Population Prospects: The 2006 Revision. Department of Economic and Social Affairs, Population Division. New York: United Nations.

USAID Health Policy Initiative (2006). Achieving The MDG: The contribution of family planning: Uganda, Washimngton, District of Colombia, USA: Constella Futures.

Westoff, C.F. and Bankole, A. (1995). Childbearing Attitudes and Intentions: Demographic and Health Surveys Comparative Studies No. 17, Maryland, Macro International Inc.

Westoff, C.F. and Bankole, A. (2000). Trends in the Demand for Family Planning Limitation in Developing Countries. International Family Planning Perspectives. Vol. 26, No. 2.

Westoff, C.F. (2006). New Estimates of Unmet Need and the Demand for Family Planning. DHS Comparative Reports No. 14. Calverton, Maryland, USA. Macro International Inc.

Woodward, M. (1992). Formulae for Sample Size, Power and Minimum Detectable Relative Risk in Medical Studies. The Statistician, Vol.41, No.2, PP.185-196.

Yonas Abesha (2005). Correlates of Contraceptive use among currently married women in Assosa town of Benshangul Gumuz Regional State, Ethiopia, MSC. Thesis presented to the school of Graduate Studies of Addis Ababa University, Ethiopia. (Unpublished)

Annex

A questionnaire prepared to collect data from currently married women about unmet need for family planning in Kobbo woreda.

Part-One: *Demographic and Socio-Economic characteristics of the respondent*

Sr. No.	Question	Choice of answer	Skip to question…
101	How old are you (at your last birth day)	_____ years (in complete years)	
102	What is your religion	1. Orthodox 2. Islam 3. Protestant 4. Catholic 5. Other (specify)_____	
103	Can you read and write	1. Yes 2. No	If "No", Skip to question 106
104	Have you attend any formal education	1. Yes 2. No	If "No", Skip to question 106
105	What is the highest grade you have completed	1. 1-8 grade 2. 9-12 grade 3. 12 and above	
106	Do you have any job	3. Yes 4. No	If "No", Skip to question 108
107	What type of occupation you are currently engaged in	1. House wife 2. Farmer 3. Merchant 4. Daily laborer 5. House maid 6. government employee 7. Other (specify)_____	
108	What is your monthly income	1. _____ birr 2. I don't know exactly	

210	How old were you when your first child was born?	1. _____ years 2. I do not know exactly	
211	If you could go back to the time you did not have children and could choose of children to have in your whole life, how many could that be?	1._____ 2. I did not decide	
212	Are you pregnant now?	1. yes 2. no 3. I am not sure	If "No" or "I am not sure", Skip to question 217
213	How much longer have you waited between the previous birth and present pregnancy?	____ months	
214	Is the pregnancy wanted now, wanted later or not wanted at all?	1. wanted now 2. wanted later 3. not wanted at all	
215	After the child you are expecting now, would you like to have another child or not to have any more children?	1. have a child 2. have no more children 3. not yet decided	If "have no more children" or " not yet decided", Skip to question 222
216	How long would you like to wait before the birth of another child?	1. with in two years 2. after two years 3. not yet decided	Skip to question 222
217	How much longer have you waited between the last and the previous birth?	_____ months	
218	How much longer have you waited since the last birth?	_____ months	
219	At the time of you become pregnant, did you want to become pregnant then, wait until later or not want to have any more children at all?	1. wanted then 2. wanted later 3. not wanted at all	If "not wanted at all", Skip to question 222
220	Do you want to have another child or not to have any more children at all?	1. have a child 2. have no more children 3. not yet decided	If "have no more children" or "not yet decided", Skip to question 222

221	How long would you like to wait before the birth of another?	1. with in two years 2. after two years 3. not yet decided		
222	Have you ever had a pregnancy that was aborted (induced abortion)?	1. yes 2. no	If "No", Skip to question 225	
223	How many times did you perform it?	_____ (enter number)		
224	Trough what way the induced abortion was ended up?	1. medical personnel 2. traditional methods 3. other (specify) _____		
225	Would you intended to use modern contraceptive methods?	1. yes 2. no 3. not yet decided	If "No", or "not yet decided", Skip to question 227	
226	Which method would you like to use?	1. pills 2. implant /Norplant/ 3. injectable 4. IUD 5. condom 6. female sterilization 7. male sterilization 8. natural methods (abstinence, withdrawal) 9. other	Yes	No

