ADDIS ABABA UNIVERSITY

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Determinants and Magnitude of Unintended Pregnancy Among Selected Married Women in Hawassa Town,SNNPRS

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A thesis submitted to the school of graduate studies of Addis Ababa University in partial fulfillment of the requirements for the degree of Master of Science in population studies.

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Acronyms/Abbreviations

AAU: - Addis Ababa university.

CSA: - Central Statistical Authority.

EDHS: - Ethiopian Demographic and Health Survey.

FGD: - Focus group discussion.

ICPD: - International Conference on population and Development.

IPS: Institute of population studies.

LUP: - Intrauterine device.

MDG: - Millennium Development Goal.

MOH: - Ministry of Health.

PRB: - Population Reference Bureau.

SNNPRS: - Southern Nations and Nationalities Peoples Region State.

SPSS: - Statistical package for social scientists.

TFR: - Total fertility rate.

UN: - United nation.

WHO: - World health organization.

Abstract

Reducing the number of unintended pregnancies promotes not only fertility reduction program but also reproductive health mainly by reducing the number of times a woman is exposed to the risk of pregnancy and child bearing in adverse circumstances. Determinants and magnitude of unintended pregnancy is crucial in attempts of attaining the goal of reducing unintended pregnancy through any kind of interventions. In this regard, this research paper examines the determinants and magnitude of unintended pregnancy among selected married women in Hawassa town.

A cross-sectional descriptive study was carried out on 630 selected married women, whose most recent pregnancy occurred between January, 2006 and January, 2008. Snowball sampling technique was used to reach at respondents. The method employed was interviewing and focus group discussions.

The findings show that 36 percent of pregnancies are estimated to have been unintended. This result is comparable with the national average, which was 35 percent. 22 percent had reported ending the pregnancy in induced abortion. Of the variables considered in the study, number of living Children, age at first marriage, educational level and age of respondents were found to be significantly associated with unintended pregnancy.

In conclusion, the research result shows that respondents of low age at first marriage, large number of children, and pregnancy at early reproductive age are at increased risk of unintended pregnancy. Hence, family planning services should focus on helping those particular groups of married women found to have been exercising unintended pregnancy.

CHAPTER ONE

Introduction

1.1. Background

Fertility researchers have been attempting for long as how to assess gaps in family planning and reproductive health services. One indicator of these gaps that is of a great interest to program planners and policy makers is the proportion of pregnancies reported as unintended, (Ilene *et al.*, 2004; shobana, 1997).

Unintended pregnancy is a world wide problem that affects women, their families and societies at large. Unintended pregnancy can result from contraceptive nonuse, contraceptive failure and less commonly from rape. More than one third of approximately 205 million pregnancies that occurred worldwide annually are unintended (Sedgh, 2007). Of the 182 million pregnancies that occur in developing countries, more than one third is unintended, posing hardships for families and jeopardizing the health of millions of women and children (Sedgh, 2007). In eleven Sub-Saharan countries surveyed in one study, more than one- fifth of births were reported as unintended (PRB, 2001). The national average of unintended pregnancies among married women in Ethiopia was 35 percent (EDHS, 2005).

The consequences of unintended pregnancy are serious, imposing appreciable burdens on children, families, and societies at large. That is, unintendedness in itself poses an added, independent burden beyond whatever might be present because of other factors, including the social and economic attributes of the mother in particular (Brown and Eisenberg, 1995; Muhllaje, 2007; Bitto, 1997).

Mothers with unintended pregnancies are less likely to seek prenatal care during the first trimester. Moreover, the child of unwanted conception is at greater risk of low birth weight, of dying in its first year of life, of being abused, and of not receiving sufficient resource for healthy development (shobana ,1997). The mother may also be at greater risk of physical abuse herself, and relationship with her partner is at greater risk of dissolution (Dietz, 1999).

Many unintended pregnancies end in abortion. Abortion occurs among women of all reproductive ages, both married and unmarried women. Although abortion has less long-term negative consequences for women's health, resolving unintended pregnancy by abortion can be often a sobering and emotionally difficult experience that no woman welcomes. In addition, the social tensions surrounding abortion continue to be a decisive force at the national, state and local level (Daularre, 2002).

In countries where abortion is illegal and unsafe, unintended pregnancy is a major contributor to maternal morbidity and mortality. According to WHO report (2007), due to complications of unsafe abortion procedure significant proportions of women loss their life. Almost all abortion-related deaths occur in developing countries. They are highest in Africa, where there were an estimated 650 deaths per 100,000 women.

