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THE DETERMINANTS OF POST-PARTUM CONTRACEPTIVE USE AMONG CURRENTLY MARRIED WOMEN IN AWASSA TOWN (SOUTHERN ETHIOPIA)

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The Determinants of Post-Partum Contraceptive Use among Currently Married Women in Awassa Town (Southern Ethiopia)

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DEDICATION

This thesis is dedicated to my wife Woizero Genet Abebe and my mother Woizero Tirunesh Haile Georgise for their concern, support encouragement and throughout my career.

Kassahun Shiferaw

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LIST OF ACRONYMS

AAU	Addis Ababa University
BOPED	Bureau of Planning and Economic Development
CBD	Community Based Distribution
CEB	Children Ever Born
CSA	Central Statistical Authority
DK	Do not Know
DTRC	Demographic Training and Research Center
FGAE	Family Guidance Association of Ethiopia
FGDs	Focus Group Discussions
FGM	Female Genital Mutilation
FP	Family Planning
ICPD	International Conference on Population and Development
IEC	Information Education and Communication
IMR	Infant Mortality Rate
MCEB	Mean Children Ever Born
MCH	Maternal and Child Health
MOH	Ministry of Health
NFFS	National Family and Fertility Survey
NGO	Non- Governmental Organization
NOP	National Office of Population
PRB	Population Reference Bureau
PSI	Population Service International
RH	Reproductive Health
SNNPR	Southern Nations, Nationalities and Peoples' Region.
CFS	Community and Family Survey
TFR	Total Fertility Rate
STDs	Sexually Transmitted Diseases
UN	United Nations
UNFPA	United Nations Fund for Population Activities
WHO	World Health Organization
UNICEF	United Nations Children's Fund

ABSTRACT

This study is an attempt to explore and learn about the postpartum contraceptive behavior of women and to identify the determinants of postpartum contraceptive use in Awassa town, the Capital of Southern Nations, Nationalities, and Peoples' Region (SNNPR).

The methods used to collect data include a cross-sectional survey, focus group discussion and informal interview with service providers. In the survey, a complete interview was administered to a total of 1142 randomly sampled currently married, non- pregnant postpartum women who gave live births within the 24 months preceding the Survey. Six focus group discussion sessions, involving 42 eligible women, and informal interview with representatives three major service providing institutions in the study area, namely: the Awassa Health Center, FGAE and Marie Stopes International Family Health Clinics, were conducted to generate the qualitative data for the Study. Descriptive, bivariate and multivariate analytical techniques were employed to analyze the data.

Results of the study show that of all respondents 52.7 percent were currently using contraceptive methods. 73.3 percent of the current users initiated contraception for spacing births. Among all non-contraceptive users 73 percent intended to use modern contraceptives in the future. Further, of all respondents 27.1 percent wanted no more children and 48.3 percent desired to space their next births by at least two years. However, 13.6 percent the respondents are exposed to the risk of unwanted pregnancy. Obtaining adequate FP-information is a major felt need of the studied women.

The popular reasons for non- use of contraceptives among women exposed to the risk of pregnancy were health concern or fear of side effects of contraceptives and current breast-feeding status.

The multivariate result shows that postpartum contraceptive use is strongly related with women's post-partum amenorrhea status, age, husband's attitude and obtaining family planning information during child immunization.

The study recommends the need to devise adequate postpartum strategies to effectively address postpartum women needs for FP- education, counseling and other contraceptive services. It is also recommended that lactational amenorrhea method (LAM) be integrated in the package of postpartum reproductive health services. Finally, the study suggests the need to encourage men to attend during antenatal and postnatal counseling sessions in order to enhance their perception of benefits of- FP and to enable them support family planning needs of their wives.

CHAPTER 1. INTRODUCTION

1.1. BACKGROUND OF THE STUDY

Improving maternal health situation has become a major concern of the world community as demonstrated in the International Conference on Population and Development (ICPD) Program of Action and the recommendations of the Fourth World Conference on Women (FWCW) in Beijing (UN, 1994, FCI, 1995). In the ICPD program of Action countries are required to reduce maternal mortality and morbidity by one half of the 1990 level by the year 2000, and further by one half by 2015. In addition, the ICPD program of action calls for attaining universal access to family planning services by 2015 through meeting the family planning needs of people with a particular attention to the most vulnerable and under served groups in the population (UN, 1994).

Family planning (FP) is one of the major components of reproductive health care, which is essential to promote the health of women, children and families. Family planning provides women the opportunity to plan their births freely and reasonably. It helps them to decide on the interval, the number of children they would like to have, when to begin and when to stop having children which is significant to the health benefits of their own, their children and families. In this way, family planning helps women to prevent unwanted and high-risk pregnancies, which endanger their health and the health of their children. It thus, gives them the opportunity for education, gainful employment and self-development.

On the other hand, unregulated fertility such as closely spaced births may severely threaten mothers' health. For instance, closely spaced pregnancies may prevent a mother

from rebuilding depleted nutritional stores and regaining strength before the next pregnancy begins. Because of these, mothers with closely spaced births are weak, depleted and extremely vulnerable to disease. In addition, closely spaced pregnancies may cause poor intrauterine growth and high risk of pre-term birth or low birth weight (McCann et al., 1981; UNFPA, 1993; Ross A. et al., 1993).

Apart from its effect on mothers' health, close spacing of births has impact on the health of children. When a mother becomes pregnant soon after a child is born, she is likely to wean the child soon or stop breast-feeding (McCann et al., 1981). This early termination of breast- feeding deprives the child from having adequate nutrients from the mother and therefore increases a child's exposure to infectious diseases and risk of malnutrition. Further, studies have shown that if children are born less than two years apart, the infant mortality rate could be double that of children born after an interval of more than two years (AcSadi F. T et al., 1990; Hobcraft, 1991 in Ross A. et. al., 1993 Short, 1992).

Therefore, to use family planning more effectively for the improvement of the health and welfare of mothers and their families it has to reach the needy women who are most fecund and at risk of conception. In this respect, women after childbirth, hereafter referred to as " ***postpartum women***", are the most fecund who can conceive quickly again, if they have no effective means of protection to prevent unwanted pregnancies.

Contraception is an essential means to prevent risk of unwanted pregnancy for postpartum women who may not desire other pregnancies or want to delay their next pregnancies. Hence, postpartum women at risk of unwanted pregnancy are women that

family planning programs should reach. Thus, meeting the needs of postpartum women for family planning services is critically important in order to prevent future unplanned pregnancies and unsafe abortions which jeopardize the health of mothers and their children (Ross A. et al, 1993; FHI, 1997).

Besides its health benefits, meeting the contraceptive service needs of postpartum women provides demographic advantages, as contraception is the most important determinant of fertility (Mosely et al., 1982; Bongaarts and Potter, 1983).

Therefore, exploring the postpartum contraceptive behavior of women and understanding the determinants of postpartum contraceptive use would have health and demographic importance.

1.2. Statement of the Problem

In Ethiopia, the Maternal Mortality Rate is estimated at 560-850 per 100,000 live births (MOH, 1998), which is among the highest in the World. The major factor that underlies many unwanted pregnancies and illegal abortions is mainly lack of family planning practice (MOH, 1995; Woods, 1997).

Illegal abortion is one of the major causes of maternal deaths in Ethiopia (Ogba Selassie G., 1997; Woods, 1997). More than half of pregnancy related deaths are the outcome of complications of illegal abortions (Kwast, 1986; MOH, 1995a; Walkulcho, 1994 cited in Woods M., 1997). A survey on illegal abortion in Addis Ababa had revealed that 52.2 percent of maternal deaths observed within a period of six months in five hospitals were

due to complications following induced abortions. A number of studies done in this connection have indicated that poor access to family planning services was a major reason which often caused women to resort to illegal abortions (Haile, 1992; Kwast, 1986;Tadesse 1996; cited in Woods, 1997). Further, a study conducted in northern part of Ethiopia has found out 40 percent of urban pregnancies and 36 percent of rural pregnancies to be unwanted or mistimed (Haile, 1992 cited in Woods, 1997).

The 1997 Southern Nations, Nationalities and People's Region Community and Family Survey (SNNPR-CFS) has also indicated prevalence of a large proportion of high risk and more closely spaced births in the region. About 41 percent of all births in the region and 50 percent of births in urban areas in the six years preceding the survey occurred at a very short birth interval of two years or less. As some studies indicated this is the result of the gradual decline of the traditional prolonged breastfeeding practices and postpartum sexual abstinence due to effects of increasing urbanization and education (Acsadi F. T. et al., 1990; Yeshewamebrat, 1995; Shah, 1994 cited in Woods M., 1997; DTRC, 1998). Hence, the 1997 SNNPR-CFS finding is an indicative of how a large proportion of postpartum women in the SNNPR in general and in urban areas in particular are exposed to high-risk closely spaced births.

In Ethiopia, infant and child mortality rates are estimated at 116 per 1000 live births and 171 child deaths per 1000, respectively (CSA, 1998). The total fertility rate (TFR) was estimated at 6.74 children per woman in 1994 (CSA, 1998). This level of fertility is also very high as compared to several other countries. Generally, the high Infant Mortality Rate (IMR) and TFR may imply high fertility behavior prevailing in the country.

Perhaps, this partly may attribute to the prevailing high-unmet need for family planning services. A number of studies have found out that there is high unmet need for family planning services in Ethiopia (Daniel Sahle, 1995; Tekabe A. et al., 1995; Dilnesaw A., 1995; DTRC, 1998).

Primarily, the disparity between the Contraceptive Prevalence Rate (CPR) and knowledge about contraception may demonstrate the unmet need. The Family and Fertility Survey (FFS) in 1990 has revealed a very high level of knowledge of contraceptives (62 percent) and very low CPR (only 4.3 percent) for currently married women in the reproductive age (CSA, 1991). The 1995 Fertility survey of urban Addis Ababa has found 98.6 percent knowledge of contraceptive method and 41.6 percent CPR among currently married women. This study has also found out 6.3 percent of unmet need for limiting births among fecund, non-pregnant, non-amenorrheic and currently married women (CSA, 1997).

Similarly, the SNNPR-CFS in 1997 has found 85.3 percent knowledge of contraceptives, and 23.9 percent level of CPR for women living in urban areas (DTRC, 1998). The SNNPR-CFS has also showed a total unmet need of 40 percent (10.5 % for limiting and 29.5% for spacing) for five zones in the region and 43.9 percent (24.8% for limiting and 19.1 % for spacing) for urban areas in these zones.

Overall, all available evidences on prevalence of unsafe abortions, high unintended pregnancies, closely spaced births coupled with a high unmet need for family planning services suggest that a substantial proportion of fecund women in Ethiopia are under

served and still at high risk of unwanted conception and related complications (or mortality) due to unmet need for family planning services. Thus, to respond effectively to these needs, that is, in order to identify the segments of the reproductive population in which these needs exist so that ultimately a well targeted interventions could be carried out in the future, a clear understanding of the contraceptive behavior and needs of the behaviorally different sub-groups of the potential users of the family planning services in the reproductive age population (15-49 years) is critically important.

In this context, when we consider postpartum women within two years after last live births, they constitute a substantial proportion of the reproductive age population (Thapa et al., 1992). They are also the very fertile segment of the childbearing population who have recently demonstrated their fertility potential. Postpartum women who may think that breast-feeding provides protection against pregnancy or traditionally believe that it is unlikely to conceive during breast feeding may become pregnant soon after birth without realizing that they are fecund. Therefore contraception is an essential means to prevent risk of unwanted pregnancy for postpartum women who may not desire other pregnancies or want to delay their next pregnancies.

Hence, understanding the contraceptive practice, needs and attitudes of postpartum women is inescapable task if unmet need is to be addressed, and thus to avert health risks associated with poorly spaced births or unwanted pregnancies and to attain reduction in the fertility rate in Ethiopia.

Nonetheless, to the investigator's knowledge, to date no research has been conducted in Ethiopia on contraceptive behavior and needs of postpartum women. Therefore, this study is an attempt to explore and learn about the postpartum contraceptive behavior and to identify the determinants of postpartum contraceptive use.

In terms of contraceptive behavior, the study will assess the contraceptive prevalence, when women initiate use and what methods they use in the postpartum period. The study will also attempt to look into the association between the women's socio-demographic characteristics and their contraceptive use. Finally, the study will attempt to identify the most important determinants of postpartum contraceptive use among the study population. In this context, the objectives of the study are the following:

1.3. Objectives

1.3.1. General Objective

The main objective of the study is to examine postpartum contraceptive behaviour and to identify the determinants of postpartum contraceptive use among eligible women in Awassa town.

1.3.2. Specific Objectives:

1. To determine prevalence of contraceptive use among the postpartum women
2. To assess the unmet need for postpartum family planning services
3. To identify the determinants of postpartum contraceptive use
4. To draw policy and program implications of the research findings

1.4. Hypotheses

1. Postpartum amenorrhea status strongly influences the postpartum contraceptive use
2. Mother's education positively influences postpartum contraception
3. Husband's attitude affects postpartum contraceptive use
4. Receiving FP- information during MCH services positively influence postpartum contraceptive use
5. There is unmet need for family planning service among the study population

1.5. Operational Definitions

Breast-feeding practice: feeding a child at its mother's breast milk with or without supplement

Conception: the beginning of a pregnancy

Contraception: conscious actions taken by individuals or couples to prevent conception

Contraceptive behaviour: in this study contraceptive behaviour refers to actual contraception practice, method choice, and timing for initiation of contraceptive use

Contraceptive use: the use of a contraceptive method at the time of the study

Non-susceptible period: the period following childbirth during which a woman is not at risk of a conception (Bongaarts and Potter 1983)

Fecund: - a woman capable of bearing live off spring (Bongaarts and Potter 1983).

Gender: refers to women's and men's roles and responsibilities that are socially determined (WHO, 1998).

Multipara: a woman who has given more than one live birth

Primipara: a woman who has given only her first live birth.

Postpartum period: in this study the postpartum period refers the first 24 months after last childbirth.

Postpartum amenorrhea: the period from delivery to onset of first menstruation.

Lactational amenorrhea : the absence of menstruation due to menstruation inhibiting effect of frequent and intensive breast-feeding

Postpartum sexual abstinence: the period following delivery when sexual intercourse is not practised.

Postpartum variables: refer to breastfeeding, postpartum amenorrhea, sexual abstinence and postpartum duration.

Postpartum duration: refers to the length of time since last delivery until the date of interview

Prolonged breast-feeding: refers to intensive breast-feeding practice for several months or a number of years

Prolonged sexual abstinence: refers to abstaining sexual intercourse for several months or a number of years following delivery

Reproductive Health (RH): A state of complete physical, mental and social well being and not merely the absence of disease and infirmity, in all matters relating to the reproductive system and to its functions and processes (UN, 1994).

1.6. Organization of the Thesis

The thesis is organized is nine chapters. Chapter one describes the background of the study, statement of the problem, basic operational definitions, the objectives and hypotheses of the study.

Chapter two presents the literature review related to the study. Chapter three deals with materials and methods employed in the study.

Chapters four to seven present the main finding of the study. In chapter eight, the main findings of the study, relevant policy and program implications are discussed.

Finally, chapter nine presents the conclusions and recommendations drawn from the study results.

CHAPTER II. LITERATURE REVIEW: Factors Influencing Postpartum contraceptive Behavior

Literature reveals that postpartum contraception is influenced by natural fertility regulation - lactational amenorrhea, behavioral factors and demographic and socio-economic characteristics.

2.1. Postpartum Variables

During the postpartum period women's actual risk of conception is closely linked to their breast- feeding, amenorrhea and sexual activity status (McCann et al., 1981; Bongaarts and Potters, 1983; Bulut and Turan, 1995).

Lactational Amenorrhea

Besides, its importance in infant nutrition and health, breast-feeding plays an important role in child spacing in many developing countries (McCann et al., 1981; Bongaarts and Potters, 1983;IPPF, 1996;CDC, 1999). The contraceptive effect of breast-feeding has been well documented in several literatures (McCann et al., 1981;Vekemans M., 1997; CDC, 1999).

Breast -feeding provides protection against pregnancy through delaying the return of ovulation and the return of menses after birth. In this way lactational amenorrhea plays an important role in pregnancy prevention (natural fertility regulation). The period from delivery to onset of first menstruation is known as lactational amenorrhea. In addition, the duration of lactational amenorrhea is often considered as a proxy indicator of anovulatory period after birth. In societies where little or no postpartum sexual

abstinence is practiced the postpartum non-susceptibl(ɜ (postpartum infecundability) period equals to the duration of lactational amenorrhea (E ɔongaarts and Potters, 1983).

Generally, prolonged breast-feeding practice leads to l(ɔnger durations of lactational amenorrhea. But, the inhibitory influence of lactation upon fertility varies between individuals. Women who breastfeed for longer durat ion, frequently on demand (including at night) and who introduce supplements l(ıte are expected to resume ovulation later than women who breast feed for shorter dura ıtion, less frequently and start early supplementary feeding to there infants (McCamm et al., 1981; IPPF, 1996). The inhibitory effect of breast-feeding largely depends on t he pattern of breastfeeding practice. Therefore, the risk of pregnancy of a lacting wom :an is expected to increase as the child starts supplementary feeding (McCann et al., 1(981; Bongaarts and Potters, 1983; IPPF, 1996; Cadman L., 1997). From this point (ɔf view, ovulation remains suppressed for a substantial number of months after childbir th if a postpartum woman fully breast- feeds her child without supplements. However , the degree of protection from getting pregnant through practicing breast-feeding is unreliable and the effect varies from one individual woman to another(McCann et al., 1(981; Cadman L., 1997)

At present, lactational amenorrhea method (LAM) has gained recognition as a highly effective child spacing mechanism (Vekemans M., 1997;CDC, 19 99). The role of LAM as an alternative to early initiation of modern contraceptive u: se has been widely recognized these days. But, reliance on LAM requires certain prereq uisites. Primarily, reliance on LAM requires adequate knowledge to use the method c(ɔrrectly. Besides, LAM can be relied upon as a contraceptive method to give up to 98 percent protection

when a woman is still amenorrheic and practices full/exclusive breast-feeding on demand (day and night) and the infant isn't above six months of age. If these conditions are not or once menstruation returns the contraceptive effect of breast-feeding to prevent pregnancy is considered to be unreliable (FHI, 1992; Ross et al., 1993; Wade B. et al., 1994; UNFPA, 1996).

On the other hand, as breast-feeding delays the return of menstruation and ovulation, and has a natural effect in lengthening the birth interval it may reduce the likelihood of contraception among lacting women (McCann et al., 1981; Laukaran and Winikoff, 1985; Knodel et al., 1985). Besides, women who believe that lactation prevents conception would be less interested in contraception.