			Yes	No
227	What are the major reasons that made you not to use modern contraceptive methods to avoid the pregnancy from happening?	1. fear of side effects 2. health concerns 3. not aware of contraceptive 4. no preferred method 5. little pregnancy risk 6. husband disapproval 7. Dissatisfaction of the method 8. cost of method 9. infrequent sex 10. religious prohibition 11. breast feeding 12. familial opposition 13. death of children 14. distance from the source 15. Desire for more children		

Part-Three: *Knowledge about family planning*

Sr. No.	Question	Choice of answer	Skip to question…	
301	Have you ever heard of family planning methods that women or men can use to avoid pregnancy?	1 yes 2. no	If "No", Skip to question 307	
			Yes	No
302	Which of the following methods do you know about?	1. pills 2. implant /Norplant/ 3. injectable 4. IUD 5. condom 6. female sterilization 7. male sterilization 8. natural methods (abstinence, withdrawal) 9. other		

310	What comm exten

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Sr. No.	Ques
501	Have meth

303	What is your source of information about family planning?	1. health extension workers 2. radio 3. TV 4. news papers 5. friends 6. husband 7. school 8. other (specify) _____	Yes	No
304	Do you know the place where modern contraceptive methods could be obtained?	1. yes 2. no	If "No", Skip to question 306	
305	If you know where the methods are obtained, where is the main place that you or others are able to get modern contraceptive?	1. hospital 2. health center 3. health post 4. shop 5. Pharmacy/drug vendor	Yes	No
306	Which advantage of contraceptive methods do you know?	1. avoid unwanted pregnancy 2. regulation of period 3. to limit family size 4. to prevent STI 5. other (specify) _____	Yes	No
307	Do you approve or disapprove of women who contact with the health extension workers?	1. approve 2. disapprove		
308	Have you ever contacted and discussed about contraception with the health extension workers with in the last three months?	1. yes 2. no	If "No", Skip to question 310	
309	If you have contacted, how many times did you contact them in a month in person?	1. once 2. twice 3. more than twice		

502	How many living children did you have at the you started to use the methods	1. son _____ 2. daughter _____ 3. total _____	Skip to question 511, if pregnant or amenorrheic	
503	Are you currently using modern family planning methods?	1. yes 2. no	If "No", Skip to question 511	
504	Which method are you using now?	1. pill 2. implant (Norplant) 3. injectable 4. IUD 5. condom 6. female sterilization 7. male sterilization 8. natural method 9. other (specify) _____	Yes	No
505	For what purpose are you using the methods	1. for spacing 2. for limiting		
506	What is the availability of method if you want to change other methods from the source you belong to?	1. easily available 2. not easily available 3. don't know		
507	What are the major problems (side effects) associated with the method you are using?	_____ _____		
508	Would you say that using contraception is mainly your decision or your husband's decision or did you both decide together?	1. mainly it is my decision 2. mainly it is my husband's decision 3. it is joint decision 4. other		
509	How long would it take to reach to the source of family planning methods?	1. _____ hours 2. I do not know		

510	How costly the method is?	1. cheap 2. reasonable 3. expensive 4. do not know	
511	Do you need the approval of your husband to begin contraceptive?	1. yes 2. no	