Worldwide 22 percent of pregnancies that are unintended end in induced abortion, 48 percent of these are unsafe. Although reducing the number of abortions by reducing the number of unintended pregnancies is of universal interest, it is especially important for the developing countries like Ethiopia where number of induced abortion is high. For example, in developing countries more than half (55 percent) is unsafe, whereas in developed regions, nearly all abortions (92 percent) are safe (Sedgh, 2007).

For most people pregnancy involves financial concerns. Pregnancy is expensive.

Even if all goes well it entails high medical costs and, for many, a substantial reduction (temporary or permanent) in the family income. While this problem is significant when pregnancy is wanted and planned for, they are even more sever when the pregnancy is unintended, because it occurs when she is unprepared, emotionally or economically (Baydar, 1995; Brown and Eisenberg, 1995)

Statistical recalculation of what the child bearing population in the developing countries would look like if unintended pregnancy did not occur (i.e. unwanted conceptions eliminated and mistimed ones distributed) shows a dramatic impact. For example, Malawi's TFR is 6.5 one of the largest in the world, if Malawi had eliminated all of its unintended pregnancy, 1.1, Malawi would have TFR of 4.1 (Duff and Seiffudin, 2007). Although the complete elimination of all unintended pregnancy is unrealistic goal, these statistics exercises add to the evidence that reduction in unintended pregnancy has an impact on demographic equation of a country.

Therefore, this research was carried out to determine the determinants and magnitude of unintended pregnancy among selected married women in one of the urban setting of Ethiopia, Hawassa town .It is hoped that the results of this study can be used as inputs for family planning implementation, and thereby increase the chance of health outcomes for both mothers and their infants.

1.2 Statement of the Problem

In Ethiopia, a few surveys conducted on issues related to unintended pregnancy suggested that unintended pregnancy is among the main causes of maternal mortality. Unintended pregnancy has health and social consequences. In Ethiopia, the total fertility rate had fallen steadily from 6.8 life birth per woman in 1981 to 5.4 in 2005 (EDHS, 2005). To a large degree, this decrease in fertility reflects the increased availability and use of modern contraceptive. According to the two national surveys conducted in Ethiopia (EDHS, 2000 and EDHS, 2005), the knowledge of contraceptive has increased from 82 percent in 2000 to 88 percent in 2005 with contraceptive use of 4.6 percent and 15 percent, respectively. Despite the decrease in over all fertility and increased contraceptive prevalence, however, many women in Ethiopia still experience unintended pregnancy. For example, EDHS (2005) reported that 35 percent of pregnancies among married women in Ethiopia are unintended (19 percent mistimed and 16 percent unwanted).

As a result, significant proportions of married women turn to induced abortion to avoid unintended pregnancy. For example, recent report shows that in Ethiopia approximately 500,000 pregnancies annually end in induced abortion among 3.7 million pregnancies. The high rate of induced abortion in Ethiopia is of course, a reflection of the high rate of unintended pregnancy (MOH, 2006).

Despite the increasing concern for maternal health and grave consequences related to unintended pregnancy such as unsafe induced abortion including death of mothers, unintended births, and the potential preventability of unintended pregnancy, very few studies addressed the factors associated with and the extent of untended pregnancy.

In Ethiopia, only few scholars conducted research on unintended pregnancy. The most recent work (Solomon and Mesganaw, 2006) shows that 33 percent of

pregnancies among all reproductive age women were unintended. Similar study conducted about a decade ago in Gonder (Haile, 1992) reported a high rate unintended pregnancy.

Although these studies have demonstrated that unintended pregnancy is increasing in Ethiopia, combining family planning need of single and married women misunderstood policy makers and program planners in attempts of detecting and targeting relevant variable of interest for interventions. In this regard, this study assesses determinants and magnitude of unintended pregnancy specifically for married women.

The respondents were selected from Hawassa town. Hawassa serves as one of the commercial, religious, and political center of the SNNPRS and is home to various ethnic groups. The town has a number of health centers and clinics that provide family planning services. It is hoped that the research will contribute its share in alleviating the social ill of the town.

1.3. Significance of the study

This research was mainly carried out to determine the determinants and magnitude of unintended pregnancy among selected married women in one of the urban setting of Ethiopia, Hawassa town. The major justifications of the study are:

- The study of determinants of unintended pregnancy has importance in detecting and targeting relevant variables of interest for interventions, and thereby increases the chance of good health outcomes for both mothers and their infants;

- The magnitude of unintended pregnancy is valuable and needed as major input for family planning implementation and evaluation;

- The scarcity and inadequacy of available, recent and regularly timed survey on the determinants and magnitude of unintended pregnancy among married women makes this research more significant;

- Last but not least, due to direct role of reducing unintended pregnancy on millennium development goals (MDGs): that is, improving maternal health and reducing infant mortality, the research can be considered as timely.