A number of studies have found less use of contraception among breastfeeding women than that of non-breastfeeding (Laukaran and Winikoff, 1985; Pebley et al., 1985). Laukaran and Winikoff (1985) in their study on sample survey of postpartum women from four cities (Bangkok, Bogota, Nairobi and Semarang) in developing countries have found a strong negative relationship between breastfeeding status and oral contraceptive use. This study (Laukaran and Winikoff, 1985) has also found a strong relationship between amenorrhea and contraceptive use. Similarly, in other studies done in developing countries the resumption of menses was found to be associated with a substantial increase in contraceptive use. As results of a previous study done in Thailand (Knodel et al., 1985) and a recent study of postpartum women in Bangladesh indicated, the return of menses acted as a stimulus to contraceptive uptake (Salawy and Nurani, 1998).

Resumption of Coitus/Postpartum sexual abstinence

Another behavioral factor affecting risk of pregnancy in the postpartum period is postpartum abstinence. Postpartum sexual abstinence is one of the traditional child spacing methods, which provides some protection from pregnancy after the birth of a child (McCann et al., 1981; Robey, B. et al, 1992).

At macro level lactational amenorrhea and postpartum sexual abstinence are generally considered to be the most important factors that determine the postpartum non-susceptibility to conception (Bongaarts, 1978; Bongaarts and Potter, 1983; Mosely et al., 1982; Anderson et al., 1983). However, when the postpartum sexual abstinence duration is shorter than lactational amenorrhea, its contribution in lengthening the birth interval (or for spacing births) has also been observed to be negligible (Mosely, 1982).

In some communities, postpartum sexual abstinence is practiced for several months or a number of years following child delivery (Bongaarts & Potter, 1983; Weiss E. et al., 1985). However, as researches have shown such traditional practice, including breast-feeding, which extends the postpartum infecundity interval after birth, are declining in many Third World countries. As the literatures indicate, in Sub- Saharan Africa young and educated urban women breast feed less and abstain for short periods (McCann et al., 1981; Acsadi F.T. et. al., 1990). According to the available evidence, the postpartum sexual abstinence period currently has been declining in many urban communities (McCann, 1981;Wood M. 1997; Acsadi F.T. et. al., 1990; Yeshewamebrat, 1995).

In many African populations postpartum abstinence is not practiced as a means for spacing births. Abstinence is practiced as a way of purifying the mother's milk, or to protect the newborn infant and the mother after birth (CDC, 1999). In addition, in some cultures postpartum sexual abstinence is practiced until some cultural and religious procedures are completed after the birth of a child. For instance, in Ethiopia, in the Orthodox religion, a baby boy is baptized 40 days and a baby girl 80 days after the date of birth respectively. Accordingly, among the followers of the Orthodox religion there is a tradition of abstaining from sexual relations until a baby is baptized.

Postpartum Duration

Another factor that is related with exposure to the risk of pregnancy was the time since childbirth (or the postpartum duration). As previous studies found out when the period after childbirth lengthens the risk of pregnancy rises (Laukaran and Winikoff, 1985; Thapa et al., 1992; Salawy and Nurani, 1998). For instance, a study conducted on Demographic and Health Survey (DHS) data for 25 countries (Thapa et al., 1992) have found those women with longer postpartum duration to have higher exposure risk to pregnancy than those with shorter postpartum duration.

Studies also have observed a relationship between postpartum contraception practice and the time since childbirth (or postpartum duration). In light of the results from previous researches, the postpartum duration was observed to influence both contraceptive use and type of contraceptive method choice in the postpartum period (Laukaran and Winikoff, 1985; Thapa et al., 1992).

Again, as studies have indicated, women's behavioral status and other background characteristics are also closely related. For instance, in a study conducted in an urban community in Nigeria (Oni G., 1985), women's education was found to have strong negative relationship with breastfeeding and postpartum abstinence. The duration of both breastfeeding and abstinence was found to decline as the educational level of the mother increased. In 1994, in a study done in Addis Ababa education was found to be the most important determinant of duration of breast-feeding (Yeshewamebrat E., 1995).

2.2. Demographic Characteristics

Studies have documented that contraceptive use varies depending on the age, desire to have more children, number of surviving children, type of marital union, etc.

Age

Age is curvilinearly related to contraceptive use, in that at early part of the reproductive life contraceptive use is low, it increases in the milddle age, and again falls at older ages (Sathara et al., 1984).

In general, it has been observed that women are less likely to contracept at the youngest and oldest ages of the reproductive life span. This pattern is interpreted partly as it may reflect desire for more children among young women, and effects of declining frequency of intercourse, perception of low risk of becoming pregnant or traditional views that favor large families at old ages (Robey B. et al., 1992;Njogu, 1991).

Desire for Additional children

The desire for additional children to be an important demographic variable, which signify women's motivation to practice contraception either for limiting or spacing childbearing. A woman who has attained the number of children that she desires to have is more likely to use contraception than a woman who has not yet achieved the number of children (Njogu, 1991; Degraff DS, 1991). Thus, a close association is expected between women's desire for additional children and the practice of contraception.

Number of living children

A number of studies have found positive association between number of living children and women's contraceptive use. For African and Asian countries, some studies have found relatively highest contraceptive use mostly among women with four or more children (Sathara et al., 1984, Robey B. et al., 1992).

Type of marital union (monogamy or polygamy)

According to earlier researches, type of marital union is an important factor, which influence use of contraception. A number of studies have pointed out that polygamous wives practice abstinence longer than monogamously married women (Caldwell and Caldwell 1981, Dow and Werner 1982,Sucier 1972 cited in Njogu, 1991). Relatively, women in polygamous marriages were found to abstain for longer periods after childbirth as their husbands have other sexual partners (Ibid.).

With regard to the interactions between demographic characteristics and women's postpartum contraceptive behavior, the research conducted in Istanbul has clearly demonstrated that fertility intention, timing of initiation of contraceptive use and the need for information to differ by some background characteristics among the study population. As the study found, young primiparous women were more likely to be spacers than were their older, multiparous counterparts. In addition, a higher proportion (82 percent) of the multiparous women had started contraception earlier (at the 40th day or earlier after childbirth) than primiparas (only 57 percent by the 40th day after childbirth). Moreover, in the logistic regression analysis education and frequency of sexual intercourse were significantly related with modern contraceptive use, after controlling for other confounding factors. Further, women who had the greatest need for information were very young and primiparous women.

2.3. SOCIO-ECONOMIC CHARACTERISTICS

Woman's Education

Studies have shown that a woman's education has a strong positive association with contraceptive use. The WFS data has shown a clear pattern of association between contraceptive use and women's education. As the number of years of schooling increases, the prevalence of contraceptive use also becomes higher (Sathara et al., 1984). Generally, education is expected to increase women's access to information and receptivity to new technologies, including awareness and use of contraception. Educated women may also desire few children than their less educated counterparts because of the incompatibility between formal sector employment and childcare (Ibid.).

Work status of women

The employment status of women is one of the factors often considered to be the determinant of their fertility aspirations and behaviour. Some studies have found a close association between socio-economic status of women and breastfeeding patterns. A study done in Istanbul, Turkey has demonstrated that the attempt to supplement breastfeeding is less likely among poor families due to economic constraints. Similarly, the research conducted in Istanbul in 1995 (which was a follow-up study of 184 postpartum women selected among those who attended four health institutions for delivery in a specified period of time), has found economic status to be significantly related to breastfeeding practice in the early postpartum period. Among the study population, women of low economic status were more likely to practice breastfeeding than that of lower middle economic status (Bulut and Turan, 1995).

Some studies have also found a positive association between breastfeeding duration and non-working status (Eshetu 1994; Ferry 1981 cited in Yeshewamebrat 1995). Hence, a relationship between work status of women and postpartum contraceptive use is anticipated.

2.4. Husband's Characteristics

Studies have also found a strong association between occupations of husbands and wives' contraceptive use. Accordingly, highest use of contraception was found among the wives of men engaged in professional and clerical occupations (Sathara et al., 1984; Dilnesaw, 1995).

2.5.Access to contraceptive information and service

Apart from the above mentioned, a number of other studies done in developing countries have found a positive association between access to contraceptive information and services, and contraceptive use (Robey B. et al., 1992; Easterlin and Crimminsn, 1982 cited in De Graff, 1991). In view of these findings, knowledge of contraceptive and sources of supply can serve as proxies to measure access to information. Women's knowledge of contraceptive methods, exposure to family planning messages on mass media and contraceptive uses are also closely linked.

Moreover, contact with health workers during antenatal and postnatal cares is regarded as important opportunities to offer postpartum counseling and information services (Castadot, R.G, et al., 1975; Thapa et al., 1992).

2.6. Attitude towards contraception

On the other hand, studies have signified that other characteristics such as disapproval of contraception, fear of side effects, etc., to be negatively associated with contraceptive use (Robey B. et al., 1992; De Graff, 1991;Robey B., et al., 1996).

In this regard, attitude of husbands towards contraception is also an important factor that has been observed to affect women's contraceptive use (Robey B., et al., 1996). In a society, where there is sex hierarchy, their husbands usually defer preferences and desires of women, and women usually obey their husbands. Hence, in the context of looking into factors affecting women's contraceptive use, attitude of husbands is an important variable that needs to be considered.

Similarly, studies have indicated inter-spousal communication on family planning to be a major determinant of contraceptive use (Dilnsew A., 1995; Robey B. et al., 1996).

In general, as several studies demonstrated there is a close relationship between women's demographic and socio-economic characteristics and contraceptive use. In Ethiopia, a follow-up survey among family planning acceptors in Addis Ababa found current users of contraceptive to be on average younger and, better educated and more economically active than non-current users (Groenewold WG. et al., 1989).

A research conducted on determinants of contraceptive use in Nazareth town in 1994 has found education, family planning communication between spouses, age, perception of modern contraception, husband's attitude and occupation to be significant determinants of contraceptive use (Dilnesaw A., 1995).

In light of the available evidences, several significant interactions appear to exist between women's demographic and socioeconomic background characteristics and their motivation for postpartum contraception. However, postpartum women's motivation issue is still a fundamental point of argument among scholars. Based on extensive behavioral evidences, some scholars maintain that women are highly motivated to contracept in the postpartum period than other times (Zatuchni, 1970 in Ross et al., 1993; Castadot et al., 1975; Ross, J.A. et al., 1993).

In contrast to the notion of high motivation in the postpartum period, others say that in the immediate postpartum period women are less likely to use contraception, especially

during lactational amenorrhea (Laukaran and Winikoff, 1985; Winikoff and Mensch 1991; Thapa et al., 1992).

Given the above differences concerning women's motivation for postpartum contraception, the fundamental importance of understanding attitudes and needs for postpartum services directly from women's perspectives (i.e., their preferences and desires with regard to timing of initiation of use, method choice, needs for services to be made available to them, etc.), before making simple generalizations based on behavioral evidences and assumptions, has now received great attention (Winikoff and Mensch 1991; Thapa et al., 1992; Bulut and Turan, 1995; FHI, 1997; Salaway and Nurani, 1998).

Therefore, in order to target the best moments for introducing information and services, first well understanding women's needs has been given much emphasis in the literatures (Ibid). Furthermore, as available evidences suggest, women's needs for postpartum family planning services have not been well addressed in several developing countries. For example, in 25 DHS surveys, among women in union who were interviewed 7-9 months after birth a substantial proportion were who didn't wish to become pregnant but who hadn't obtained contraception protection, and hence were exposed to the risk of pregnancy (not pregnant, not abstaining and with menses having returned)(Thapa et al., 1992; Ross et al., 1993).

2.7. Gender and Reproductive health

Gender relations and reproductive health are closely related. Prevalence of equal relationship between men and women (or gender equity) in matters of sexual relations

and reproduction is vital for sexual and reproductive health. In addition, equity and mutual respect between the genders contributes to improving the quality of life of individuals (UN, 1994; PRB, 1997; NOP, 1999).

Reproductive health implies that a person is able to have a satisfying and safe sex life and capacity to have children and freedom to decide if, when, and how often to do so. Sexual health is also a part of reproductive health which include; healthy Sexual development, equitable and responsible relationships and sexual fulfillment and freedom from illness, disease, disability, violence and other harmful practices related to sexuality (Ibid.).

In view of this, lack of equal relationship between men and women in matters of sexual relation and reproduction affects sexual and reproduction health. For instance, violence against women is one of the practices, which hampers safe sex and the ability to control fertility. Sexual violence can have serious health consequences, including unwanted pregnancies, unsafe abortions and Sexually Transmitted Diseases (STD_S).

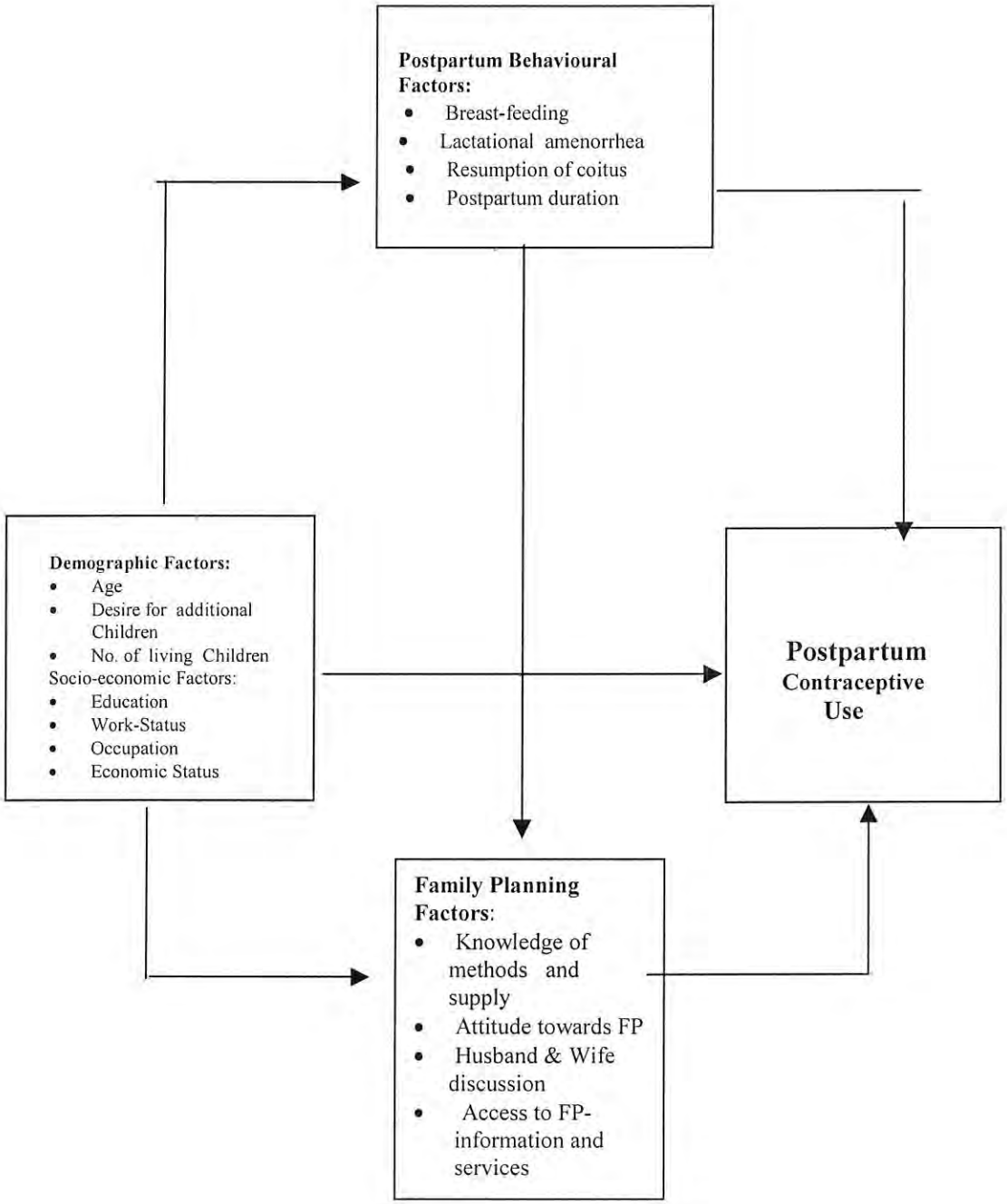
As in many other countries, in Ethiopia, violence against women, and harmful traditional practices like Female Genital Mutilation (FGM) are among the causes of women's reproductive health problems (NOP, 1999).

Therefore, gender equity is very important condition in matters of sexual relations and reproduction. Ideally, a couple's decision about family size and contraceptive use should be made jointly, by giving equal consideration to the concerns of the woman and the

man. But, in societies where an imbalance of power between women and men exists, the opinions of the man are often dominant in the decision making process.

However, studies have shown that providing men with information about reproductive health can help make them more supportive of contraceptive use and more aware of shared decision making (WHO, 1999).

Figure 1. A conceptual Framework for examining the basic factors affecting Postpartum Contraceptive use at individual level



CHAPTER III. MATERIALS AND METHODS

3.1. The Study Area

The study area selected for this research is Awassa town. Awassa is located 275 Kms far southwards from Addis Ababa on the main highway which links Addis Ababa to Kenya. The town of Awassa was founded in 1960. At present it is the capital of Southern Nations, Nationalities and Peoples Region (SNNPR) which is one of the largest regional states (with an estimated 118,000 sq. km area and 11.3 million population) in the Federal Democratic Republic of Ethiopia (BOPED, 1996; CSA, 1996).

In the current administrative structure, Awassa has two weredas and 14 kebeles (smallest urban administrative units). According to the 1994 census, the population of the town was about 69, 169, out of which 35,029 were males and 34,140 females (CSA, 1996). Currently, its population is estimated to be over 80.000. Among the urban centres in SNNPR Awassa is the largest, accounting for 10 percent of the region's urban population. Furthermore, the population of the town comprises people from diverse ethnic, cultural and socio-economic background.

Awassa is also one of the fast growing urban centres in the country where various types of industries, trade and business activities are flourishing including the expansion of health and educational facilities. At present, one government hospital and a health centre, eight private clinics, 12 private drug vendors, eight pharmacies (2 public and 6 private) two public drug stores and a number of other work place clinics are found is Awassa town. Most of these health institutions provide family planning services to the

town residents. Moreover, two NGO clinics one established by Ethiopian Family Guidance Association of Ethiopia (FGAE) and another established by Marie Stopes International provide family planning and MCH services. There are also Community Based Distribution (CBD) attempts, a PSI (Population Service International) dispensary and other social market networks operating to reach the needy people with family planning (FP) - services.

One of the socio - cultural aspect that affects women's reproductive health is early marriage practice. The persistence of the practice of early marriage contributes to early onset of child bearing and maternal health risks in the study area. Thus, early onset of childbearing is known to be one of the major causes of maternal health problems in Awassa town (Zenabu et al., 1999). Such traditional practices tend to hamper the possibility for young girls to develop their educational potential. There is a gender disparity in education. The literacy level or school enrollment of females is substantially lower than males (Ibid).