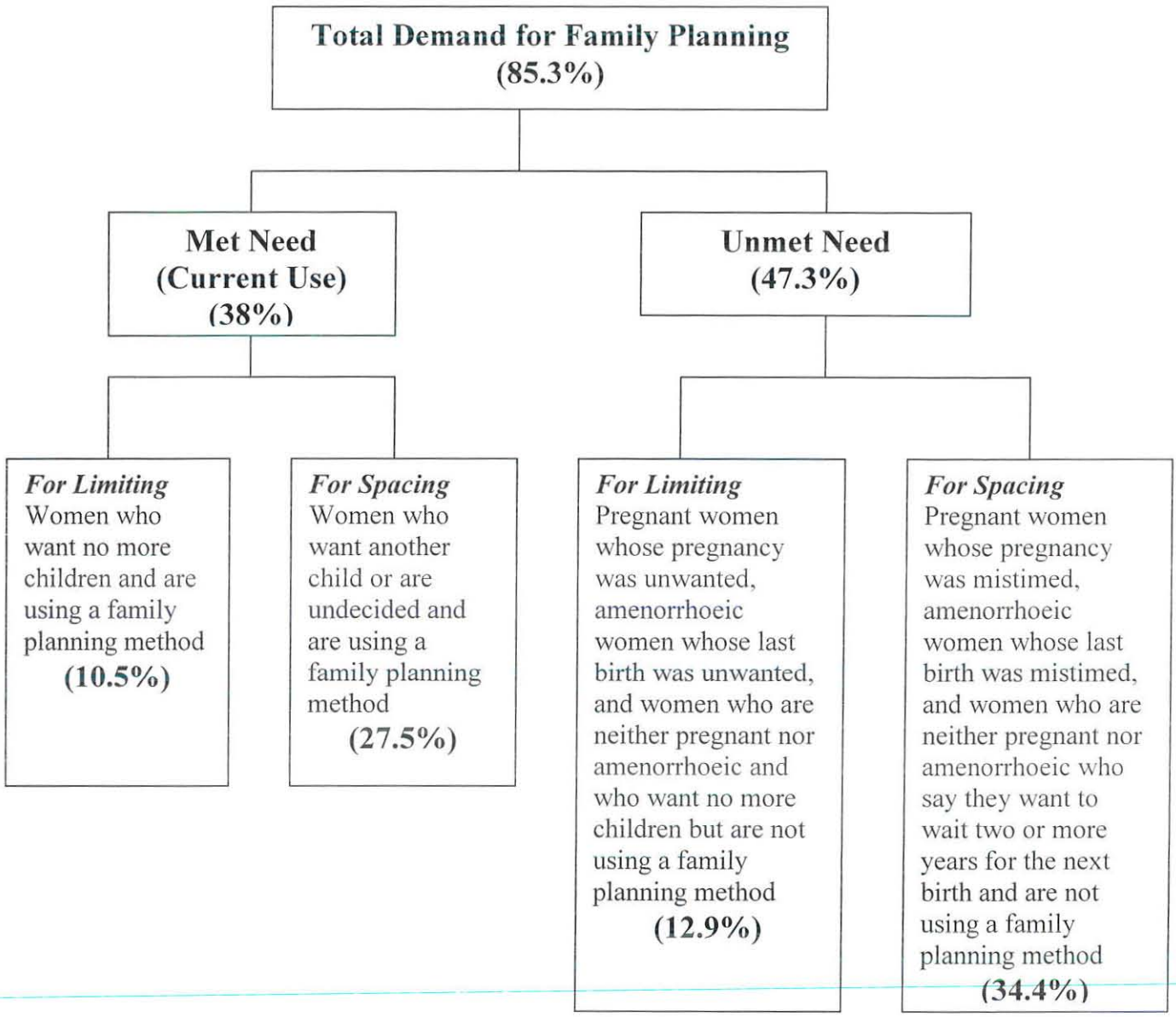
Part Six: Questions for the focus group discussions

1. What do you know about family planning methods?
2. What do you think about the advantage and disadvantage of using any family planning methods?
3. What about the supply of the methods?
4. What is your ideal interval between children?
5. Some couples have more number of children than they ever wanted. What could be the reason do you think?
6. What is the advantage of having few numbers of children through out one's life?
7. What is the attitude of husbands towards family planning? What about the communication between husband and wife on issues related to FP and decision to use contraceptives?

Part seven: Questions for the interview with key informants

1. What are the types of contraceptive methods provided in your center?
2. What do you think is better to increase contraceptive use in your locality?
3. What are the most common challenges that women face or experienced in using family planning at home or outside of home? What measures should be taken?
4. Why women do have more children in your locality?
5. What are the major reasons for the discontinuation of contraceptive method?
6. Do you have some evidences about the side effects of contraceptive use?
7. Do you have any additional comments or measures to say for improving family planning in general?