1.4. Delimitation of the Study

Unintended pregnancy is the problem of both married and unmarried women. However, the scope of this study is delimited to examine the determinants and magnitude of married women only. Moreover, the respondents were selected

from urban setting, Hawassa town.

1.5. Limitations of the study

As the research is a cross sectional retrospective measure of married women's pregnancy intention, the probability of recall bias and misreporting of events was likely to happen. However, the reliability of the data is maintained by:

- Using similar sex interviewers who had prior experience in data collection;
- Using qualitative study to complement or triangulate the findings;
- Choosing relatively recent time frame;
- Considering the most recent pregnancy to control for multiple pregnancy outcomes to the same women.

The research uses an element of non-probability sampling method to reach at eligible respondents, which might affect its generalizabilty.

1.6. Research Objectives

1.6.1. General Objective

The main objective of the research is to examine the determinants and magnitude of unintended pregnancy among selected married women in Hawassa town. It has got the following specific objectives.

1.6.2. Specific Objectives

1. To assess the magnitude of unintended pregnancy among respondents.
2. To examine whether number of living children has an association with unintended pregnancy;
3. To identify whether differences in age at first marriage has an association with unintended pregnancy; and
4. To examine the age of respondents to make an association with unintended pregnancy.

1.7. Research questions

The study has the following research questions:

1. What is the magnitude of unintended pregnancy among respondents?
2. To what extent does number of living children have an influence on state of unintended pregnancy?
3. How far is the difference in unintended pregnancy when age at first marriage decreases?
4. How far is the difference in unintended pregnancy when age increases?

CHAPTER TWO

Review of Related Literature

Several studies have been made on the demographic and socio-economic determinants of unintended pregnancy and the findings of these studies came up with different point of views. In this chapter, an attempt is made to review the selected variables. Contraceptive use and knowledge as related to unintended pregnancy are also reviewed.

2.3 Determinants of unintended pregnancy

Determinants of unintended pregnancies, suggested by many researchers and which are believed to be relevant for this study are: socio-economic (Education, income, place of birth) and demographic factors (age at first marriage, age, number of living children).

2.3.1 Demographic Determinants

Age

Demographic variables are the major determinants of contraceptive use, thereby unintended pregnancy. Age is one of the demographic factors that socially and biologically associated with married women pregnancy intention. Studies show that as the level of age increases information on reproductive health, the type and use of family planning method of individual will be increasing (Linh et *al*, 2004)

Study conducted in Ecuador (Elizabeth, 1999) shows that giving birth at a relatively older age (i.e., 30-49 years) significantly lower the risk of unintended pregnancy. Similar study conducted in Harar shows that women of age group

15-24 years are more likely than women with age group 35-49 years to classify their pregnancy as unintended (Solomon and Mesganaw, 2006).

Number of living children

Among the factors research identified, the number of living children before women's current pregnancy is one of the key factors affecting population level of unintended pregnancy. In societies where large families are desired, the potential unintended pregnancy tends to be low. As societies move through the fertility transition, the desired number of children decline along with the number of years required for bearing intended children (Bongaarts, 1997).

Recent study conducted in united state (Denise, 2004) supports the above findings. Women with high number of living children had an increased risk of unintended pregnancy. In Nigeria, women with more than three living children had greater odds than women with one or less number of living children (Gilda, 2006). Similar study conducted in Harar town also shows that women with fewer than three children had a significantly (43 percent) lower chance of experiencing unintended pregnancy, than women with 5 or above living children (Solomon and Mesganaw, 2006).

Age at first marriage

Age at first marriage is also another determining factor for unintended pregnancy. A study conducted in Harar town shows that age at first marriage has an association with the likelihood of unintended pregnancy. Women with age at first marriage less than 20 years had a higher chance of unintended pregnancy (Solomon and mesganaw, 2006).

2.3.2 Socio-economic determinants

Education

Education is one of the most pervasive impacts on married women's pregnancy intention. It empowers women with knowledge, skill, and self-confidence, and thereby addressing the practical need of women in their reproductive health including practice of contraceptive use (Yonas, 2005). Moreover, Education may increase an individual's willingness to accept new procedures that reduce fertility more effectively, thereby reducing the number of unwanted birth (Almaz. 1997).

According to EDHS (2005), poorly educated women in Ethiopia are less likely to refuse sexual intercourse with their husband for any reason. As result, they could have several unwanted pregnancies in their life times. A study conducted in Ecuador reveals that education decreases the odds that pregnancy was unintended (Elizabeth, 1999).