The structure of families also tends to be in favor of men than women. Thus, in many families concerns and desires of women are marginalized, and women are subordinated to men. Husband's refusal to allow their wives to use contraceptives because of the existing cultural value which favor large family size is also a barrier to contraceptive use.

Service availability is an important condition for contraceptive use. In this regard, the existing condition in the town, that service outlets are widely available. This would enable one to examine other variations irrespective of this issue. The diversified

composition of the town's population can also provide an opportunity to examine the influence of various background characteristics on the main study variable. Therefore, considering this background of the town and further the researcher's familiarity with the area, Awassa has been selected as a suitable place to pursue the present study on determinants of postpartum contraceptive use among married women.

3.2 The Study Population

The target population for this study are currently married and non-pregnant women who have given live births within the 24 months before the survey. It is intended to confine the study to currently married women assuming that they are exposed to greatest risk of pregnancy due to their engagement in marital union. Pregnant women were also excluded from the study for the reason that both menstrual status and contraceptive use are affected by pregnancy.

3.3. Methods of Data Collection

A cross sectional survey and a qualitative method have been employed to generate the necessary data for the study. However, the study was mainly based on primary data generated by the cross-sectional sample survey of eligible women in the age group 15-49 years, while the information generated by the qualitative method (i.e. focus group discussions) was used to supplement and enrich the survey result.

3.3.1. Sampling Design

To select the sample population for the survey a Two-Stage Simple Random Sampling design has been employed (Cochran, 1977).

In this respect, during the first stage six among 14 kebeles found in the town, were randomly selected using table of random numbers. After selection of kebeles, as there was no readily available information which could help to identify the eligible subjects for the study, listing of households was conducted in the six randomly selected kebeles to prepare the second stage-sampling frame for the study. The listing was conducted by going from house to house within each of the selected kebeles. And then, using the fresh list of households generated for each kebele, eligible subjects and their households were identified and this was used as a frame to sample the study subjects.

Next, using a 95 percent confidence level, 3 percent margin of error and assuming a possible contraceptive prevalence rate of 50 percent (i.e. a CPR level which implies a large sample size) the minimum sample size required to arrive at a reasonable estimates from the survey was determined to be about 1000 eligible women (Fisher A. et al., 1991). However, considering this minimum sample size required to derive reliable estimates from the survey and including 10 percent allowance for non-response or non-compliance, finally it was decided to sample a total of 1200 eligible women for the survey. The total sample size was then allocated to each of the six sample kebeles proportionally to the size of eligible women found in each kebele and based on the result of the household listing. Finally, at a second stage the eligible women for the survey were selected using a systematic random sampling technique from the household list produced for each of the randomly selected kebele at the first stage of sampling.

Out of the1200 eligible women sampled for the survey information was collected from 1142 eligible women using a semi-structured questionnaire. This gives a total response rate of 95.2 percent. The reason for not obtaining information from the remaining 58 sampled women was because 17 respondents were not available at home, even after repeated visits to their residences, and the information on 41 respondents was found to be incomplete and were discarded.

3.3.2 Survey Instruments

The main survey instrument was women's questionnaire. This interviewer-administered questionnaire has served, as an instrument to collect the relevant socio-demographic and family planning information from all eligible respondents. The women's questionnaire was first prepared in English, translated into Amharic, and then pre-tested on 40 eligible women in the survey area outside the sampled kebeles. Based on the pre-test result and comments received from experienced persons, the questionnaire was further revised; printed and used for the survey.

In addition, a household-listing format was used in the survey to list all households in the sampled kebeles and to identify the eligible women for the survey. Both the household listing format and the women's questionnaire employed in the survey are included as Annex I & II in this report.

3.3.3. Recruitment, Training and Fieldwork

A total of 23 female interviewers who had completed at least grade 12 and good academic results as well as previous data collection experience were recruited for conducting the work of interviewing. Similarly, seven supervisors who had adequate educational qualification and experience in survey were selected to supervise the fieldwork.

Intensive training for the interviewers and supervisors was undertaken for five days. The training included classroom discussion, mock interviews and actual field practice in filling the questionnaires. During the classroom sessions, the trainees were given detailed explanations on the objectives of the survey, the content of the questionnaire, concepts of family planning and other reproductive health issues relevant for the survey. In the mock interview, the interviewers also practised how to fill the questionnaires. During the field practice each interviewer was able to interview at least two eligible women from the non-selected kebeles in the study area. The questionnaires filled by each interviewer were critically reviewed, and then mistakes were pointed out to the interviewers in a special discussion session arranged to assess the field practice result before they were deployed for the fieldwork.

Recruitment and training of interviewers and supervisors was undertaken in February 1999, and the household listing and the main survey were carried out in March 1999.

3.3.4. The Qualitative Method

The major purpose of employing a qualitative method in the study was to generate qualitative information which enrich and supplement the survey result, particularly on

attitudes and needs for postpartum family planning services. With this aim, six Focus Group Discussions (FGDs) comprising target participants selected from the eligible postpartum women were held.

All participants selected for FGDs were postpartum women within the first 12 months after their last live births and with at least two surviving children. Besides, homogeneity within groups was maintained by organising the groups according to participants' similar age and educational status.

Among the six FGDs three groups represented younger women (age 20-29 years) each with different educational status: no schooling, primary education (Grades 1-6), junior secondary and above (Grades 7+). The remaining three FGDs were also represented by older women (age 30-39 years) and each with different educational status as mentioned above. And the group size or number of participants in each group was 6-8 women.
The participants were identified from the completed survey questionnaires, and then, they were given appointment for a FGD session based on their consent to participate.
The focus group discussions were conducted in schools and kebele offices. The main issues covered during each session were the same for all groups. A topic guide that includes the important issues to be covered was used as a discussion guide for each session. The topic guide employed in the group discussions is included in this report (see Annex III).

Two female moderators had facilitated the discussion for each session. One of them was assigned as a moderator to chair and guide the discussion while the other served as a

note taker recording the discussion verbatim. The moderators have completed grade 12. They also have adequate experience in organising and conducting focus group discussions.

In addition, they were given intensive training for two days on the objectives of the research, the content of the discussion guideline, how to guide and record discussions. In each session, the researcher attended as an observer to have full understanding of the group discussions held. Further, after each session the researcher summarised major findings.

After completing the group discussions, informal interviews and discussions were conducted with representatives of three major service providing institutions, namely; the Awassa Health Centre, FGAE and Marie Stopes International, in order to learn what they do for postpartum women and to identify main constraints of the existing service.

Finally, the main findings of the qualitative method are incorporated with the survey result.

3.4. Ethical Considerations

All study subjects participated in the study based on their willingness to participate and consent obtained by informing them about the purpose of the study and confidentiality of the information given.

No incentive was given to respondents or participants in the focus group discussion. The study was also undertaken with full respect to the cultural values and expectations of the society.

3.5.Methods of Analysis

Having completed data collection, responses for all open-ended questions were coded, and all completed questionnaires were re-edited by the researcher before data entry into a computer. Mean while, all incomplete questionnaires were discarded. Information from the completed questionnaires was entered into a computer and the data processing and analysis was undertaken using the SPSS computer program.

The data analysis has been carried out and presented within the context of univariate, bivariate and multivariate analysis in order to examine the relevant respondents' characteristics, and the relationships between these characteristics and the outcome behaviour (contraceptive use).

A univariate analysis has been undertaken to summarise data and observe relevant characteristics of the study population. The result is presented in the form of frequency distribution and summary statistics. In this way, the approaches and assumptions employed in the univariate analysis include the following:

Postpartum period

In this study the postpartum period refers the first 24 months after childbirth. The fundamental reason for considering 24 months postpartum period was based on the following assumptions:

- First, it was assumed that the 24 months after childbirth would encompass a substantial proportion of women in the childbearing age.
- Second, it was also assumed that the 24 months postpartum period would allow adequate time for initiation of contraceptive use, so that the contraceptive behaviour

of the women could be well examined. Further, it was anticipated that the 24 months after childbirth would accommodate longer duration of breastfeeding and postpartum amenorrhea.

Data on Fertility

Data on number of children ever born alive are usually under reported due to recall laps of respondents, especially among older women. It has been observed that older women tend to omit children died very young or living somewhere else due to recall laps or other cultural reasons. However, here it may be noted that different attempts were made to minimise underreporting of ever born children alive during the data collection and verification. Accordingly, the survey schedule included question on total number of children ever born alive as well as sub-questions asking about children ever born alive and living at home, living else where or died, including the sex of child. In addition, during the field data collection, the accuracy of information on total number of children ever born was carefully crosschecked with the results of the three sub-questions. Interviewers were also given adequate instruction and training how to carefully cross check responses and use probing questions to achieve accurate information on total number of children ever born alive.

Determination of Economic Status

Information on economic status was based on proxy indicators computed using asset scores on number of items owned by a household of a respondent. That is, the ownership of at most two items for low economic status, three to five items for middle and six or more items for better/high among the set of selected items listed in the survey schedule (See Annex II).

Estimation of mean duration of breastfeeding, postpartum amenorrhea and sexual abstinence

In the estimation of the means for breastfeeding duration or amenorrhea current status data are considered to be less subject to reporting errors than retrospective data (Mosely et al., 1982; Anderson et al., 1983).

Further, a number of studies have found the prevalence/incidence method to be very robust method for estimating mean duration of breastfeeding or amenorrhea based on current status data of women who reported to be currently breastfeeding or amenorrheic at the time of the survey (Ferry B., 1981; Mosley et al., 1982; Anderson et al., 1983; Ferry and Smith, 1983; CSA, 1993). This method has given very consistent result with the current status life table technique using the World Fertility Survey (WFS) data (Ferry and Smith, 1983; Anderson et al., 1983). Besides, it has proved to be useful method for estimating mean duration of breastfeeding or amenorrhea from survey data which doesn't contain complete birth history of respondents except current status data based on date of last birth only (Anderson et al., 1983). Therefore, in the estimation of the mean duration of breastfeeding, postpartum amenorrhea and sexual abstinence we have employed the prevalence /incidence method, and the current status data of women who were breastfeeding, amenrrheic and women abstaining sexual intercourse at the time of the survey. In this way, the mean duration of breastfeeding, postpartum amenorrhea and sexual abstinence were computed, by dividing the number of women who were currently breastfeeding, amenorrheic and abstaining sexual intercourse by average number of all live births the women had during the 24 months before the survey, respectively.

Knowledge of Family Planning Methods

In the survey respondents were asked to name if they have heard any methods or ways that men and women could use to avoid pregnancy. Therefore, respondents who could name or recognise an FP-method either spontaneously or through probing (i.e. after reading the name and brief description about a method) are considered to have heard of a method, and those who couldn't recognise after the name and a brief description was given by interviewers about an FP-method were considered to have not heard of that method. In such ways, in this study respondents who are considered having knowledge of FP-method are those who have heard of at least any one FP-method. Otherwise, those who haven't heard of at least one FP-method have been considered as having no knowledge of FP-methods.

The bivariate analysis was also carried out to examine the association between relevant respondents' background characteristics and postpartum contraceptive use. In this context, cross tabulations, X^2 (chi-square) and F-tests have been employed.

The multivariate analysis was undertaken to determine the most important predictive variables for the outcome behaviour controlling other confounding factors. For the multivariate analysis, a logistic regression model is employed. In this model, the dependent variable is contraceptive use, a dichotomous variable, which is measured by coding, 1 for current use and 0 otherwise.

The independent variables included in the model are relevant demographic, postpartum and socio-economic characteristics of the respondents.

In the multivariate analysis the application of the logistic model is considered to be the most appropriate one. Because, the dependent variable is dichotomous; and the model allows the inclusion of both continuous and dummy independent variables which this study attempts to examine their effect on the outcome behaviour (Halli and Rao, 1992). The application of the logistic model has been discussed further in chapter VII.

3.6. Data Quality

During the fieldwork, a close follow-up and intensive supervision of the field data collection activities have been undertaken by the researcher as well as by the supervisors to secure the quality of data. To check the completion, accuracy and consistency of the data collected the field supervisors and the researcher daily reviewed all completed questionnaires. As required, interviewers were also made to make return visits to respondents for making corrections. Intensive follow- up and supervision on the extents to which the interviewers accurately ask questions and record replies has been made during the survey. Further, in order to verify the quality of the survey data randomly selected respondents from each kebele were re-interviewed by the supervisors.

Evaluation of data quality is an essential and a primary step in demographic data analysis. It helps to identify errors in data and to make appropriate adjustment to the data if there are errors that impair the quality of the data.

In this respect, assessment of respondents' age distribution data is one of the important ways of evaluating the quality of survey data (Shryock and Siegel, 1976). In situations where misstatement of age is prevalent due to ignorance of birth dates or age preference

(for some reasons such as social or cultural) data on age are subject to errors. Therefore, evaluating the survey age data is useful to assess its quality and to proceed on further analysis with the data. Hence, as a first step plotting of the survey population by single year age has been observed.

As figure 1 shows, the peaks observed in the age plots indicate the presence of age heaping in the data. So, in order to understand the extent of heaping at specific ages, the Myers' index, which is one of the most important internal consistency checks (Ibid.) has been computed for the single year age data of the surveyed women. The result obtained is presented in Table 1 as follows:

Table 1: Myers' Index for Age Heaping

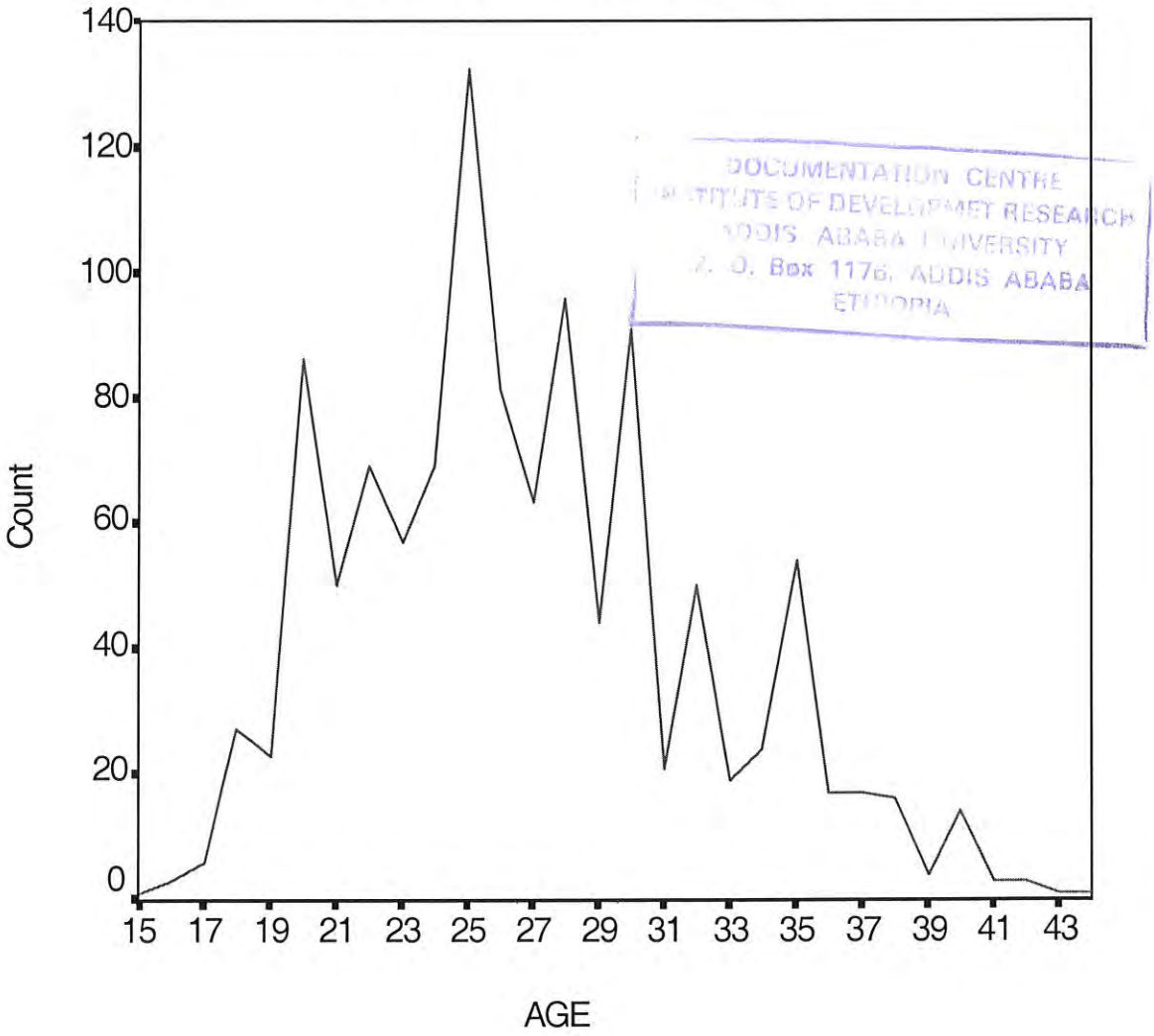
Terminal Digit	*Deviations from 10 percent*
0	+5.18
1	-5.46
2	-0.15
3	-4.28
4	-2.18
5	+7.93
6	-0.15
7	-0.99
8	+3.68
9	-3.58
Sum	*32.58*

According to Myers' Index, for good data the distribution of the blended sum at each terminal digit is expected to be 10 percent of the total blended population. Positive deviations indicate digit preference, while a negative deviation means avoidance of ages. In the Myers' Index age heaping is assessed by finding one-half of the sums of the absolute values of all deviations from 10 percent. Then, for no age heaping the Myers' Index is a approximately equal to 0, and 90 if all ages were reported at a single digit (Ibid.).

The Myers' index computed for the survey age data was 16.79. This value may indicate that the survey age data is fairly accurate. But, this does not mean that the survey age data is free from digit preference and avoidance. This is also clear from Table 1 that there was relatively more preference for ages ending with '5' followed by ages ending in digits '0' and '8', while ages ending with digits 1,3,9 and 4, respectively were most avoided.

However, since our analysis is based on broad age groups and such preference for certain ages has no significant effect in the analysis, making adjustment in the reported single year age data wasn't required.

Figure 2: Single year Age Distrbution of Surveyed Mothers



3.7. Limitations of the Study

In cross- sectional surveys, asking information about retrospective events occurred in the reference period before the survey can be subject to error due to reference period error or respondents forgetfulness of events.

Since, respondents eligible for the survey were women who were non- pregnant and who have given live births within 24 months preceding the survey, the quality of information the respondents supplied partly may rely on their memories to recall retrospective events correctly over the time elapsed since their last live births.

However, in dealing with such instances probing questions were the main approaches employed to aid respondents in recalling relevant events and to obtain accurate data from all women concerned.

In cases, where women refuse to give response for some sensitive questions, the approaches used to obtain reliable and truthful data from respondents include providing further explanation about the purpose of the survey and assuring guarantees for confidentiality of information given.

One of the constraints to the fieldwork was non- availability of respondents at home in certain households. In such instances, however, through arranging return visits when the respondents would be present at home, efforts have been expended to minimize the non-response error in the survey.