Figure 3. Classification of the need for family planning: Kobbo Woreda



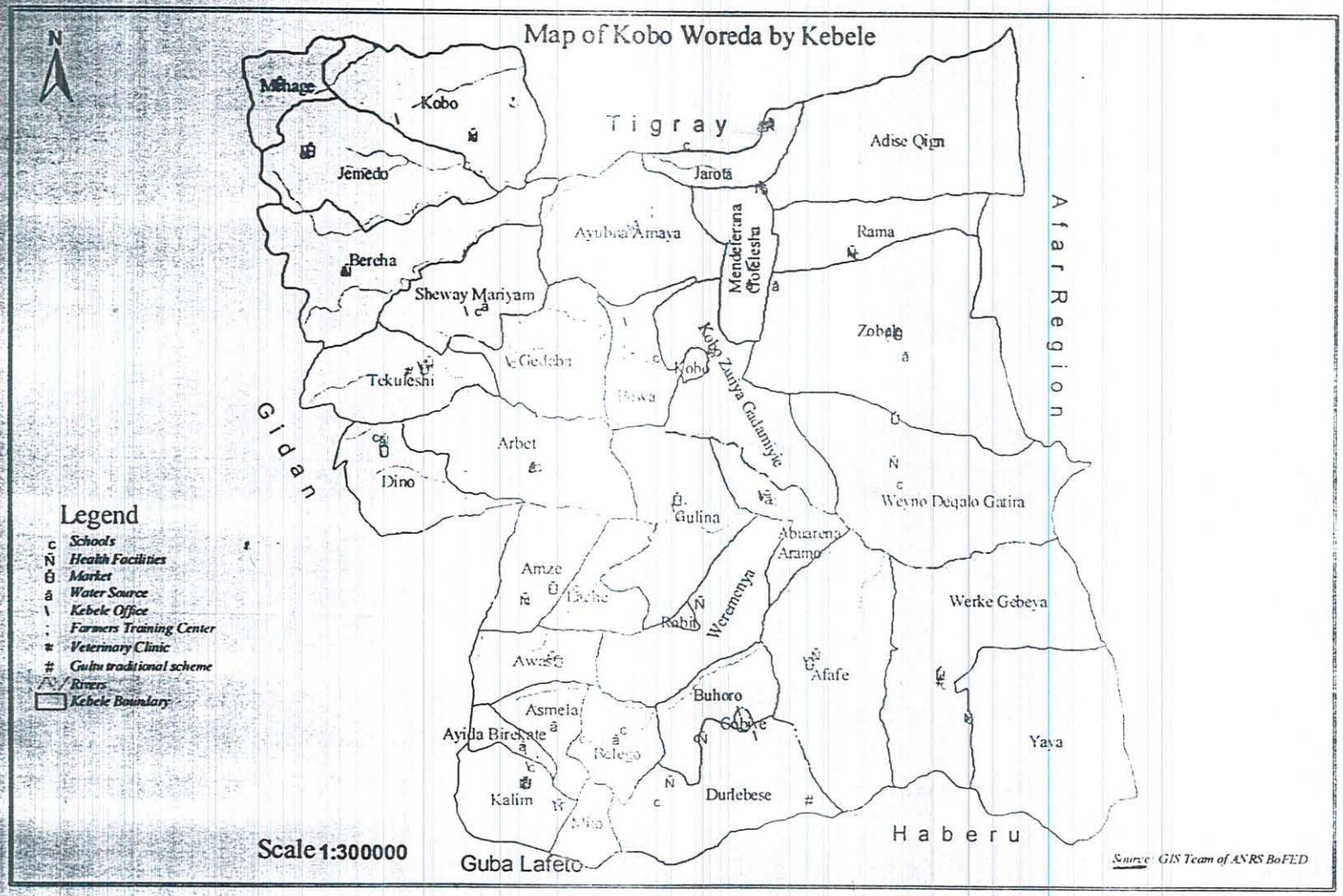


Figure 4: Map of Kobo Woreda

Declaration

The thesis is my original work, has not been presented for a degree in any other university and that all sources of material used for the thesis have been dully acknowledge.

Getahun Molla		June 30, 2009
Student	**Signature**	**Date**

I confirm that this thesis has been submitted with my approval as the supervisor of the same.

Habtamu Belete		30/06/09
Advisor	**Signature**	**Date**