Income

Access to a family planning is crucial with current high rate of unintended pregnancy. Income is the key to transforming women's attitude and belief from traditional to modern by creating access to information and contraceptives. Women in low-income household will not able to afford the family planning services that are probably more accessible to high-income women (Jeannie, 1978).

In Nigeria, 30 percent of low socio- economic status women had an unintended pregnancy, compared with 23 percent of women of middle socio-economic status (Gildas, 2006). Similar study conducted in Ecuador (Elizabeth, 1999) reveals that women from high income households were less likely than those from low income background to have had unintended pregnancy (14 percent Vs. 16 percent)

Place of origin

Place of origin (urban/ Rural) is one of the determinants of unintended pregnancy. Rural women's ideal family sizes tend to shift downward when they move to cities, where living space is limited and cost of living is higher. Even if family planning services are available, women who have recently migrated may lack the knowledge and skills needed to achieve their modified reproductive preference. Hence, married women from rural area are more likely than their counter parts from urban area to experience unintended pregnancy (Elizabeth, 1999; Linh et *al.*, 2004).

2.2. Contraceptive and Unintended Pregnancy

Contraceptive information and services are supplied and utilized for planning reproduction. It has tremendous impact on women health. Contraceptive is saving the lives of millions of women around the world from hazards of unwanted pregnancy. From its relative importance, worldwide access to family planning is crucial with current high rate of unintended pregnancy, unsafe abortion, and unprecedented population growth (Bongraat, 1997)

Based on the intentions to space or limit births and on their use of contraception, married women are grouped in to two (CSA and ORC macro, 2006): women who are using some methods of family planning and say they want to have another child or undecided whether to have another child and women who are using and who want no more children.

In most developing countries aside from Sub-Saharan Africa, contraception is used much for limiting than spacing in many African traditions (Setty Venugopal, 2002). However, if a woman is aware that she can regulate her fertility (space or limit births), but does not know how to do so, or is unable to obtain services, she is incapable of avoiding unintended pregnancy (Brown and

Eisenberg, 1995).

Knowledge and practice of contraceptive methods are overriding factors affecting fertility, and thus the likelihood of unintended pregnancy. However, knowledge about and access to contraceptives by no means guarantees its use and efficiency. A study conducted in Ecuador shows that past users of modern method are more likely than non-users to report that it was unintended. Prior contraceptive users who had used a modern method were 59 percent more likely than the non users to report that their most recent pregnancy had been unintended rather than planned (Elizabeth, 1999).
Methods failure was among the reasons forwarded by past users of contraceptive for their pregnancies that were unintended. A study conducted in Shangai (Yan and John, 2004) shows that 21 percent of pregnancies occurring between marriage and first birth were reported as unintended. Of which 81 percent results from contraceptive failure.

Contraceptive non-use is the main reason for unintended pregnancy. In most DHS surveys women who did not wish to become pregnant were asked to identify the main reason for not using contraception. Based on the data from 13 DHS countries, John Bongaarts and Judith have found that the most important reasons for non-use overall are lack of knowledge (25 percent), health concern (20 percent) and husband disapproval (9 percent). The next three reasons were infrequent sex (6 percent), religion (4 percent), and low access (4 percent). The remaining factors are typically considered important by only small proportion of women. They added to note that lack of knowledge is much more important in Africa than in Asia or Latin America while health concerns are important in Asia and Latin America but some what less in Africa (Bongaarts and Bruce, 1995).

The following reasons for non-use of contraceptive were reported among married women during the 2005 EDHS. The most important reasons identified were method related reasons (37.5 percent) and opposition to use (23.6 percent). The least important reasons identified were health concern (13.6 percent), lack of knowledge (11.1 percent), and reason do not known (3 percent). The most important particular reasons for non-use identified are wanting as many children as possible (17.8 percent), religious prohibition (13.8 percent), husband opposed (10.4 percent), other reasons were reported by 11.1 percent of women, and the remaining reasons were reported by small proportions (CSA and ORC Macro, 2006).

Although related literature have demonstrated that particular group of women are at increasing risk of unintended pregnancy combining family planning need of single and married women would misunderstood policy makers and program planners in attempts of detecting and targeting relevant variable of interest for interventions. In this regard, this study assesses determinants and magnitude of unintended pregnancy specifically for married women.

CHAPTER THREE

Methodology

3.1. Profile of the study area

Hawassa town is located at 07°03¹ latitude and 30°29¹ longitude, at distance of 275 km away and to south direction of Addis Ababa along the major asphalted road running from Addis Ababa to Moyale. The town is located 1618m above the sea level over an area of 1628.04 hectares and it is bounded by oromia region in the north and eastern directions, Alamora mountain in the southern direction, and lake Hawassa in the western direction (Hawassa city administration, 2004).