Another major constraint to the fieldwork was also lack of transport facilities for distribution of survey materials to the field staff, coordination and supervision of the field data collection activities. Similarly, in this case every possible effort was made to cope with such problem and adequately undertake the field data collection, coordination and supervision.

On the other hand, the involvement of highly competent and dependable female interviewers, who have adequate knowledge of the local languages and conditions had facilitated the work of interviewing and the completion of the field data collection according to the schedule.

CHAPTER IV: CHARACTERISTICS OF RESPONDENTS

4.1.Demographic Characteristics

4.1.1. Age Distribution

The Age distribution of the surveyed mothers is given in Table 2.

Table 2: Age distribution of surveyed mothers, Awassa, March1999

Characteristics	*Number*	*Percent*
Age		
15-19	60	5.2
20-24	331	29.0
25-29	416	36.0
30-34	205	18.0
35-39	108	9.5
40 -45	22	1.9
Total	*1142*	*100.0*

Of all 1142 women respondents, nearly two-third (65 percent) were between ages 20-29 years, and about 18 percent were aged 30-34 years. The proportion under 20 (teenage mothers) and those above 34 years were 5.2 percent and 11.4 percent, respectively. The average age of the surveyed women was 27 years. Overall, as the pattern by age reveals, among the respondents the highest percentages were young women in the most fertile ages.

4.1.2. Nuptality

With regard to nuptality, information on age at first marriage, current situation in marital union and type of marital union of respondents has been presented in Table 3.

Table 3: Distribution of surveyed mothers by nuptality characteristics, Awassa, March1999

Characteristics	*Number*	*Percent*
Age at First Marriage (in years)		
< 15	101	8.9
15-17	347	30.4
18-19	250	21.9
20	139	12.2
21+	303	26.6
Total	***1140***	***100.0***
Current Situation In Union		
Living with husbands	1126	98.6
Not living with husbands	16	1.4
Total	***1142***	***100.0***
Type of Marital Union		
Monogamous	1035	90.6
Polygamous	102	8.9
Not stated	5	0.5
Total	***1142***	***100.0***

Age at first Marriage

As data in Table 3 shows, about 9 percent of the respondents married under 15. About 30 percent of the women married between ages 15 - 17. Nearly 40 percent of the respondents marred before age 18. Those who married after age of 20 were only about 27 percent of the respondents. The mean age at first marriage was 18.8 years.

Current Situation in Union

Of all respondents about 99 percent had reported that they were living with their husbands at the time of the survey. Those who reported temporarily not living with husbands were very few (only 1.4 percent of the respondents).

Type of Marital Union

Among all women respondents, about 91 percent were in monogamous marriage. The proportion reported polygamous marriage were nearly 9 percent of the respondents (Table 3).

4.1.3. Fertility Behaviour

Table 4 and Table 5 present information on fertility of the surveyed mothers based on data on total number of children ever born alive to the women.

Number of Children Ever Born (CEB)

Table 4: Distribution of surveyed mothers by number of children ever born alive, Awassa, March1999

Number of children ever born alive	*Number of women*	*Percent*
1	321	28.1
2	281	24.6
3	188	16.5
4	128	11.2
5	66	5.8
6-11	158	13.8
Total	*1142*	*100.0*

Among the surveyed women the number of children ever born ranges from 1 to 11(Table 4). Further, out of all respondents about 53 percent had one or two live births. Nearly 28 and 20 percent of the women had three to four and five or more live births, respectively. The survey data on mean number of children ever born alive and surviving by age group of mothers is presented in Table 5 below.

Table 5: Mean number of children ever born and surviving by age group of surveyed Women, Awassa, March1999

Age-group	*Total number of women*	*Mean Children Ever Born (MCEB)*	*Mean children surviving*
15-19	60	1.1500	1.1167
20-24	331	1.6767	1.6254
25-29	416	2.7716	2.6010
30-34	205	4.2000	3.9171
35-39	108	5.9537	5.5463
40-45	22	6.2727	6.1364
Total	***1142***	***2.9939***	***2.8231***

The mean number of children ever born alive were almost 3 children per woman. When the mean is observed by age, it consistently increases with age of mothers from lower to higher age groups. The mean number of children ever born which was observed to be 1.15 among teenage mothers (15 - 19) increased over five times and reached 6.3 for those aged 40 - 45. This pattern of lifetime fertility experience of the surveyed women suggests that women in the study population would have almost six children in their late thirties (by age 35-39) and over six children when they reached at the end of their reproductive life span.

The mean number of children surviving was also 2.8 children per woman. Similarly, in this case the mean increases with age of mothers and reaches maximum for those aged 40-45 years (Table 5).

4.1.4 Birth Interval

According to the survey result, of all live births the women had within the 24 months preceding the survey, 19 percent were closely spaced births that occurred in less than two years after the previous births. The mean length of the interval between most recent live births was 3.4 years for those who have had at least two live births until the survey (Table 6).

Table 6: Distribution of surveyed mothers by length of interval between the last and second last live births, Awassa, March1999

Birth Internal between last & second last child (In months)	*Number of cases*	*Percent*
<12	10	1.3
13-23	138	17.7
24-36	255	32.7
37-48	175	22.4
49-60	81	10.4
60 +	121	15.5
Total	***780***	***100.0***
Mean = 41.2 months (3.4 years)		

4.1.5. Future Childbearing Preference

Women's childbearing preference is an important demographic variable that gives useful indications of the unmet need for family planning (Robey B., et. al., 1992; Westoff C., et al., 1992). Demand for family planning is closely related with future childbearing preference of fecund women. In the survey, all women who reported to be fecund were asked whether they want to have additional children or not in the future. In addition, those women who stated they want to have additional children were further asked the number of additional children they want, and when they want to have their next birth. The results obtained with respect to these questions are presented in Table7.

Of all women who reported to be fecund, nearly 28 percent wanted to stop childbearing and 62 percent desired to have additional children in the future. Overall, women who wanted no more children and those who desired to space their next births by at least two years constitute 27.1 and 48.3 percent of the total survey respondents, respectively.

About 10 percent of the respondents hadn't decided if they want to have or not additional children in the future. Among women who desired to have additional children, the number of additional children desired ranged from 1-8. However, of these women nearly 70 percent wanted to have at least two (or 2-8) additional children, while about 30 percent desired to have only one more child in the future.

The mean additional number of children desired was 2.24. Further, as the ANOVA and F-test result show mean number of additional children desired was significantly different (i.e. P<. 001) by number of living children the women had. Relatively, mean

additionally desired children were observed to be higher among women who had less number of living children (Table 7).

In the analysis, women who want no more children or want to stop childbearing have been considered as they desired to limit their births, while those who wished to delay their next birth by at least two years are considered as desiring to space births.

Table 7: Distribution of surveyed mothers by future childbearing preference, Awassa, March1999

Desire to have additional children	*Number*	*Percent*
Yes	694	62.0
No	309	27.6
Undecided/up to God	111	9.9
I don't know	5	0.5
Total	***1119***	***100.0***
Number of addition children desired		
1	209	30.4
2	241	35.1
3	146	21.2
4-8	91	13.2
Total	***687***	***100.0***
No. of living children	***Number***	***Mean***
1	292	2.51
2	209	2.22
3+	184	1.81
Total	***685***	***2.24***
Preferred time for next birth	**Number**	**Percent**
Within one year	6	0.9
Within two years	14	2.0
After two years	551	80.0
Up to God	107	15.5
Others	11	1.6
Total	***689***	***100.0***

4.2.Socio-economic Characteristics

Table 8 presents the distribution of the surveyed mothers by selected socio-economic characteristics.

4.2.1. Religion and Ethnicity

Among the study women, 46.6 percent were Protestants, 43 percent Orthodox, 4.1 percent Catholic and 4.5 percent Muslims (Table 8).

The surveyed women represent different ethnic groups. The proportion that belonged to Wolayita, Amhara, Sidama, Oromo and Guraghie ethnic groups make up 87.9 percent of the total surveyed women. The remaining 12.1 percent of the respondents were from Kembata, Tigre, Hadiya and other ethnic groups (i.e. Gedio, Gamo, Kore, etc.).

4.2.2. Women's Education and Work Status

Of all surveyed women 23 percent were illiterate; 19.1 present have attended primary level schooling (Grades 1-6), and 56.6 percent had above primary level of education (Grade 7 and above).

During the survey, 33.6 percent of the respondents were working (or engaged in gainful work), while 66.4 percent were housewives who had no any gainful work except their usual duties as mothers and housewives (Table 8).

Occupationally, among the working women, 43.2 percent were sales and service workers, 20.3 percent were engaged in managerial, professional or technical activities,

18 percent were clerical workers and 10.5 percent were engaged in elementary occupations (such as cleaning and other manual labour); while others 8.9 percent were workers engaged in production and other related activities.

4.2.3. Economic Status

In this way, the proportion of respondents who had low, average and better economic status were 34 percent, 52.6 percent and 13.4 percent, respectively (Table 8).

4.3. Husband's Education and Occupation

About 5.2 percent of the respondents had illiterate husbands. For about 2 percent of them, their husbands hadn't attended any formal education. However, for about 76 percent of the respondents, their husbands had attended at least secondary education (Table 8).

For 19.1 percent of the respondents their husbands had no occupation or were engaged in elementary occupations. 26.9 percent had husbands engaged in administrative, managerial or professional activities. Others 27 percent of the respondents had husbands engaged in clerical, service and sales occupations; while for the remaining 27.2 percent their husbands were engaged in production and related activities (Table 8).

Table 8: Distribution of surveyed mothers by selected socio-economic Characteristics, Awassa, March1999

Characteristics	*Number*	*Percent*
Religion		
Orthodox	490	42.9
Catholic	47	4.1
Protestants	532	46.6
Other Christians	22	1.9
Muslim	51	4.5
Total	***1142***	***100.0***
Ethnicity	264	23.1
Amhara		
Oromo	111	9.7
Tigre	35	3.1
Sidama	180	15.8
Wolayita	338	29.6
Kembata	60	5.3
Hadiya	21	1.8
Guragie	111	9.7
Others	22	1.9
Total	***1142***	***100.0***
Women's Education		
Illiterate	258	22.9
Read and Write	16	1.4
Primary (Grades 1-6)	215	19.1
Secondary (Grades 7-12)	578	51.4
Above secondary (12+)	58	5.2
Total	***1125***	***100.0***

Table 8 Contd

Characteristics	*Number*	*Percent*
Women's Work Status		
Working	384	33.6
Not – Working	758	66.4
Total	***1142***	***100.0***
Women's Occupation		
Managerial, Professional & Technical	77	20.3
Clerical	68	17.9
Sales and Service	164	43.2
Production and related	31	8.2
Elementary Occupation	40	10.5
Total	***380***	***100.0***
Husband's Education		
Illiterate	59	5.2
Read and write	23	2.0
Primary	186	16.4
Secondary	629	55.4
Above Secondary	238	21.0
Total	***1135***	***100.0***
Husband's Occupation		
No Occupation	25	2.2
Administrative or Managerial	56	5.0
Professional or Technical	246	21.9
Clerical	87	7.8
Service and Sales	213	19.0
Production and Related	305	27.2
Elementary	190	16.9
Total	**1122**	**100.0**
Economic Status		
Low	***387***	***34.0***
Middle	***597***	***52.6***
Better/High	***152***	***13.4***
Total	***1136***	***100.0***

CHAPTER V. BREASTFEEDING, POSTPARTUM AMENORRHEA AND SEXUAL ABSTINENCE

5.1. Prevalence and duration of Breastfeeding

Breast- feeding was almost universal among the surveyed mothers. About 99 percent of them have breast fed their last children. In addition, among the surveyed mothers 81.5 percent were breastfeeding their last children at the time of the survey. Among those who weren't breast-feeding at the time of the survey, the largest proportion (about 99 percent) were mothers who had completed breast-feeding of their last children. Those, who didn't breastfeed their last children were only about 1 percent of the respondents (Table 9). The mean duration of breastfeeding was also found to be 17.2 months.

Table 9: Distribution of surveyed mothers by breastfeeding practice for the last child, Awassa, March1999

Breast feeding practice	*Number*	*Percent*
Current breastfeeding	930	81.5
Not-currently breastfeeding	211	18.5
• Breastfed before	199	17.4
• Didn't breastfeed	12	1.1
Total number of cases	***1141***	***100.0***
Mean 17.2 months		

5.2. Exclusive Breastfeeding

Table 10 presents information on exclusive breastfeeding practice. Of all women who were breastfeeding their last-born children, 79.4 percent were supplementing breastfeeding, while only 20 percent were exclusively breastfeeding at the time of the survey. In addition, about 54 percent of them had started giving supplement food to their children within 4 months after delivery. Others 36 percent introduced supplements when their children were at ages between 4 to 6 months. However, after 6 months exclusive breastfeeding practice was minimal among the study population. The mean length of time to exclusive breastfeeding duration was also 4.9months.

Table 10: Distribution of surveyed mothers by exclusive breastfeeding practice, Awassa, March1999

Exclusive breastfeeding	*Number*	*Percent*
Status of Supplementation of Breastfeeding		
Supplementing	738	79.4
Not-Supplementing	192	20.6
Total	***930***	***100.0***
Duration of Exclusive breastfeeding (In Months)		
<1	16	2.2
2	35	4.7
3	66	8.9
4	278	37.7
5	80	10.8
6	186	25.2
7+	77	10.4
Total	***738***	***100.0***
Mean = 4.9months		

5.3. Perception about breast-feeding and monthly reproductive cycle

In the survey, respondents were asked about the relation between breast-feeding and chance of becoming pregnant, including perception about the most likely chance of pregnancy during the monthly menstrual cycle (Table 11). Among the respondents asked about the relation ship between breastfeeding and chance of becoming pregnant, about 16.5 percent of them had stated that they didn't know the effect of breastfeeding on chance of becoming pregnant.

Table 11: Distribution of surveyed mothers by perception about the influence of breast-feeding and the most likely chance of pregnancy in the monthly menstrual cycle, Awassa, March1999

Variables	Number	Percent
Perception about the influence of breast-feeding on pregnancy		
Increases a woman's chance of becoming pregnant	56	5.0
Decreases chances of becoming pregnant	459	41.0
Has no relation/ can't influence	405	36.2
Other	14	1.3
Don't know (DK)	185	16.5
Total	1119	100.0
Perception about when pregnancy is most likely during the menstrual cycle		
During period	49	4.3
In few days just after period	354	31.0
In the middle of the cycle	413	36.2
Just before period begins	107	9.4
Other	14	1.2
DK	203	17.8
Total	1140	100.0

36.2 percent of the respondents said that breast-feeding has no relation with pregnancy. 5 percent of them also stated that breast-feeding would increase a woman's chance of becoming pregnant. As a whole, over 50 percent of the respondents appear to have no accurate perception or clear knowledge about the influence of breastfeeding on the likely chance of becoming pregnant.

In addition, during the focus group discussions (FGDs), a substantial proportion of the participants had clearly mentioned that they didn't know the relation existing between different patterns of breastfeeding practice and return of maternal fertility after birth.

Similarly, among the respondents, nearly 18.0 percent had reported that they didn't know when pregnancy is most likely during the menstrual cycle. The responses given by others 46 percent of the respondents also reflect, as they had no accurate perception when pregnancy is most likely during the menstrual cycle (Table 11). Here too, over 50 percent of the respondents seem to have no clear or accurate perception when pregnancy is most likely during the menstrual cycle.

5.4. Postpartum Amenorrhoea and sexual abstinence/Resumption of coitus/

As data in Table 12 shows, out of 1142 surveyed postpartum mothers about 67 percent reported the return of their menses after their last live births. The proportion of respondents who reported that their first menses didn't return after their last delivery (or who were amenorrheic) were about one-third (33.1 percent). The average duration of postpartum amenorrhea was 7.03 months.

In addition, of all surveyed mothers who gave live births during the last two years preceding the survey, the largest proportion (88.4 percent) reported that they had resumed coitus before the survey. Mothers who hadn't resumed coitus were a small proportion (11.6 percent). Further, among the surveyed women, the mean duration of postpartum sexual abstinence was 2.5 months (Table12).

Table 12: Distribution of surveyed mothers by postpartum amenorrhea and sexual abstinence status, Awassa, March1999

Variables	*Number*	*Percent*
Amenorrhea status		
Non-ammenorrheic	764	66.9
Amenorrheic	378	33.1
Total	1142	100.0
Mean 7.03 months		
Sexual abstinence/Resumption of coitus		
Resumed coitus	1009	88.4
Not-resumed/still abstaining	133	11.6
Total	1142	100.0
Mean 2.5months		

CHAPTER VI. FAMILY PLANNING KNOWLEDGE, ATTITUDE AND PRACTICE

6.1. Knowledge of contraceptive methods

The survey result obtained on knowledge of-FP methods has been shown in Table 13 below.

Table 13: Distribution of respondents by knowledge of family planning (FP) methods

Awassa, March1999

FP-Methods	*Ever heard of FP-method*	
	Number	*Percent*
Pill	1111	97.3
Loop/IUD	971	85.0
Injectables	1099	96.2
Diaphragm/Foam/Jelly	497	43.5
Condom	1028	90.0
Tubal ligation	856	75.0
Vasectomy	365	32.0
Norplant	918	80.4
Rhythm/Safe period	854	74.8
Withdrawal	661	57.9
Prolonged Breastfeeding	840	73.6
Prolonged Abstinence	918	80.4
Any other	13	1.1
At least any one contraceptive -method	1134	99.3
At least any one modern contraceptive	1111	97.3
Total number of cases	**1142**	

Overall, among all surveyed postpartum women about 99 percent have heard of at least one FP-method. The proportions of the respondents who have heard of at least one modern contraceptive method account about 97 percent of the respondents. With regards to knowledge of specific methods, the level ranges from 32.0 percent to 97.3 percent. As depicted in Table 12, most respondents were familiar with pills (97.3 percent) followed by injectables (96.2 percent) and condom (90.0 percent). However, surveyed mothers seem to be less familiar to

modern methods like vasectomy (32.0 percent) and diaphragm/foam/jelly methods (43.5 percent). In each of these cases, the proportions that reported to have heard of the method were relatively low.

6.2. Knowledge of Sources of Supply

Table 14*:* Distribution of respondents by knowledge of sources of modern FP-methods, Awassa, March1999

Method	*Number of Cases*	*Know Sources*	
	Know method	*number*	*percent*
Pill	1111	1087	97.8
Loop/IUD	971	905	93.2
Injectables	1099	1057	96.2
Diaphragm/foam/jelly	497	412	82.9
Condom	1028	974	94.8
Tubal ligation	856	796	92.9
Vasectomy	365	207	56.7
Norplant	918	834	90.8
Total number of cases			1142

As the data in Table 13 reveals, about 95 percent of the respondents knew the service delivery centres or sources of supply for at least one modern method. Of all modern methods, sources of service (or supply) for pill (97.8 percent), injectables (96.2 percent) condom (95 percent) and Loop/IUD (93.2 percent) seem to be most widely known. However, sources of service for permanent or long-term methods like Vasectomy, Tubal ligation and Norplant relatively appear to be less known among the respondents. For instance, it may be noted that among respondents who know methods like Vasectomy, Tubal ligation and Norplant about 43.3 percent, 7.0 percent and 9.2 percent, respectively didn't at all know sources of service for these methods (Table 14).