The town was established in 1952 EC and currently it is the capital city of the SNNPR region. Administratively, Hawassa is located in Sidama zone and starting from 2003, it is divided in to 7 sub-cities. According to projection made in 2005, the town has a total population of 118,311with male to female ratio 1: 0.975. Of the total population, approximately 23 percent (27,212) is women of reproductive age (15-49) (CSA, 2005).

The town has currently three hospitals (one private, one referral and teaching hospital owned by Hawassa University and an Army Hospital), one family guidance association clinic, one health post and several private clinics.

3.2. Data Sources and Instruments of Data Collection

3.2.1. Data sources

The Survey focus on the pregnancy intention status of selected married women whose most recent pregnancy occurred between January, 2006 and January, 2008 were the main participants of the study. This relatively recent time frame was chosen to limit problems of recall and rationalization associated with retrospective data. To control for multiple pregnancy outcomes to the same women, only the most recent pregnancy is considered. Moreover, all pregnancies regardless of outcome are included in the study.

3.2.2. Instruments of the study

3.2.2.1. Standardize questionnaire

A standardize questionnaire, which contains relevant information for the study has been prepared and administered. Most of the questions were adapted from DHS questionnaire however some questions have been added to the questionnaire in order to address different determinants of unintended pregnancy. The questionnaire covered the following topics:

1 Background characteristics;
2 Demographic and socio-economic characteristics;
3 Contraceptive knowledge and practice;
4 Reproductive history of respondents.

The questionnaire was first prepared in English and then translated in to Amharic language (to make it suitable for use and acceptable to the respondents). The data were collected using seven 12th grade completed and trained female data collectors who have got prior experience of data collection.

Pretest

Prior to the actual data collection pretest was conducted among 20 married women whose most recent pregnancy occurred in the specified period of time. Based on the pretest some minor problems were detected and amendments were made accordingly.

3.2.2.2. Focus group discussions

Standardized questionnaire alone does not appear to be sufficient to generate the required data the study population. Thus, two focus group discussions (FGDs) consisting of six to eight people were formed and discussion were held to collect qualitative information. For the discussions, there were one moderator, one scriptwriter and one caretaker.

3.3. Sampling procedure

Uneven distribution of the source population, the practical considerations during pilot study, and financial and time constraints had necessitated the use of snowball sampling technique. The researcher made initial contact of seven eligible married women one from each subcity. From each respondent other eligible married women were identified. The respondents thus identified will then be interviewed and asked to identify other respondents. This process continued until the researcher had interviewed all 630 eligible married women. In this study, only one eligible respondent from the same place or household has been taken and in the case of more than two eligible people were present the one with most recent pregnancy was taken.

3.4. Sample Size Determination

Even though non-probability sampling method does not permit the development of statistical theory to examine the properties of sample estimators, the researcher used Gordon method to estimate the total sample size to avoid blind guess.

A total of 630 married women in the reproductive age group were included in the study based on the assumptions:

- Considering the absence of studies on the study population and to obtain substantial size of sample, unintended pregnancy among married women is estimated to be 50%;
- 95% confidence interval was taken;
- 0.04 (4%) error margin was taken;
- The sample size is determined by the formula purposed by Gordon (1994).

That is:

$$\text{Sample size (n)} = \frac{p(1-p)z^2}{T^2} + 5\%$$

Where; P= 0.5(50%) proportion of unintended pregnancy

Z= 1.96

T= margin errors= 0.04

Contingency=5%

Actual sample size=630

3.5. Ethical Issues

Prior to data collection, appropriate ethical clearance was taken from institute of population study of AAU. Further, formal concerned administrative bodies of the town including SNNPRS Health bureau Ethics committee and Hawassa town provisional administrative office were informed about the study. During data collection, each respondent was informed about the purpose, scope and

expected outcome of the research, and appropriate informed written consent was taken from the respondents. Any one who was not willing to participate was excluded from the study; and during the interview, respondents who were interested to avoid specific questions or discontinue the interview were allowed to do so. In order to establish anonymous linkage, only the codes, not the names of the respondents were registered on the questionnaire. During the training of data collectors and supervisor, ethical issues were addressed as an important component of the research.

3.6. Research variables

3.6.1. Dependent Variable

The dependent variable of the study, unintended pregnancy, is a retrospective measure of women's reproductive intention and was determined by asking respondents to recall their feeling at the time they become pregnant. In this study, all pregnancies regardless of outcome are included. The data were collected by asking questions like "Did your most recent pregnancy wanted?" If the answer is "Yes" the respondent further asked if the pregnancy happened too soon, right time or later than wanted. If a woman reported that her pregnancy occurred when it was not wanted or sooner than wanted, it was categorized as unintended.

3.6.2. Independent variable

The selection of the explanatory variables was guided by literature reviewed. The literature suggested that various socio-economic and demographic determinants are likely to influence married women's pregnancy intention. The independent variables that are included for this study are: respondents'

- Age at first marriage (10-14, 15-19, 20-24, and 25 and above);
- Age (15-24, 25-34, and 35-49 years);
- Place of origin (urban/rural);
- Number of living children (below 2, 3-4, and 5 and above);
- Educational level: illiterate (those who can not read and write), primary (from grade one to eight), secondary (from grade 9 to12), and tertiary (certificate, diploma, degree, and above);
- Family income: low (household income less than 500), middle (household income between 500 and 1500), and high (household income greater than 1500).

3.7. Theoretical background and conceptual framework

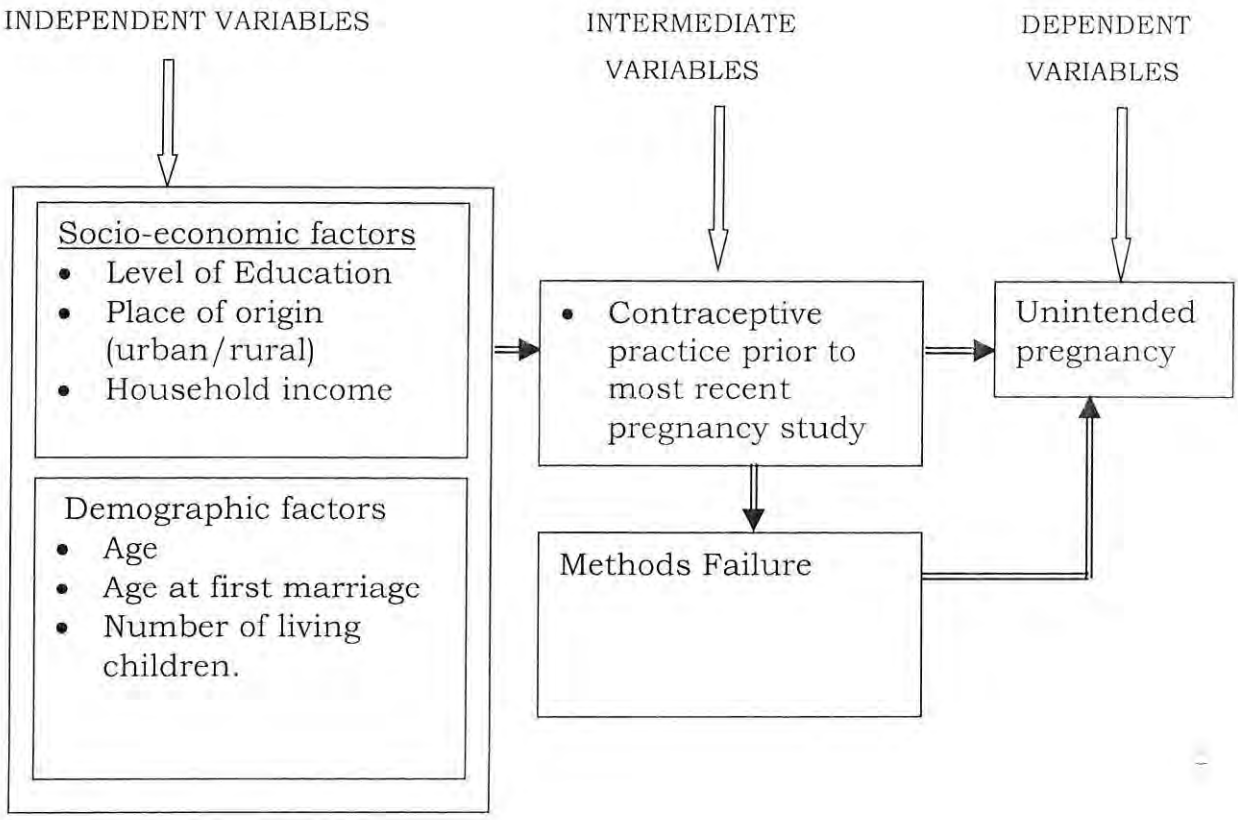
In formulation of a theoretical background for studying reproductive health problem such as unintended pregnancy, theory of reasoned action provides a useful prototype. On the basis of this theory, Schoch (1999) have suggested that pregnancy intensions are the most immediate determinant of fertility and related behaviors.