6.3. *Dissemination of family planning (FP) Information during MCH services*

In the survey, some data were also collected on utilisation of some Maternal and Child Health (MCH) services and obtaining family planning information from health facilities during visits for those services. In this regard, the data obtained from the survey is summarised in Table 15. From Table 15, of all mothers who attended antenatal care in modern health facilities (91.7 percent), during their last pregnancies, about 72 percent had obtained family planning information.

On the other hand, among mothers who delivered in health institutions (59.8 percent) only one-third (33.7 percent) reported receiving FP-information during delivery care.

Moreover, of all mothers who attended health facilities for child immunisation about 68 percent of them had obtained FP-information during those visits. According to these results, most mothers appear to have had the chance of obtaining FP-information (from health institutions) during visits for child immunisation and antenatal care (Table 15).

Table 15*:* Distribution of surveyed mothers by attendance of some MCH services and receiving family planning (FP) Information, Awassa, March1999

Receiving MCH Service and FP-Information	*Number*	*Percent*
A. Antenatal Care		
• Attended antenatal care	1047	91.7
• Not attended	95	8.3
Total	*1142*	*100.0*
Received FP-Information during antenatal care	751	71.8
Not-received	295	28.2
Total	*1046*	*100.0*
B. Delivery Care		
• Deliveries at health institutions	678	59.8
• Deliveries at home	455	40.6
Total	*1133*	*100.0*
Received FP-Information during delivery care At health institutions	228	33.7
Not-received	448	66.3
Total	*676*	*100.0*
C. Child Immunisation		
• Last child immunised	1071	94.2
• Last child not immunised	66	5.8
Total	*1137*	*100.0*
Received FP-Information During child immunisation	725	68.0
Not-received	341	32.0
Total	*1066*	*100.0*

6.4. Current use of Contraception

In the survey, all respondents who stated that they have heard of at least one method of contraceptive were asked whether they were currently using or not any contraceptive method(s) at the time of the survey. In this way, the survey information obtained regarding the current use of contraceptive methods has been summarised in Table16.

Table 16: Distribution of surveyed mothers by postpartum family planning practice, Awassa, March1999

FP- Practice	*Number*	*Percent*
Current use of modern contraceptive methods		
Current users	602	52.7
Non-current users	540	47.3
Total	***1142***	***100.0***
Current use by type of contraceptive method:		
• Pills	293	25.6
• Loop/IUD	40	3.5
• Injectables	201	17.6
• Condom	23	2.0
• Tubal ligation (TL)	16	1.4
• Norplant	29	2.5
Total	***602***	***52.7***
Distribution of current users by type of method		
Pills	***293***	***48.7***
Loop/IUD	***40***	***6.6***
Injectables	***201***	***33.4***
Others	***68***	***11.3***
Total	***602***	***100.0***

6.4.1. Prevalence of contraceptive use and Methods used

As Table 16 shows, of all surveyed mothers 52.7 percent were using modern contraceptives at the time of the survey. Besides, the most widely used types of contraceptive methods were oral pills and injectables followed by Loop/IUD. 88.7 percent of the current users relied on these three types of contraceptive methods; while only about 11.3 percent of the current users make use of other contraceptive methods (condom, Tubal Ligation and Norplant). Of all modern methods, use of oral contraceptives (pills) contributes the higher percentage to total contraceptive prevalence rate (CPR). Overall, use of oral pill accounts nearly 26 percent of the total modern contraceptive prevalence rate among the study population. The second popular method that accounts for 17.6 percent of the CPR was injectable contraceptive. However, the use of modern methods like Loop/IUD, Tubal ligation and Norplant totally accounted for about 7.4 percent of the CPR. So, this pattern of method use (i.e.more use of short-term methods) partly may reflect that the demand for contraception among the study population was mainly for spacing births rather than for limiting family size. Condom use is very less among the study population. Only 2 percent of the respondents reported the use of condom.

6.4.2. Reasons and time for initiating contraceptive use

Table17 presents the reasons for use of contraception and time for initiating use. As depicted in Table 17, 73.3percent of the current users adopted contraception for spacing births. Those who reported limiting family size as a reason for use of contraception were about a quarter (24.7 percent) of the current users. Current users who reported medical and other reasons for using contraceptives were only 2 percent. Again, this result of the survey would show that the contraceptive users were highly motivated for spacing births rather than limiting family size.

Table 17: Distribution of current users of modern contraceptive methods by reasons for use and initiation of contraception in relation to return of menses, Awassa, March1999

Reasons and time for Initiating covtraceptive use	*Number*	*Percent*
Reasons for use:		
Space births	441	73.3
Limit family size	149	24.7
For medical reasons	7	1.2
Other	5	0.8
Total	***602***	***100.0***
Initiation of use in relation to return of menses		
Before menses return	224	37.2
After menses return	378	62.8
Total	***602***	***100.0***

When initiation of contraceptive use is observed in relation to return of postpartum menses, nearly 63 percent of current users initiated contraceptive use after their first postpartum menses returned. Those who initiated contraception before their first postpartum menses returned were 37.2 percent (Table 17).

6.4.3. Sources of supply for current methods

In the study area, the two main suppliers of contraceptives for current users were the FGAE's family health clinic and the Awassa town health centre. The largest percentage (about 88 percent) of the current users had obtained their last methods from these two sources. Those who received from hospitals or pharmacy/drug stores were nearly 5 percent. Women who Obtained their methods from shops, friend/relatives or other sources were also about 7 percent of the total current users (Table 18).

Table 18: Distribution of current users of contraceptives by sources of supply, Awassa, March1999

Source of supply	*Number*	*Percent*
Hospital	13	2.2
Awassa health centre	248	41.2
FGAE clinic	281	46.7
Pharmacy/Drug Stores	15	2.5
Shops/Kioskes	10	1.7
Friends/Relatives	19	3.1
Other	16	2.6
Total	*559*	*100.0*

In the survey, current users of modern contraceptives were further asked whether their husbands did know or not their use of contraceptives. In this regard, as the responses obtained indicate, among the current users the largest proportion (96.3 percent) were using contraceptives with the consent of their husbands, while nearly 4 percent of them were using without the consent or knowledge of their husbands (Table 19).

Though, the percentage of respondents who reported use of contraceptives without the consent of their husbands were relatively lower, the result may partly reflect the prevalence of husbands' resistance to contraception among the population. This result is also in line with finding from the group discussions. In the focus group discussions, husband's opposition was one of the main problems reported by the women, as a barrier to contraceptive use.

Table 19: Husband's attitude and husband and wife discussion on family planning, Awassa, March1999

Questions	*Number*	*Percent*
Does you Husband Know?		
Yes	579	96.3
No	22	3.7
Total	***601***	***100.0***
What is the Attitude of Your husband?		
Approves	917	82.2
Disapproves	107	9.6
Indifferent	62	5.6
DK/ other	30	2.7
Total	***1116***	***100.0***
Have you ever discussed FP with your husband since last birth?		
Yes	***808***	***72.7***
No	***303***	***27.2***
Other	***1***	***0.1***
Total	***1112***	***100.0***

In the survey all respondents were further asked how they perceive the attitude of their husbands towards contraception. On this basis, respondents who reported husband's approval and disapproval of contraception were 82.2 and 9.6 percent, respectively (Table 19).

With regard to husband and wife discussion on FP (Table 19), 73 percent of the respondents had reported having discussed with husbands on family planning issues after delivery; while 27.2 percent of them stated that they hadn't discussed with husbands.

6.5. Reasons for not using contraceptive methods

In the survey, respondents who were not using any contraceptive method were asked why they weren't using a method, and the reasons given by respondents in this case are summarised in Table 20.

Table 20: Distribution of non-users of contraceptive methods by reasons for not using contraceptive methods, Awassa, March1999

Reasons	*All non -users*		*Non-users who resumed sex & menses returned*	
	Number	*Percent*	*Number*	*Percent*
Amenorrhea	127	23.6	n.a.	n.a.
Delivered recently	79	14.7	n.a.	n.a.
Anticipated long birth interval	11	2.0	3	1.4
Breast-feeding	36	6.7	34	15.3
Side effects/health concern	130	24.2	98	43.9
Want children	26	4.8	23	10.3
Non-presence of husband	21	3.9	10	4.5
Don't want to use	20	3.7	14	6.3
Religious reason	17	3.2	7	3.1
Lack of knowledge	15	2.8	4	1.8
Husband refused	7	1.3	4	1.8
Use natural method	13	2.4	11	4.9
Not resumed sex	11	2.0	n.a.	n.a.
Other	24	4.5	15	6.7
Total	537	100.0	223	100.0

n.a. = not applicable

As depicted in Table 20, the major reasons for non-uses of contraceptives reported by non-users include amenorrhea (23.6percent), fear of side effects/health concern (24.1 percent) and recent delivery (14.7percent). On the other hand, main reasons for non-use reported by those who resumed sex and menses returned were fear of side effects of modern contraceptives (43.9percent), current breast-feeding status (15.3percent) and the desire to have more children (10.3percent).

Overall, from the observed data fear of side effects/health concern about use of modern contraceptives appears to be the primary reason for non- use of contraceptives among the study population.

6.6. Future Intention to use and attitude towards modern contraceptive methods

In the survey, non-current users were asked if they or their spouses would intend to use contraceptives in the future. The result obtained to this question is shown in Table 21. On this basis, nearly 73 percent of the non-current users would intend to use; while about 20 percent of the non-current users didn't intend to use contraceptives in the future. The remaining 7 percent of the non-current users hadn't decided about their future contraceptive use.

In addition, from data in Table 21, among all non-current users who intended to use contraceptives in the future the highest percentage (43.8 percent) preferred to use injectables. Contraceptive methods preferred by the second and third highest percentage of the non-current users (i.e., among those who were intending to use in the future) were Pills (24.7 percent) and Norplant (9.2 percent), respectively. However, as the data suggests the future users seem to be less inclined to prefer the permanent methods like Tubal ligation and the male methods (condom and vasectomy).

On the other hand, among those who didn't intend to use over 46 percent had mentioned fear of side effects of modern contraceptives as a major reason for not intending to use in the future (Table 21). This result also agrees with the out come from group discussions. In the focus group discussions a substantial proportion of participants had expressed their concern for health or fear of side effects of modern contraceptives. During the group discussions, some

women had mentioned as they discontinued using some contraceptives due to side effects. They have also mentioned their concern for health problems such as gastric pain, infertility, skin infection, loss of weight, etc. resulting from use of modern contraceptives. Moreover, another important factor mentioned by about 23 percent of non-current users as a reason for not intending to use contraceptives in the future was the desire to have more children (Table 21).

Table 21*:* Percentage distribution of surveyed women who were non-current users by future intention to use modern FP- methods, Awassa, March1999

Future Intention	*Number*	*Percent*
Future Intention to use modern contraceptives:		
Intending	383	72.5
Not- Intending	106	20.1
Undecided	35	6.6
Don't Know (DK)	4	0.8
Total	***528***	***100.0***
Methods preference of those who were intending to use modern contraceptive methods		
Pills	94	24.7
Loop/IUD	14	3.7
Injectables	167	43.8
Condom	2	0.5
Tubal ligation	4	1.0
Vasectomy	1	0.3
Norplant	35	9.2
Other	64	16.8
Total	***381***	***100.0***
Reasons for not intending to use		
Want children	24	22.6
Health concern/fear of side effects	49	46.2
Religious reason	6	5.7
Husband opposition	4	3.8
Difficult to reach	2	1.9
Other	21	19.8
Total	***106***	***100.0***

6.7. *Unmet need for Family planning*

Table 22 presents the distribution of women who were exposed to risk of pregnancy by their future preference to space or limit births and current contraceptive use status.

Table 22: Distribution of respondents exposed to risk of pregnancy by future preference to space or limit births and current contraceptive use status,

Awassa, March1999

Future Preference	*All women*	*Women exposed to risk of pregnancy*			
		Total no. of women	*Users*	*Non - users*	*Percent*
Want to space	551	381	73.2(279)	26.8(102)	100
Want to limit	309	174	69.5 (121)	30.5(53)	100
Total	***860***	***555***	***72.1(400)***	***27.9 (155)***	***100***

Note: Figures in parentheses refer to number of cases

As a whole, women exposed to risk of pregnancy and who intended to space or limit their births constitute about 64.5 percent of all fecund women who wanted to space or limit their births (Table 22). Besides, among all women exposed to risk of pregnancy and who wanted to space or limit their births about 72.1 percent were using contraceptives at the time of the survey. Those who were exposed to risk of pregnancy and who wanted to space or limit births but who weren't using contraceptives were about 28 percent of women exposed to risk and wanted to space or limit their births.

On this basis, this group of women have been identified as a group exposed to risk of unwanted pregnancy and having unmet need for FP. When the composition of unmet need is considered within this group, unmet need for spacing and limiting births account 65.8 percent and 34.2

percent, respectively. As a whole, the unmet need group of women also constitute 13.6 percent of total surveyed mothers.

6.7.1. Reasons for non-use of contraception among women with unmet need

The main reasons for non-use of contraceptives reported by women with unmet need for FP are summarised in Table 23 below.

Table 23: Percentage distribution of surveyed women with unmet need by reasons for non-use of contraceptive methods, Awassa, March1999

Reasons for non-use	*Number*	*Percent*
Breastfeeding	28	18.5
Non-presence of husband	8	5.3
Disapproval of contraceptives/don't want	11	7.3
Health concern/ side effects	78	51.7
Lack of knowledge	2	1.3
Husband refused	2	1.3
Religious reason	4	2.7
Use natural method	9	6.0
Other	*9*	*5.9*
Total	*151*	*100.0*

Women exposed to the risk of unwanted pregnancy had reported several reasons for not initiating contraceptive use afterbirth. One of the major reasons mentioned by over half (51.7 percent) of the respondents was health concern and fear of contraceptive side effects.

Another major reason of non-use stated by the second highest percentage (nearly 19 percent) of

the respondents was also indicator of the prevailing women's perception of no risk of conception because of their current breastfeeding practice, regardless of the return of menses and beginning sexual activity. On this basis, the most important factors causing unmet need among the study population partly seem to be the concern of women about their health and side effects of contraceptives and women's perception of no risk of pregnancy while breastfeeding (Table 23).

6.7.2. Other felt needs for postpartum FP- services

Another approach used in the study to assess unmet needs for postpartum FP services was the qualitative information generated through Focus Group Discussions (FGDs). So, here it may be worth noting that the survey results with regard to unmet need for FP are in line with the result obtained from the FGDs.

With the aim of attaining further insight on demand for FP and to identify the major felt needs of target participants, one of the main topics posed for group discussion was about FP service needs. During the FGDs target participants were asked to mention their important types of service needs. Then, according to consensus of FGD participants, the most important types of service needs mentioned by participants include needs for adequate FP-IEC/ counselling and education, examination service, education on infant care and nutrition, and other contraceptive services.

However, of all needs mentioned the need for adequate FP-IEC/ counselling service was the major felt need reported by group participants consistently. In this regard, the FGD participants had clearly indicated their greatest need for obtaining adequate FP-IEC/ counselling before

receiving contraceptive supplies. At the same time, they had also mentioned that the existing FP-IEC or counselling service was inadequate (or weak).

Similarly, another important issue treated in the group discussions was identification of major constraints / problems for postpartum contraception. On this basis, main problems indicated by the group participants include prevalence of fear and rumours about side effects of contraceptives, lack of adequate FP-IEC /counselling and examination service and opposition from husbands. Again during this discussion, lack of adequate FP- information and counselling service was a key problem identified as a barrier to family planning use.

Lack of adequate FP-IEC/ counselling service as a major constraint to FP-practice was also a main point emphasised by the service providers, during the discussions held with service providers. According to the service providers, shortages of IEC materials, trained staff, enough rooms to conduct counselling privately, etc., were the main service side problems affecting the provision of adequate FP-IEC/ counselling service. In addition, the service providers had mentioned the prevalence of shortage of staff; lack of relevant logistic materials and supplies as main constraints affecting the provision of adequate examination service to clients. From the provider's view, lack of follow-up, supervision and feed backs for monthly reports, etc., were other problems reported as affecting the quality of service given to FP- beneficiaries.

On this basis, the focus group result generally has revealed that adequate FP-IEC/counselling service was a major felt need of FP-beneficiaries.

6.8. Differentials in postpartum contraceptive use: bivariate analysis

Postpartum contraceptive use varies depending on postpartum behavioural factors, demographic and socio-economic characteristics of women. Thus, this section deals with bivariate analysis of selected demographic, postpartum and socio-economic characteristics of surveyed mothers and their contraceptive use.

6.8.1.Demographic Characteristics and Contraceptive Use

Table 24: Percentage distribution of surveyed mothers by demographic characteristics and current contraceptive use status, Awassa, March1999

Characteristics	*Current use*		*Total*	*X2 (chi-square)*	*P (sig.)*
	User	*Non-User*			
Total	*602*	*540*	*1142*		
Age				19.139***	0.000
15-24	59.8	40.2	100 (391)		
24-35	51.2	48.8	100 (621)		
35+	38.5	61.5	100 (130)		
				39.308***	0.000
No. *of surviving children*					
1	51.2	48.8	100 (334)		
2	61.5	38.5	100 (296)		
3	63.5	36.5	100 (192)		
4+	39.9	60.1	100 (318)		
Additional children desired	50.2	49.8	100 (309)	4.719	0.194
0					
1	55.5	44.5	100 (209)		
2	58.5	41.5	100(241)		
3+	51.1	48.9	100 (237)		

*Significant at *** p<0.001*

Age

Table 24 depicts the bivariate relationship between selected demographic characteristics and contraceptive use. As the pattern by age reveals, contraceptive prevalence relatively appears to

be higher among the younger women than for the older women. From the observed data contraceptive use tend to be associated with age. Based on the X^2 –test result this association is also statistically significant at $p < 0.001$.

Number of surviving children

In this regard, relatively higher contraceptive use was observed among women with three living children (63.5 percent) followed by women with two children (61.5 percent), while the least was among women with four or more children (39.9 percent).

The X^2-test has also confirmed the prevalence of a statistically significant association ($p<0.001$) between number of surviving children and women's postpartum contraceptive use (Table 24).

Desire for additional children

Concerning the number of additional children desired, postpartum contraceptive prevalence was found to be relatively less among women who desired to stop child bearing followed by women wished to have many more children (three or more).

However, in the bivariate analysis there was no statistically significant association found between number of additional children desired and women's contraceptive use (Table 24).