The theory suggests that, behavioral intentions and, in turn, behaviors are influenced by attitude toward action (i.e. individual's beliefs about behavior and his or her evaluation of its outcome) and perceptions of likely responses (reflected by predicted reactions from peers and the extent to which an individual desires to please her peers).

As applied to my study married women who has positive attitude about avoiding unintended pregnancies, or about using modern contraceptives, and

who has the convection that she can carryout these behaviors, will be likely to undertake unintended pregnancy prevention action.

Figure 1:-Conceptual Framework of the study



Source: - Developed by the author based on literature, 2008.

3.8. Data processing and analysis

After the completion of data collection, a tabulation plan was developed so as to start the process of analysis. The data were processed and analyzed using the statistical package for social science (SPSS). Before the actual data analysis was made, open-ended questions were edited and coded. Following that, all the required data obtained from the respondents were entered into a computer and consistency check was made. In order to test the effect of each predictor variable on the dependent variable both bivariate and multivariate analysis techniques are employed. At the bivariate stage, cross tabulation and chi-square test are employed in order to identify the important explanatory variables, which should be retained in the multivariate analysis for further investigation. At the multivariate stage, logistic regression model is used. The underlying principle of selecting the model is that the logistic regression analysis can be applied for condition that the research needs to predict the presence or absence of characteristics of outcome based on the scores (values) of independent variable (predictors).Logistic regression is a most widely applied model when the dependent variable is dichotomous taking values 0 or 1.

Using the binary logistic regression model, it is possible to estimate the probability (likelihood) of an event occurring. When a number of predictors are taken into consideration to estimate the likelihood of the occurrence of an outcome variable (for this study, unintended pregnancy of married women) the relation is built using the equation as follows;

Logistic regression is based on the concept of odds ratio: p/(1-p), where p is the probability that the event Y occurs P(Y=1) and (1-p) is the probability that the event Y does not occur p (Y=0). Based on this the probability of the outcome variable not occurring can be estimated as: Prob (no event) = 1- prob (event)

The logistic regression model can also be put in the logit model in the following manner:

$$\ln\left[\frac{p}{1-p}\right]=a + BX + e$$

Or

$$\frac{P}{(1-P)}=\exp(a + BX + e)$$

Where:

ln is the natural logarithm;

P is the probability that the event Y occurs, p (Y=1);

P/ (1-p) is the "odds ratio";

In [p/ (1-p)] is the log odds ratio, or logit.

For example, in this case p would be the probability of unintended pregnancy, where as 1-p would be probability of planned pregnancy, a is the constant term, and B is the logistic coefficient which can be interpreted as the change in the log odds associated with a one unit change in the independent variable. Or exp (B) is the factor by which the odds change when the independent variable increases by one unit (Gujarti, 1988).

3.9-Definition of Terms

Current user: - Is a woman who is using modern contraceptive until the date of interview.

Ever user: - Is a woman who is using modern contraceptive sometimes in the past but has discontinue.

Induced abortion:-Is a deliberate termination of pregnancy without medical reason(s) at gestational period of less than seven months or 28 weeks.

Married woman:-A woman who is legally married or in consensual union.

Methods Failure: -Contraceptive: failure, inconsistence or inappropriate use.

Mistimed pregnancy: - pregnancy to a woman that occurs sooner than wanted.

Never user:-Is a woman who has never used modern contraceptive till the date of interview.

Pregnancy intention status: planned, unwanted and mistimed pregnancy.

Unintended pregnancy:-Pregnancy that occurs too soon or not wanted at all.

Unwanted pregnancy: - pregnancy to a woman that is not wanted at all.

Total fertility rate: -The number of children that a married woman expected to have at the end of her reproductive age given that the current age specific fertility rate remains the same and no woman dies between the ages of. 15-49 years.

CHAPTER FOUR

Background characteristics of respondents

4.1. Characteristics of respondents

As clearly indicated in the objective, the prime purpose of the research is to assess the determinants and magnitude of unintended pregnancy among selected married women in Hawassa town. The survey offered information on some background characteristics of the interviewed women. It is also helped to collect a wide range of information, which is crucial in the study of determinants and magnitude of unintended pregnancy. This includes married women's socio-economic and demographic backgrounds that are expected to have a profound effect on unintended pregnancy.

In view of analyzing the determinants and magnitude of unintended pregnancy and to examine the differential effect of each of the major variables, it is necessary to bring forward an overview of some of the characteristics of respondents.