6.8.2. Postpartum Variables and Contraceptive Use

A bivariate analysis was also employed to examine the association between postpartum variables and women's contraceptive use. Table 25 below presents the result obtained in the bivariate analysis.

Table 25: Percentage distribution of surveyed mothers by postpartum variables and current contraceptive use status, Awassa, March1999

Postpartum variables	*Current contraceptive use*		*Total*	*X^2 (chi-square)*	*P (sig.)*
	Users	*Non – users*			
Total	***602***	***540***	***1142***		
Postpartum duration (in months)				***52.251******	***.000***
0-6	34.0	66.0	100 (268)		
7-12	56.9	43.1	100 (364)		
13-18	57.0	43.0	100 (284)		
19-24	63.1	36.9	100 (225)		
Current breast-feeding status				***36.723******	***.000***
Breastfeeding	48.5	51.5	100 (930)		
Not – breastfeeding	71.6	28.4	100 (211)		
Amenorrhea				***237.136******	***.000***
Amenorrheic	20.4	79.6	100 (378)		
Non-amenorrheic	68.7	31.3	100 (764)		
Resumption of coitus				119.287***	.000
Not – resumed	8.3	91.7	100(133)		
Resumed	58.6	41.4	100(1009)		

Significant at *** P<0.001

Postpartum duration

As regards to postpartum duration, as the time after birth lengthens contraceptive prevalence also tended to rise (Table25). Over the 24 months postpartum period considered, the contraceptive prevalence ranged from 34.0 percent among women within 0 to 6 months postpartum to 63.1 percent for those who were within 19 or more months after their last live births. In this case, contraceptive prevalence rate appeared to be relatively lower in the early postpartum period than latter periods. Based on the bivarite analysis, the postpartum duration and women's contraceptive use are statistically associated (i.e. at $p<0.001$).

Breast-feeding and contraceptive use

Among mothers who were breastfeeding their newly born babies at the time of the survey, 48.5 percent were using contraceptives; while the proportion using contraceptives among the non-breastfeeding mothers was nearly 72 percent (Table 25).

Though, contraceptive protection of breast-feeding varies among individuals depending on the latational status of a mother (frequency of suckling, infant food supplementation, return of menses, etc.), relatively breast-feeding mothers appeared to be reluctant to use contraception than their counterparts who weren't breast-feeding their children. As confirmed by the X^2 (Chi-square) test, the association between breastfeeding status and postpartum contraceptive use is statistically significant (i.e. $P < 0.001$).

Amenorrhea and contraceptive use

Higher contraceptive use rate was also observed among non-amenorrheic mothers. Among mothers who reported to be non-amenorrheic during the survey, the proportion who were using contraceptives were 68.7 percent. The contraceptive use rate for amenorrheic mothers was only 20.4 percent. In general, as the bivariate statistical analysis confirmed, there is a high statistically significant ($P < 0.001$) association between women's amenorrheic status and their postpartum contraceptive use (Table 25).

Resumption of coitus

Among women who had resumed coitus the contraceptive prevalence was 58.6 percent while it was only 8.3 percent for those who hadn't resumed (Table 25). Thus, most of women who resumed sexual relations after their last births were contraceptive users.

In the bivariate result the resumption of sexual relations after birth and contraceptive use tended to be associated ($p<0.001$).

6.8.3. Socio-economic Characteristics and Contraceptive Use

Table 26 presents contraceptive use by women's education, religion, work, occupation and household economic status including husbands' education and occupational status

Women's education and contraceptive use

From data in Table 26, 34.7 percent of the illiterates, 56.7 percent of mothers with primary education and 59 percent of those who had secondary and above educational level were using contraceptives at the time of the survey.

As expected, the postpartum contraceptive prevalence tended to go up with educational attainment level of the surveyed mothers. Mothers with better education appeared to have higher contraceptive use rate as compared to the illiterate or less educated. From the observed pattern, women's education tends to be positively associated with postpartum contraceptive use. In the bivariate analysis, the association between women's education and their postpartum contraceptive use was statistically significant (i.e. at $P < 0.001$).

Women's religious affiliation and contraceptive use

With regard to religion, higher contraceptive prevalence was observed among the Orthodox followed by the Protestants. Less contraceptive prevalence was also observed among the Catholic and Islam religion followers (Table 26). However, based on the X^2 –test women's religious affiliation and their contraceptive use after birth was not statistically associated.

Table 26: Percentage distribution of surveyed mothers by selected socio-economic characteristics and contraceptive use, Awassa, March1999

Characteristics	*Current use of contraceptives*		*Total*	X^2 *(Chi-square)*	*p (sig.)*
	Users	*Non-users*			
Education				47.133***	.000
Illiterate/non-formal	34.7	65.3	100 (274)		
Primary (1-6)	56.7	41.4	100 (215)		
Secondary & above	59.0	41.0	100 (636)		
Religion				5.954	.114
Orthodox	54.3	45.7	100(490)		
Catholic	36.2	63.8	100(47)		
Protestant	53.1	46.9	100(554)		
Islam	49.0	51.0	100(51)		
Work status	50.1	49.9	100 (758)	6.032*	.014
Not – working					
Currently working	57.8	42.2	100 (384)		
Women's occupation				3.678	.298
No /Elementary occupation	50.9	49.1	100(798)		
Professional, technical & clerical	57.2	42.8	100(145)		
Service & sales workers	56.7	43.3	100(164)		
Production & related	58.1	41.9	100(31)		
Husband education				28.948***	.000
Illiterate/non-formal education	30.5	69.5	100(82)		
Primary (1-6)	43.0	57.0	100(186)		
Secondary (7-12)	56.9	43.1	100(629)		
Above secondary (12+)	56.3	43.7	100 (238)		
Husband occupation				15.892**	.003
No /elementary occupation	46.0	54.0			
Administrative, managerial & professional	61.2	38.8			
Technical & clerical	60.4	39.6			
Service & sales	52.1	47.9			
Production & related	48.5	51.5			
Household economic status				14.376**	.001
Low	45.0	55.0	100 (387)		
Middle	57.1	42.9	100 (597)		
Better/high	55.3	44.7	100 (152)		

Significant at * p<0.05 ** p<0.005 *** p<0.001

Women's work status and contraceptive use

As Table 26 shows, 57.8 percent of the working and 50.1 percent of the mothers who had no work were contraceptive users at the time of the survey. Relatively, contraceptive prevalence tended to be higher among the workingwomen than for the non-working. The relationship between women's work status and their contraceptive use was also found to be statistically significant at $p<0.05$.

Women's occupation and contraceptive use

Occupationally, relatively less use of contraceptive was also found for those who had no occupation or who were engaged in elementary occupation (50.9 percent). In Table 26, the contraceptive prevalence rates observed for professionals, technicians and clerks, as well as for those engaged in production and related occupations are almost comparable. However, the bivariate analysis has confirmed that there was no statistically significant association between women's occupational status and their contraceptive use.

Husband education and contraceptive use

From the pattern observed in Table 26, postpartum contraceptive use of women also tended to increase with educational status of their husbands. In this case, less contraceptive use was observed among women with illiterate or less educated husbands, while relatively higher use rate was among those who had better-educated husbands. The association between husband's education and women's postpartum contraceptive use was also statistically significant (at $p<0.001$).

Husband's occupation and contraceptive use

When occupational status of husbands' is considered, higher contraceptive use was observed among mothers with husbands engaged in administrative, managerial, and professional work followed by technical and clerical workers, while least contraceptive prevalence was for women with husbands engaged in elementary occupation or had no occupation. In this regard, the bivariate analysis generally indicates the prevalence of statistically significant association (i.e. $p<0.005$) between husband's occupational status and women's contraceptive use afterbirth (Table 26).

Household economic status and contraceptive use

From data in Table 26, the postpartum contraceptive use was higher among women with better and middle economic status, while it was relatively lower for those with low economic status. As the bivariate analysis suggests, women's economic status and their contraceptive use tend to be associated (i.e. at $p<0.005$).

6.8.4. Family Planning (FP) Variables and Contraceptive use

Table 27 presents distribution of surveyed women by husband's attitude towards contraception, husband wife discussion on family planning, access to FP- information during antenatal care and child immunisation, and contraceptive use.

Table 27: Percentage distribution of surveyed mothers by some selected family panning (FP) variables and contraceptive use, Awassa, March1999

FP- variables	*Current use of contraceptives*		*Total*	X^2 *(chi-square)*	*P (Sig.)*
	Users	*Non Users*			
Attitude of husband towards contraception				101.951***	.000
Approves	60.7	39.3	100(917)		
Disapproves	28.0	72.0	100(107)		
Indifferent	17.7	82.3	100(62)		
Don't know (DK)	10.0	90.0	100(30)		
Husband & wife discussion on – FP				102.180***	.000
Yes	63.0	37.0	100(808)		
No	29.0	71.0	100(303)		
Receiving FP information during visits for antenatal care				12.637***	.000
Yes	58.6	41.4	100(751)		
No	46.4	53.6	100(295)		
Receiving FP- information during child immunisation				23.542***	.000
Yes	60.4	39.6	100 (725)		
No	44.6	55.4	100 (341)		

Significant at *** p<0.001

Attitude of Husbands

As examination of the bivariate result in Table 27 shows, higher contraceptive use rate (60.7 percent) was among women with husbands that approve use of contraceptives, while relatively lower contraceptive use was observed (only 28 percent) for those with husbands that disapprove use of contraceptives. In this case, the bivariate finding has indicated the prevalence of close association between husbands' attitude and women's contraceptive use ($P < 0.001$).

Husband and wife discussion on Family planning

Women who had discussed family planning matters after their last births had higher contraceptive use rate (63 percent) as compared to their counterparts that hadn't discussed (29 percent). As depicted in Table 27, in the bivariate analysis a statistically significant association ($P < 0.001$) has been found between husband and wife discussion on family planning matters and women's contraceptive use afterbirth.

Access to FP - information during antenatal care

The bivariate analysis has also shown the prevalence of a significant association between women's access to family planning information/education during antenatal care and postpartum contraceptive use ($P < 0.001$). The postpartum contraceptive use was higher (58.6 percent) among mothers who received FP- information during antenatal care than those who hadn't received (46.4 percent).

Higher contraceptive prevalence (60.4 percent) was observed among mothers who received FP-information/education during attending child immunisation than those women who hadn't obtained FP-information (44.6 percent). In the bivariate analysis this association also has been found to be statistically significant (i.e. $P < 0.001$).

CHAPTER VII.THE DETERMINANTS OF POSTPARTUM CONTRACEPTIVE USE: Multivariate analysis

The bivariate analysis in the preceding chapter has indicated statistical associations existing between women's demographic, postpartum and socio-economic characteristics and their contraceptive use. However, the bivariate results didn't show the directions of the observed relationships and the net effect of each independent variable on the outcome behaviour (or women's contraceptive use). As the bivariate associations were observed without controlling for the effect of other factors, it is very difficult to conclude whether the observed statistical association was because of the existing causal relationship between a given independent variable and the outcome behaviour or due to other confounding factors.

So that, a bivariate analysis doesn't permit one to measure the net effect of each independent variable on the outcome behaviour and to identify the most important predictors of the outcome behaviour. Therefore, to overcome these fundamental shortcomings of the bivariate analysis, and to identify the most important predictors of the outcome behaviour this section deals with multivariate analysis of the relationship between women's contraceptive use and their selected demographic, postpartum and soci-economic characteristics. For the multivariate analysis we have employed a logistic regression model.

7.1. Multivariate Model

The Logistic Regression Model applied for the multivariate analysis was as given below:

$\ln (P_i/1-P_1) = B_o + B_1 X_1 + ... + B_n X_n$

Generally, while this model is used to predict the likelihood of contraceptive use among the

study population, each parameter in the model represents the following:

l_n (p_i./l-p_i) - Represents the log odds of being a contraceptive user for 1^{th} women in the sample

P_i = the probability of using contraception for the 1^{th} woman in the sample.

X_l to X_n - Represent the independent demographic, postpartum and socio-economic variables included in the model.

B_i - Represents the unknown regression coefficients

Within this model, the relationship between the probability and the independent variables is assumed to be non-linear. The unknown regression coefficients (or the betas) are estimated by a maximum likelihood method. An estimated coefficient for a beta (b_i), which is associated for independent variable (X_i) included in the model, measures the increment in log odds for one unit increase in the given X_i, holding other independent variables constant. Further, exp (b_i) represents the multiplicative factor by which the odds change for every one-unit increase in a given X_i, when other factors are controlled. In this context, each of the estimates for multivariate coefficients (b_i) is a measure of the net effect of the corresponding independent variable included in the model (Halli and Rao, 1992).

In the multivariate model, to identify the independent variables that enter into the model the stepwise variable selection methods available in the logistic regression procedure have been employed.

In the application of statistical models like the logistic regression, assessing the prevalence of multicollinearity between independent variables is an essential condition before making estimation of the parameters. Because, the presence of high degree of multicollinearity leads to unreliable coefficient estimates and large standard errors.

Hence, for diagnosing multicollinearity the matrix of correlations between independent variables has been carefully examined. Then, to cope with collinearity, among the independent variables selected with the stepwise regression methods those which showed high degree of collinearity with other independent variables have been removed from the final model applied for estimation of the multivariate coefficients. On the basis of these statistical approaches and logical plausibility, the independent variables finally included in the multivariate model are: age, postpartum duration, postpartum amenorrhea status, women's education, receiving FP information/education during child immunization, husband's occupation and husband's attitude towards contraception.

In the model, age and education were entered as continuous variables. Postpartum duration and husband's occupation included in the model as categorical and dummy coded. All other independent variables entered into the model are also dummy coded.

After model fitting, the overall goodness of the fitted multivariate model has been assessed using observed result of the likelihood ratios and chi-square test. The result obtained also suggests that the model is a good fit.

7.2. Multivariate Findings

The result of the multivariate analysis is presented in Table 28 below. As Table 28 shows, among all independent variables included in the logistic regression model, postpartum amenorrhea status, a woman's age, receiving family planning information or education during child immunisation and husband's attitude have come out to be the most important predictors of the likelihood of postpartum contraception among the study population.

In the multivariate analysis, when postpartum duration and other background variables are controlled, postpartum ammenorrhea status of women has come out to be the main predictor of the likelihood of postpartum contraception among the study population. Postpartum amenorrhea status has shown a high statistically significant association ($P < 0.001$) with the likelihood of postpartum contraception. The direction of association between amenorrhea status and the likelihood of contraception is also in line with expectation. The estimated multivariate coefficient in this case suggests as the resumption of menses has a strong positive effect on the likelihood of using contraceptives after birth. The result obtained generally indicates that the return of menses was accompanied by higher contraceptive use. Thus, the odds of using contraceptives among women whose menses have returned was about 6.8 times higher than their counterparts who were still amenorrheic, when all other variables in the model are held constant.

Table 28: Logistic regression model parameters' estimates for the likelihood of postpartum contraceptive use among married women in Awassa, March 1999

Variables	*Estimated coefficients (b)*	*Standard error*	*Odds ratio*	*Sig. Level*
Age	-0.0547	0.0147	0.9468***	0.0000
Postpartum Duration				
0-6 months	**RC**			
7-12 months	0.3057	0.2173	1.3576	0.1594
13-18 months	0.1048	0.2316	1.1105	0.6510
19-24 months	*0.2996*	0.2497	1.3493	0.2302
Postpartum Amenorrhea				
Amenorrheic	**RC**			
Non- amenorrheic	*1.9130*	0.1780	6.7731***	0.0000
Women's Education	*0.0243*	0.0194	1.0246	0.2101
Husband's Occupation				
No/ Elementary occupation	**RC**			
Administrative, Managerial & professional	0.1048	0.3149	1.1105	0.7393
Technical & Clerical	0.0222	0.2670	1.0224	0.9338
Service and Sales	-0.1921	0.2532	0.8252	0.4481
Production and related	-0.1784	0.2326	0.8366	0.4432
Receiving FP-information during child immunisation				
Not-received	**RC**			
Received	0.6091	0.1634	1.8389***	0.0002
Husbands' attitude				
Approve	**RC**			
Disapprove / Indifferent	-1.2724	0.2249	0.2801***	0.0000
-2 Log likelihood (initial)	1345.6929			
-2 Log likelihood (estimated)	1076.6170***			
(Number of cases 1142)				

Significant at ***p<0.001

Note: **RC**: Reference Category with which other categories are compared.

Another important predictor of postpartum contraception was women's age. The likelihood of postpartum contraception was significantly (P<0.001) related to women's age. In this case the sign of the estimated multivariate coefficient for age of women further shows the negative influence of age on the likelihood of postpartum contraception. As shown in Table 28, when all other explanatory variables in the multivariate model are controlled, each additional year in a woman's age decreases the log odds of contraceptive use by a factor 0.0547. In other words, this indicates as every one-year increase in a woman's age reduces the odds of using contraception by about 5 percent.

Husband's approval of family planning practice has a strong influence on the likelihood of postpartum contraceptive use by women. The multivariate coefficient for husband's attitude is highly significant (p<0.001). As the result shows, husbands' disapproval of contraception has a strong negative effect on the likelihood of women's postpartum contraceptive use. The likelihood of postpartum contraception among women who had husbands that disapprove or were indifferent to contraceptive use was significantly lower than women with husbands that approve contraception. Women in the former case were less likely to initiate postpartum contraception than the latter group. Hence, the odds of using contraceptives for women whose husbands approved contraception was about 3.6 times higher than their counterparts who had husbands that disapproved or were indifferent to contraceptive use.

The likelihood of postpartum contraceptive use was also significantly associated (i.e. at p< 0.001) with receiving family planning information during visit for child immunisation. In the multivariate analysis odds of using contraceptives for women who received FP- information

during child immunisation was over 1.84 times higher than those who hadn't received information. This finding still confirms the bivariate result.

In the multivariate result, each additional year of a woman's education tended to increase the odds of postpartum contraception by a factor 1.0246. In other words, this may indicate as each additional year of schooling or education attained by a woman increases the odds of postpartum contraception by about 2.5 percent, when all other independent variables in the model are held constant. In this regard, the multivariate result generally may suggest the positive influence of women's education on the likelihood of postpartum contraception. However, in the multivariate analysis, the association between postpartum contraception and women's education wasn't found to be statistically significant.

The multivariate estimates of coefficients for postpartum duration are all positive numbers. This pattern may suggest the prevalence of positive relationship between the likelihood of postpartum contraception and postpartum duration (the length of time after a woman's last live birth). The estimated odds ratios in the multivariate result also tend to show the prevalence of more likelihood of contraception in the late postpartum duration as compared to the earlier period (Table 28). The odds of using contraception among women who were within 7 to 12, 13 to 18 and 19 to 24 months were respectively about 1.36, 1.11 and 1.35 times higher than their counterparts who were within 0 to 6 months postpartum, when all other factors in the model are held constant. However, neither of the multivariate coefficients for postpartum duration were found to be statistically significant. Therefore, postpartum duration wasn't found to be a significant predictor of postpartum contraceptive use among the studied women.

Similarly, estimates of the multivariate coefficients for husband's occupation weren't statistically significant. Even so, in this regard examination of the multivariate result suggests that women with husbands that were engaged in managerial and professional, technical and clerical occupations were more likely to initiate postpartum contraception than women with husbands of no occupation or engaged elementary occupation, in service and sales or production and related occupations. The odds of postpartum contraception among women in the former cases were 1.11 and 1.02 times higher than women whose husbands had no occupation or engaged in elementary occupations, while it was less than one in both the latter cases as compared to the reference group (Table 28). However, from the multivariate result one could see that husband's occupation wasn't an important predictor of the likelihood of postpartum contraception among the women in the present study.

CHAPTER VIII. DISCUSSION

Overall, 52.7 percent of the surveyed women were using contraceptives at the time of the survey. This result of the study on use of contraceptive methods compares with findings from other studies for urban areas in Ethiopia (CSA, 1993; Seyoum et al., 1994; CSA, 1997). The result much compares with the result of a survey conducted in Awassa town in 1999, which has found 50.8 percent of contraceptive prevalence rate among non-pregnant currently married women (Zenabu et al., 1999).

Most women practice contraception for spacing births rather than for limiting family size. The potential demand for contraceptive service also appears to be high among the study population. Nearly 73 percent of the non-users intended to use modern contraceptives in the future. Most current users (about 63 percent) initiated contraception after their first postpartum menses returned. Those who initiated contraception during amenorrhea were about 37 percent of the total.

Among the survey respondents about 27.1 percent wanted to stop childbearing while 48.3 percent of them wished to delay their births by at least two years. This result still would suggest that the surveyed women were more motivated to use contraception for child spacing purpose rather than for family size limitation.

The survey result has shown the prevalence of unmet need for postpartum contraceptive service among the study population. Of all women who were exposed to risk of pregnancy (i.e. non-pregnant, non-amenorrheic and who resumed coitus) and wanted to space or limit their births about 28 percent weren't using contraceptives at the time of the survey.

As a whole, this group of women constitutes 13.6 percent of the total respondents. According to studies of developing countries, total unmet need among married women in the reproductive age (i.e. for both rural and urban residents) ranges from 11 percent in Thailand and Turkey to 36 percent in Kenya and 37 percent in Rwanda. The average for developing countries and Africa was also found to be 20 percent and 26 percent, respectively (Robey et al., 1996). In the recent approaches developed for the estimation of total unmet need (Westoff C. et al. 1992; Robey et al., 1996), the unmet need group also includes amenorrheic women if their recent births were mistimed or unwanted.

However, asking whether or not the previous birth had been wanted or unwanted or mistimed partly may depend on the belief that pregnancy is controllable exists in a particular culture, and survey respondents accurately state their past fertility preferences. In traditional societies where parents give high value to children and children are considered as gifts of God, for some women it is unlikely to say that her last child was unwanted. Because, for those having strong religious views once a child is born it is accepted. Otherwise, saying that a child is unwanted may be considered as being against the will of God and some thing bad for a child. Thus, in such situations asking about unwanted or mistimed births would lead to biased responses. As a result of this, the size of total unmet need observed among the study population may be underestimated. Therefore, in this study the result on unmet need could be used as a low estimate of unmet need level for the study population.

The most popular reason for non-use of contraceptives among the non-users exposed to risk of pregnancy was the concern for health and side effects of contraceptives and current breast-feeding status. Both the survey and the qualitative study have indicated the persistence of great

fear and concern about side effects of modern contraceptives among the study population. Hence, fear of side effects of modern contraceptives is an important issue that needs to be seriously addressed by the service providers.

The study women also had unmet need for family planning information. In the focus group discussions women had stated that they need adequate information or counselling which will help them to understand the advantages and disadvantages of methods and to make informed choice of methods. According to the consensus in the FGDs obtaining adequate FP-information is a major felt need of the studied women. The women were generally interested to receive FP- information. However, they have mentioned that the existing service was inadequate. On this basis, lack of adequate FP-IEC/ counselling service perhaps could be one of the factors contributing to the existing widely spread fear of side effects of contraceptives in the study area. Therefore, it would be useful making efforts to improve the existing FP-education and counselling service delivery, and to encourage women to use the available services. In general, in view of the prevailing needs for FP- services it seems necessary designing postpartum FP- strategy to promote contraception effectively among postpartum women, so that health risks associated with unwanted pregnancies could be averted and longer interval between births could be ensured.

Of all predictors included in the multivariate analysis, postpartum amenorrhea status has come out to be the most important determinant of postpartum contraception among the study population. According to the study results, most users of postpartum contraception were non-amenorrheic women. Further, most of the women began contraceptive use after their first postpartum menses returned.

In this regard the result obtained was consistent in the univariate, bivariate and qualitative findings of the study. The consensus of the focus group discussions (FGDs) has clearly indicated that most mothers need to initiate contraception after their menses return. In general, the return of menses has led to higher postpartum contraceptive use among the study women. This result also agrees with research findings in other developing countries (Laukaran and Winikoff, 1985; Oni, GA., 1985; Thapa S. et al., 1992; Salway and Nurani, 1998).

As results from recent researches suggest lactational amenorrehea method is highly effective contraceptive method to prevent pregnancies for properly lacting women (Vekemans M., 1997; CDC, 1999). Its effectiveness also compares with other modern methods. Hence, for postpartum women who rely on contraceptive effect of lactational amenorrhea, seeking contraception protection after first postpartum menses would be very essential to prevent unwanted pregnancy, as the risk of pregnancy generally increases after the end of amenorrhea. (McCann et al., 1981; Bongaarts and Potter; 1983; IPPF, 1996).

However, for sexually active amenorrheic women waiting for return of menses may involve risk of pregnancy. Studies have shown that 3 to 10 percent of women have become pregnant before their postpartum menses returned (Edelman DA et al, 1981). Hence, unless the previous experience and current actual breastfeeding status of the mother is highly reliable to delay initiation of contraception, waiting for menses may expose women with postpartum amenorrhea to risk of unwanted pregnancy.

At present, the contraceptive effect of breast-feeding during lactational amenorrhea period is widely recognised. However, it is considered to provide effective protection against pregnancy

(98 percent) in the first six months after birth if a women is amenorrheic and practice full breast-feeding on demand day and night (Short R., 1992; Vekemans M., 1997).

In view of this, under the present circumstance duration of lactational amenorrhea and full breast-feeding practice tend to be short among the study population. A considerable proportion of the mothers also introduce supplements early in the postpartum period. Since, early supplementary feeding may decrease suckling it may lead to an earlier return of ovulation and menstruation. So that, there will be increased risk of ovulation or return of fertility for women who don't breast-feed adequately and introduce supplements early after delivery(McCann et al., 1981; Bongaarts and Potter; 1983; IPPF, 1996). Thus, the study results suggest the need to encourage full breast-feeding to prevent earlier return of ovulation and risk of conception. In this connection, as the consensus of the focus group discussions showed, there is also a need to enhance the awareness of mothers about the link between early supplementation of infant feeding and rising risk of conception. Postpartum mothers have to be well informed about the link between patterns of breast-feeding and return of fertility after birth. Especially, mothers who breast feed for short period and start weaning their children earlier need to start using contraception earlier in order to prevent unwanted pregnancy or closely spaced births soon after delivery.

A considerable proportion of women exposed to the risk of pregnancy weren't using contraceptives, as they perceived that their breast-feeding practice could help them to prevent pregnancy, though they had begun sexual activity and their menses resumed. Clearly, contraceptive protection mayn't be needed until sexual activity begins. But, a woman who has begun sexual activity and her menses have resumed will be at increased risk of pregnancy even

if she is breast-feeding. Hence, in order to protect women from postpartum risk of conception, and thereby to ensure reasonable interval between pregnancies/births, FP-counselling efforts targeting postpartum women still need to take in to account such perceptions of women prevailing in the study area. Thus, adequate information on breast-feeding and amenorrhea should be given to mothers during FP-education and counselling. Besides, sexually active and non-amenorrheic mothers need to be motivated to start using contraception if they want to avert unwanted pregnancies.

Another important option to avert risk of conception during amenorrhea, for women who want to delay initiation of permanent or long-term contraceptive methods until the return of menses, would be using condom in combination with breast-feeding. However, this situation still underscores the importance of obtaining the understanding, consent and co-operation of the husbands in order to avert risks of unwanted pregnancy soon after birth.

In this context, the study result generally would show the need to promote breast-feeding for birth spacing in order to take the contraceptive advantage of lactational amenorrhea effectively. Again, this may require the need to introduce lactational amenorrhea method (LAM) and integrating it as a contraceptive option in the existing FP/RH-service.

Another important predictor of contraceptive use among the study population was age. Age has been found to have a significant consistent negative association with postpartum contraceptive use in both the bivariate and multivariate analyses. In the multivariate analysis, increasing age has shown a negative association with the likelihood of contraceptive use. The study result in this respect generally indicates that the likelihood of contraceptive use among the younger

women was significantly higher than for the relatively older women. This may also suggest the prevalence of higher motivation to contracept among the younger women than for older women.

This result implies that younger women were more likely to be postpartum contraceptive users than the relatively older women were. Hence, the prevalence of relatively less use of contraception among older women might be due to the effects of perception of low risk of becoming pregnant or prevailing traditional views that favour large families. On the other hand, the prevalence of higher contraceptive use among younger women partly could be as the younger women may want a smaller family and more motivated to contracept than older women.

As Doan and Brewster (1998) clearly noted in their recent work, this pattern of use partly can also be as the younger women were''... more open to new ideas than older women, and thus more aware of the benefits of family planning, more informed about contraceptives, and more accepting of birth spacing or control at lower parties.'' In addition, the prevalence of less likelihood of postpartum contraception among older women partly may attribute to prevalence of reliance on breast-feeding practice, fear of side effects of contraceptives or anticipation of menopause. The consensus of the focus group discussions also supports this assertion. Because, a considerable proportion of older women participants had mentioned as they were used to prolonged breast-feeding practice. Some of them even had further stated that they would like to initiate modern contraceptives when they stop breast-feeding.

Older women also tended to be so concerned about side effects or health problems related to modern contraceptive use, while younger women generally felt that side effects of contraceptives could be managed by switching methods.

Therefore, this situation would give good opportunity for FP service providers to promote contraceptive use among the younger women. In addition, this may also imply the need to give a particular attention to relatively older mothers during FP-education and counselling to motivate and encourage them to use the available service.

Husband's approval of contraception has strong influence on the likelihood of postpartum contraception. In this case, the bivariate and qualitative results of the study also support the multivariate finding. In the FGDs, husband's opposition was one of the key problems mentioned by the group participants as a barrier to contraceptive use. Overall, the results obtained in this case suggest the need to target men is FP- education and information to enhance their perceptions about benefits of family planning, and thus their involvement in family planning practice, and to make them support the contraceptive needs of their wives. Moreover, the current little use of male contraceptive methods would indicate the importance of encouraging and motivating men to practically exercise the family planning decisions in their families. In fact, this requires a change in traditional values and attitude of men. However, such changes can also partially achieved through teaching responsible parenthood and offering adequate counselling and education on family planning.

The use of contraceptives among the surveyed postpartum women was also strongly associated with women's access to FP- information during maternal and child health (MCH) services in

health facilities. Particularly, receiving FP-information during child immunisation was strongly related with postpartum contraception. In this regard, the study result generally shows how family planning acceptance in the postpartum period is heavily influenced by efforts to provide FP-information during MCH services. Thus, the results of the study would show the importance of providing FP – information/ education during child immunisation to promote contraception adoption among the postpartum women.

Overall, the study women appeared to be very interested to obtain FP-information from the health facilities. However, lack of continuity in FP-IEC, lack of adequate print materials such as brochures, mini-posters, leaflets, pamphlets etc., including lack of adequate counselling during contraceptive services has become a set back to satisfy women's needs for FP-information. This situation is also indicative of the need to improve the provision and quality of FP- education and counselling in the study area.

CHAPTER IX. CONCLUSIONS AND RECOMMENDATIONS

9.1. Conclusions

As the study result reveals, of all respondents 52.7 present were current users of modern contraceptive methods. The motivation of the studied women to initiate contraception was mainly for spacing births rather than to limit their family size.

Among the respondents, about 13.6percent were exposed to the risk of unwanted pregnancy due to unmet need for FP. The studied women also had unmet need for family planning information (i.e. education and counselling). Most women seem interested to obtain FP information. However, the provision of FP- IEC/ Counselling in the existing service delivery appears inadequate. Therefore, this situation suggests the need to devise appropriate postpartum FP strategy to address women's needs for FP- information and other contraceptive service.

The potential demand for family planning is high among the study population. Most women need family planning service. Overall, 75.4 percent of respondents wanted to space or limit their births; while 73 percent of the non- current contraceptive users intended to use modern contraception in the future.

A major reason for non-use of modern contraceptive methods is the prevalence of health concern or fear of side effects of modern contraceptives. This would show the need of intensifying FP-IEC/Counselling efforts to enhance women's awareness on health effects of contraceptives, to correct the prevailing myths and misconceptions about modern contraceptives, and to encourage women to use modern contraceptives.

Postpartum contraception was more likely to be practiced by women whose menses have returned, who were younger, and who obtained family planing information during child immunisation and whose husbands approve contraception. Women's education also has a positive influence on postpartum contraception.

In general, the results of the study demonstrate the validity of the study hypotheses. As expected, amenorrhea status has strong influence on postpartum contraceptive use. Most users of postpartum contraception were non-amenorrheic women. Most women began contraceptive use after their first postpartum menses returned, and still most of them desired to initiate contraception after their first postpartum menses returned. The return of menses has led to higher postpartum contraceptive use among the study women. This situation would suggest the importance of promoting breastfeeding for birth spacing through integrating lactational amenorrhea method (LAM) in the existing FP service. In this way, introducing LAM in the service delivery is expected to reduce risk of unwanted pregnancies during amenorrhea or breastfeeding for those who want to rely on the contraceptive advantage of breastfeeding. Further, LAM could serve as a contraceptive option for breastfeeding women who have strong fear of side effects to initiate modern contraception in the early postpartum period.

Age of women is an important determinant of postpartum contraceptive use. The study result in this respect has indicated the prevalence of higher motivation to contracept among the younger women than for older women. This result is also indicative of the need that the service providers should give a particular attention to relatively older women during FP education and counselling to encourage and motivate them to use the available services.

The chance of initiating postpartum contraceptive use was strongly related to husbands' attitude towards contraception. Among the studied women, the probability of postpartum contraceptive use was significantly lower for women whose husbands had negative attitude towards contraception. This finding general implies the importance of targeting men and encouraging them to participate in family planning.

Receiving FP- information during child ammunition is an important determinant of postpartum contraceptive use. This result of the study also demonstrates the importance of intensifying efforts in FP-IEC/Counselling during MCH services to promote postpartum contraception.

As expected, women's education has shown a positive influence on postpartum contraception. This result reflects the importance of improved education for women to promote their social status and family planning use.

Therefore, on the basis of the study results, the following recommendations are given.

9.2. RECOMMENDATIONS

1. Greater effort should be made to enhance postpartum mothers' awareness on health and contraceptive benefits of breastfeeding. Along this, particular attentions need to be given to introduce the mothers about the possible link between breastfeeding patterns and maternal fecundity.
2. FP/RH service providers need to design strategies to address postpartum women needs for family planning counselling, information and other contraceptive services.
3. Lactational amenorrhea method (LAM), as an option for early initiation of contraception, need to be integrated as a package of postpartum reproductive health services.

4. Increased educational opportunity for women should be encouraged, as education is a major promoter of the social status of women and contraceptive use.
5. During FP - IEC/ Counselling particular attention need to be given to relatively older mothers to motivate and encourage them to use FP – service, at the same time without disregarding providing information to younger women.
6. Since exposure to family planning information and FP - practices are strongly related; efforts to promote FP-IEC during MCH services should be intensified. Similarly, efforts to promote FP - IEC messages need to be continuous and supported with important means of communication such as motivational brochure, pamphlets, leaflets, mini- posters, TV, Tape/Radio, etc. In this regard, developing adequate FP-IEC/Counselling materials for postpartum FP service is very essential.
7. To cope with fear of side effects of modern contraceptives greater efforts need to be made in FP-IEC/Counselling messages to provide adequate information about the benefits and risks of all fertility regulation methods, including the misconceptions and rumours prevailing about modern contraceptives. In addition, to make users feel more comfort about quality of family planning services being offered, attention must also be given to improve the quality of the FP - IEC/ counselling, and to provide essential laboratory test services. Further, staff who provide FP- service should be adequately supervised to ensure the quality of the service.
8. Programs should encourage husbands to attend antenatal and postnatal sessions, so that they could be responsible fathers who support the family planning needs of their wives.
9. In the future, similar studies addressing husbands of post-partum mothers need to be encouraged.

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Annex I. Household Information and Eligible Women Identification form

Keftegna/ Wereda _____
Kebele _____
Zone _____

House No.	*Household Serial No.*	*Name of the Household (HH) usual member*	*Sex: 1. Male 2. Female*	*Age*	*Relation to head of Household*	*Current marital status Age 10+*	*Criteria To Identify Eligible women for the study*				*Eligible women are those encircled code 1 under column 8-10 & code 2 under column 11*
							Is/age of [name] in 15-49? 1. Yes 2. No	*Is [name] currently married? 1. Yes 2. No*	*Did [name] give birth in the last 24 months? 1. yes 2. No*	*Is [name] currently pregnant 1. yes 2. No*	
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*

Codes for 6:
1. Head
2. Husband/wife
3. Son/daughter
4. Relative
5. Non-Relative

Codes for 7:
1. Married
2. Divorced
3. Widowed
4. Separated
5. Never Married

Enumerator's Name _____ Signature _____
Supervisor's Name _____ Signature _____

Annex -II

DEMOGRAPHIC TRAINING AND RESEARCH CENTER

INSTITUTE OF DEVELOPMENT RESEARCH

ADDIS ABABA UNIVERSITY

WOMEN'S QUESTIONNAIRE FOR THE STUDY ON: THE DETERMINANTS OF POST- PARTUM CONTRACEPTIVE USE

AMONG CURRENTLY MARRIED WOMEN IN AWASSA.

QUESTIONNAIRE NUMBER:_____

AREA IDENTIFICATION

TOWN / CITY_____

KEFTEGNA_____

KEBELE_____

HOUSE NUMBER_____

HOUSEHOLD SERIAL NUMBER_____

SERIAL NUMBER OF ELIGIBLE WOMEN_____

INTERVIEWER'S VISITS

VIST	FIRST	SECOND	THIRD
Date			
❖ RSEULT			
TIME TAKEN TO COMPLETE			

❖ RESULT: 1. Completed 2. Respondent was not found 3. Postponed

4. Refused 5. Partially completed 6.Other(specify)_____

INTERVIEWER'S NAME:_____Signature_____Date_____

SUPERVISOR'S NAME_____Signature_____Date _____

SECTION 1: RESPONDENT'S BACKGROUND CHARACTERISTICS

A1. For how many years have you been living continuously in Awssa town?
1. _____ years 2. _____months
3.All my life _____ (SKIP to A3)

A2. Did you live in a rural area or urban center before you came to Awassa?
1. Rural area/village 2. Urban center (name)_____

A3. How old are you ? Age (in completed years)_____

A4. What is your religion?
1. Orthodox 2. Catholic 3. Protestant 4. Muslim
5. Other (Specify)_____

A5. What is your ethnic group?
1. Amhara 2. Oromo 3. Tigre 4. Sidama 5. Welaita
6.Kembata 7. Hadiya 8. Guragie 9. Gedeo 10. Gidole
11.Keffa
12. Other (Specify)_____

A6. Can you read and write?
1. Yes 2. No _____(Skip to A8)

A7 . If yes, what is your educational status/ highest level of schooling you completed?
1. No schooling 2. Grades completed (specify)_____
3. Other (specify)_____

A8. Apart from household duties such as cooking, cleaning, washing clothes, rearing children, etc., do you have any other work?
1. Yes 2. No_____ (Skip to A12)

A9. Whom are you working for?
1. Self employed 2. In family business
3. For Government 4. NGO/ International organization
5. For some one else 6. other (specify)_____

A10. What kind of work do you do?
Type of work:_____

A11. Do you do this work at home or away from home ?
1. At home 2. Away from home 3. Other (Specify)_____

A12. Is your present union the first marriage?
1. Yes 2. No

A13. How many years have you been married in this union? _____years

A14. Are you currently living with your husband?
1. Yes 2. No 3. Other (specify)_____

A15. Does your husband have any other wife?
1. Yes 2. No 98. Don't know

A16. How old were you when you married for the first time?
1. Age (In completed years):_____98. Don't know

SECTION 2: REPRODUCTION HISTORY

B1. Are you pregnant now?
1. yes _____ (Quit Interview) 2. No

B2. How many male and female children have you everborne alive?
Males_____Females_____Total_____

B3. How many of these children are now living with you?
Males_____ Females_____Total_____

B4. How many of these children are living elsewhere?
Males_____Females_____Total_____

B5. Have you ever given birth to child who was born alive but died later?
1. Yes 2. No_____ (Skip to B37)

B6. How many children were born alive but died later? (Even if the child lived for a short period of time)?
Males_____Females_____Total_____

INTERVIEWER: Add the number given to B3, B4 and B6 and check with B2.

B7. How old were you when you had your first live birth?
1. Age (in completed years):_____ 98. Don't know

B8. Have you given birth to any child during the last 12 months?
1. Yes 2. No

B9, In what month and year your last child was born?
Date of birth of last child: Day_____Month_____Year_____

B10. Is your last child alive?
1. Yes 2. No_____(Skip to B12)

B11. Are you now breast feeding your last child?
1. Yes _____(Skip to B13) 2. No

B12. For how many months did you breast-fed?_____months

(***INTERVIEWER:*** If the child was never breast-fed write 'oo' months)

B13. Are you currently giving the child other supplement food (food or liquid) besides breast milk?
1. Yes 2. No (only breast milk)_____ (Skip to B16)

B14. For how long after birth did you breasted the child with breast- milk only?
_____months

B15. Do you regularly and most often (i.e. above 85%) give the baby your breast milk?
1. Yes 2. No

B16. In your opinion, for how long should breast-feeding continue without supplement feeding? 1. _____months 98. Don't know

B17. In your opinion, how does breastfeeding influence a woman's chance of becoming pregnant?

1. Increases a woman's chance of becoming pregnant 2 .Decreases chance of becoming pregnant

3. Has no relation /can't influence 4. other (specify)_____98 . Don't know.

INTERVIEWER: Check B2 and ask questions B18-B21 if the woman has given birth to more than one live birth- Otherwise Skip to B 22

B18. In what month and year your second last child was born?
Day_____Month_____Year_____

B19. Did you ever breast-feed this child?
1. Yes 2. No_____(Skip to B22)

B20. For how many months did you breast-feed?
1. _____months 2. Other (specify)_____

B21.How old was your second last child when your last child was born?
1._____year 2._____months
3.other(specify)_____

B22. How long has been since your last live birth?
_____year _____months _____days

B23. Has your menstrual period returned?
1. Yes 2. Not yet returned_____(Skip to B25)

B24. How long after delivery did your first menstruation resumed?
1. _____months_____days
2. Other (specify) _____

B25. Have you resumed sexual intercourse after your last delivery?
1. Yes 2. No, Still abstains_____ (Skip to B27)

B26. For how long did you abstain from sexual intercourse?
1. _____months_____days 98 Don't know

B27. How long do you think a woman should abstain from sexual intercourse after she delivered?
1._____months_____days

B28. When do you think pregnancy is most likely during the menstrual cycle?
1. During period
2. In the following few days just after period
3. In the middle of the cycle
4. Just before period begins
5. Other (specify)_____
98. Don't know.

B29. Have you ever experienced any pregnancy that ended up in abortion?
1. Yes 2. No_____(Skip to B32)

B30. How many times did you have such incidence ?
Number:_____

B31. What was/ were the cause (s) for the termination of the pregnancy?
1. Traditional medicine
2. Unknown pain
3. Medical reason (ie to protect health or life of woman)
4. Other (Specify)_____

B32. Is it physically possible for you and your husband to give birth if you want one?
1. Yes 2. No_____(Skip to C1) 98. Don't know/ God knows

B33 Do you want to have additional children in the future?

1. Yes
2. No _____(Skip to B37)
3. Undecided/ up to God _____(Skip to B37)
4. Don't know_____(Skip to B37)

B34. If yes, how many additional children you want to have? Number of additional children:_____

B35 When do you prefer to have your next child?
1. Within one year 2 .Within two years
3.After two years 4.Up to God 5.Other (specify)_____

B36. If you could have as many as you wish, how many children would you like to have in your whole life?
1. Desired family Size _____ 98. God knows.

B37. What is the length of birth intervals you consider ideal between subsequent births?
1. _____Months_____years
2. ***Other (Specify)***_____

SECTION 3: <u>REPRODUCTIVE HEALTH SERVICE</u>

C1. Did you ever attend prenatal care during your last pregnancy?
1. Yes 2. No_____(Skip to C3)

C2. If yes, did you receive any information / education about spacing births, preventing unwanted pregnancies (or family planning)from the health staff during those visits?
1. Yes 2. No 3. Other (specify)_____

C3. Where did you deliver your last birth?
1. Hospital_____(Skip to C5)
2. Health Center_____(Skip to C5)
3. Clinic_____(Skip to C5)
4 .At home
5. Relative / Friend's home
6. Other (Specify)_____

C4. Who assisted you during the delivery of your last birth?
1. Health worker 2. Trained TBA
3. Untrained TBA 4. No one / unassisted
5. Neighbour / Relatives/ Friends
6. Other (Specify)_____

<u>INTERVIEWER:</u> SKIP TO C6

C5. Did you receive any information/ education about spacing of births, preventing unwanted pregnancies (or family planning) during that visit?
1. Yes 2. No

C6. Did you ever receive any postpartum check-up (care) within six weeks after the delivery of your last child?
1. Yes 2. No_____(Skip to C8)

C7. If yes, did you receive any information/ education about spacing of births, preventing unwanted pregnancies (or family planning) from the health staff during those visits?
1. Yes 2. No 3. Other (specify)_____

C8. Have you ever visited any health facility after your last birth to obtain family planning information (counselling) or contraceptives?
1. Yes 2. No

C9 . Has your last child ever received any vaccination (at least once)?
1. Yes 2. No _____(Skip to C11)
3. other(specify)_____

C10. If yes, did you receive any information/ education about spacing births, preventing unwanted pregnancies (or family planning) from the health staff during those visits?
1. Yes 2. No

C11. In you opinion, would you say obtaining family planning service is an essential need for a post-partum woman?
1. Yes 2. No, it is not essential at all_____(skip to D1)

C12. If yes, what type of service is the essential need?
1. Counselling/ Information service
2. Contraceptive Service
3. Information /counselling and contraceptive service
4. Other (Specify)_____

C13. In your opinion, which is the best time to provide family planning information for a post- partum woman?
1, During pre-natal check up
2. At delivery
3.During post- partum care
4.When a mother visits a health facility to start immunisation for her child
5.Other (Specify)_____

C14. When do you think a postpartum woman should start using modern contraception?
1. Immediately after delivery
2. After 45 days postpartum
3. Before menses return
4. After resumption of menses
5. Other (specify)_____

SECTION 4 : POST-PARTUM CONTERACEPTIVE BEHAVIOR

There are different methods couples can use to delay or avoid pregnancy. Which of these methods have you ever heard about?

No	METHOD	D1	D2
1.	**PILL** Women can take a pill every day	Have you ever heard of (method)? Yes/spont.....1 Yes/probed..... .2 No.....3	Do you know where a person goes to get (method)? Yes.....1 No.....2
2	**LOOP /IUD** Women can have loop/ or plastic coil placed in the womb by a doctor or a nurse	Yes/ spont.....1 Yes/ probed.....2 No.....3	Yes.....1 No.....2
3	**INJECTABLES** women can have an injection that can prevent pregnancy for several months	Yes/ Spont.....1 Yes/probed.....2 No.....3	Yes.....1 No.....2
4	**DIAPHRAGM/FOAM/JELLY** Woman can place a sponge, Suppository, diaphragm , jelly or cream inside them before intercourse	Yes/ Spont.....1 Yes/probed.....2 No.....3	Yes.....1 No..... 2
5	**CONDOM** Men can use a rubber sheath during sexual intercourse	Yes/ Spont.....1 Yes/ Probed.....2 No.....3	Yes.....1 No.....2
6	**TUBAL LIGATION** Women can have an operation to avoid having any more children	Yes/Spont.....1 Yes/ Probed.....2 No.....3	Yes.....1 No.....2
7	**VASECTOMY** Men can have an operation to avoid having any more children	Yes/ Spont.....1 Yes/ Probed.....2 No.....3	Yes.....1 No.....2
8	**NORPLANT** Women can have a set of six, small thin plastic tubes placed under the skin of the upper arm that can prevent pregnancy for a number of years.	Yes/ Spont.....1 Yes/ Probed.....2 No.....3	Yes.....1 No.....2
9	**RHYTHM/SAFE PERIOD** Couples can avoid having sexual intercourse on certain days of the month when the women is more likely to become pregnant.	Yes/ Spont.....1 Yes/ Probed.....2 No.....3	Do you know where a person can obtain advice Yes.....1 No.....2
10	**WITHDRAWAL** Men can be careful and pull out before climax.	Yes/Spont.....1 Yes/Probed..... 2 No.....3	NA (nor Applicable)
11	**PROLONGED BREAST FEEDING** After birth women can use prolonged and intensive breast-feeding practice to prevent pregnancy	Yes/Spont.....1 Yes/Probed..... 2 No.....3	Do you know where a woman can obtain counselling and guide line Yes.....1 No.....2
12	PROLONGED ABSTINENCE Couples can avoid sexual intercourse for several months /years to avoid pregnancy	Yes/ Spont.....1 Yes/Probed.....2 No.....3	Not applicable(n.a.)
13	ANY OTHER METHOD If Yes, a_____ (Specify) b_____ (Specify	Yes/Spont.....1 No.....3 Yes/Spont.....1 No.....3	n.a.

D3. Have you / your husband ever used any method to avoid pregnancy after your last live birth?

1. Yes 2. No_____(Skip to D19)

D4 What method(s) have you used?

Methodes used:_____

D5. Are you /your husband currently using any method to avoid pregnancy?

1. Yes 2. No_____ (Skip to D19)

D6. What method(s) are you currently using?

1. Pill 2. LOOP/ IUD 3. Injectables
4. Diaphragm/ Foam/ Jelly 5. Condom 6. Tubal ligation
7. Vasectomy 8. Norplant 9.Rhythm/ safe period
10. Withdrawal 11. Prolonged breast feeding 12. Prolonged abstinence
13. Other (specify)_____

D7 Who chose this method ? yourself or the service provider?

1. Self 2. The service provider 3. Other (Specify)_____

D8 . How long have you been using this method continuously?

Duration of continuous use:_____months_____days.

D9. What is your main reason for practicing contraceptive method (s) currently?

1. Don't want any more children
2. Want children but not now (or space births)
3. For medical reason
4. Other (specify)_____

INTERVIEWER: For those who reported currently using traditional \ natural methods skip to D18.

D10.How long after the birth of your last child you started using contraception?

_____days_____months

D11. When you started using it, was it before menses, after menses or the same menses month?

1. Before menses return 2. After menses return

3. On the same menses month but just after

4. On the same menses month but few days before

5 Other (Specify)_____

D12. From where did you obtain this method last time?

1. Hospital 2. Health Center 3. FGAE Clinic
4. Marie Stopes' Clinic 5. Pharmacy/ Drug Store
6. Shop/ kiosk 7. Clinic on Work place
8. private Clinic 9. Received at home from FP-field worker
10. Friend/ Relative 11. Other (Specify)_____

D13. How do you often go to the service centre you mentioned?

1. Walk 2. Cart 3. Use bicycle 4. Taxi
5. Bus 6. Own car 7. Other (Specify)_____

D14. How long does it take to travel to this place (one way)

1. Minutes_____2. Hours:_____3. Days_____

D15 How do you consider the price of contraceptive at this service delivery centre?

1. Low/ cheap 2. Reasonable 3. Expensive
4. Other(Specify_____

D16. How would you consider the adequacy of the service delivered at this place?

1. Adequate 2. Inadequate
3. Other (specify)_____

D17. If you want to change your current method, do you think there are several contraceptive options at this place?

1. Yes 2. No 98. Don't Know

INTERVIEWER SKIP to E1

D18 What is the main reason that you aren't currently using any modern contraceptive method?

Main Reason_____

INTERVIEWR: SKIP to D20

D19. What is the main reason for not using any contraceptive method?

Reason;_____

D20. Do you intend to use modern contraceptive method at any time in the future?

1. Yes 2. No_____(Skip to D22)
3. Not decided_____(Skip to E1) 98. Don't know____(Skip to E1)

D21. Which method would you prefer to use?

1. Method_____2. Other (Specify)_____

INTERVIEWER: SKIP to E1

D22. What is the main reason that you will not use modern contraceptive method in the future?

1. Want children 2. Infecund / Menopausal
3. Religious prohibition 4. Husband opposition
4. Health concern / fear of side effects
5. Cost too much
6. Difficult to reach to source (too far)
7. Other (Specify)_____

SECTION 5. INFORMATION ON HUSBAND'S BACKGRAOUND AND HOUSEHOLD RESOURCE

E1. What is the educational status of your husband?

1. Illiterate
2. No schooling but read and write)
3. Grades completed_____
4. Other (Specify)_____

E2. What is the current occupation of you husband?

INTERVIEWER : The next question i.e. E3 should be put to those who are currently using a contraceptive method(s) to prevent pregnancy.

E3. Does your husband know that your are currently using a contraceptive method ?

1. Yes 2. No 3. Other (Specify)-_____

E4. What is the attitude of your husband towards contraception?

1. Approves 2. Disapproves
3. Indifferent 4. Other (specify)_____

E5. Have you ever discussed about spacing births/ preventing pregnancy (or family planning) with your husband after you delivered the last child?

1. Yes 2. No 3. Other (specify) _____

E6. Which of the following items you own in your household?

1. Radio
2. Tape Recorder 3. Television
4. Refrigerator 5. Telephone
6. Electric Light 7. Pipe water
8.Own residence house
9. Other (Specify)_____

E7. In your opinion, what is your household's economic status compared with other households in your area?

1. Low 2. Middle / average 3. Better/High

E8. How many times were you engaged in sexual intercourse in the last month?

_____times

END OF INTERVIEW:*Thank you for your Co-operation.*

Annex-III Guideline for Focus Group Discussion

TO PIC 1. BENEFITS OF BREASTFEEDING

1.1 Mothers breastfeed their children . What are the advantages of breastfeeding?

1.2 Is there any relation between breastfeeding practice and resumption of menses after child birth?

If yes , how?

If no , why not ?

1.3 Can breastfeeding help to prevent pregnancy ?

If yes , how ?

If no , why not ?

1.4 Have you learned about the contraceptive effect of breastfeeding?

If yes , where and from whom ?

1.5 In your opinion , is there any difference in feeding a child at its mother breast milk alone , breastfeeding and supplement , or not breastfeeding a child ?

TOPIC 2. RETURN OF FERTILITY AFTER CHILDBIRTH

2.1 When does risk of pregnancy start after birth ?

2.2 Does resumption of postpartum menstrual cycle could be a signal for a return of fertility after birth ?

If yes , how ?

If no , why ?

2.3 Is there a risk of pregnancy during amenorrhea ?

If yes , how ?

If no, why ?

TOPIC 3. DESIRABILITY OF SPACING AND ATTITUDE TOWARDS MODERN CONTRACEPTIVE METHODS

3.1 What do you think about your next birth ? Do you have any plan about it ?

3.2 Is there any advantage in properly spacing births ?

If yes , what ?

If no , why ?

3.3 If yes , what are the important mechanisms(means) to space births ?

3.4 Do you think using a modern contraceptive method is important for spacing births ?

If yes , how ?

If not , why not ?

3.5 Do you have any concern about using modern contraceptive methods ?

How do you perceive its effect on health ?

[Probe : their concerns and perceptions about its effect on health]

3.6 If a woman wants to use a modern contraceptive method after birth when she has to start using ?

[Probe : is it before or after resumption of menses ? or some other time ?]

3.7 Do you have any concern about using modern contraceptives while breastfeeding ?

If yes , what ?

If no , why ?

TOPIC 4. NEED FOR POSTPARTUM FAMILY PLANNING SERVICES

4.1 What are the important health service needs of mothers after birth ?

4.2 Do you think family planning service is one of the important needs for mothers after birth ?

If yes , why ?

If not , why not ?

4.3 If FP- service is a need, what type of FP- services are the main needs ?

4.4 If a woman wants to use a contraceptive method , when she should start using it after birth ? why ?

4.5 Where do you prefer to obtain FP- service ? why ?

TOPIC 5. MAIN PROBLEMS/ CONSTRAINTS TO OBTAIN FP-SERVICES

5.1 Would you tell us your problems (if any) to obtain FP-services ?

5.2 Probe :

-Is there any problem in obtaining adequate FP-services ?

-Is the service accessible and affordable ?

-Are there any other difficulties related with using FP- services ?

THANK YOU FOR YOUR PARTICIPATION IN THE DISCUSSION.

DECLARATION

I, the undersigned declare that this 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 duly acknowledged.

Name: Kassahun Shiferaw

Signature: 

Place and date of submission: A.A.U

June 2000