4.1.2. Demographic characteristics

For this research work a total of 630 married women whose most recent pregnancy occurred between January, 2006 and January, 2008 were selected. The survey finding indicated that majority of respondents (49 percent) lied in the age group 25-34 years, that is mostly considered as peak reproductive age group, 24 percent lied in the late reproductive age group (i.e., 35-49 years) ,and 27 percent were married women of early reproductive age group (i.e., 15-24 years).The mean age of respondents was 29.3 with standard deviation of 2.4.

Table 4.1 Percentage distribution of respondent by broad age groups (N=630)

Age group	Frequency	Percent
15-24	169	27
25-34	309	49
35-49	152	24
Total	630	100

Source: Field survey, 2008.

The data shows that the majority of the respondents (44 percent) were first entered at marriage at age of 15-19 Years and 15 percent of respondents first entered at marriage at age of 25 or above. The mean age at first marriage for respondents was found to be 21.4 with standard deviation of 2.1.

Table 4.2 Percentage distribution of respondents by age at first marriage (N=630)

Age at first marriage	Frequency	Percent
10-14	52	8
15-19	277	44
20-24	205	33
25and above	96	15
Total	630	100

Source: - Field survey, 2008.

Half of respondents (52 Percent) had two or less number of living children. Seventeen percent had living children of 5 or above.

Table 4.4 Percentage distributions of respondents by selected socio-economic and cultural characteristics (N=630)

Characteristics	Frequency	Percent
Place of origin (Past residence)		
Urban	396	62.9
Rural	234	37.1
Income		
Low	185	29.5
Middle	300	47.6
High	145	23
Educational level		
Illiterates	87	13.8
Primary	79	12.5
Secondary	164	26
Tertiary	300	47.7
Ethnicity		
Amhara	216	34.3
Welaita	123	19.5
Sidama	102	16.2
Oromo	85	13.5
Others	104	16.5
Religion		
Orthodox	308	48.8
Protestant	262	41.6
Muslim	34	5.4
Catholic	21	3.3
Others	5	0.8

Source: - Field survey, 2008.

4.1.3. Reproductive History of Respondents

Almost all 96 percent of respondents have expressed to have known at least one method of modern contraceptives.

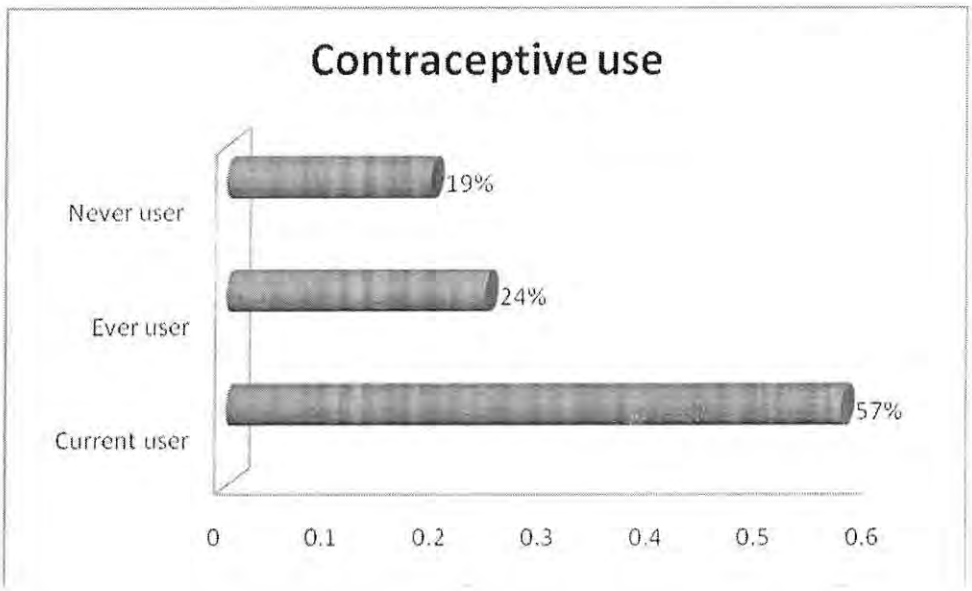
Table 4.5 Percentage distribution of contraceptive use by knowledge of respondents (N=630)

Know at least one method	Frequency	Percent
Yes	605	96
No	25	4
Total	630	100

Source: -Field survey, 2008.

Concerning to contraceptive use, about 57 percent were current users of contraceptive, whereas, 15 percent were never used any kind of modern contraceptive.

Figure.2.Percentage distribution of respondents' by contraceptive use (N=630)



Source: Field survey, 2008.

About two- third (62.1 percent) of the sample had used a modern method prior to their most recent pregnancy. This shows that significant number of respondents had an awareness either to limit or space pregnancies.

Table 4.6 Percentage distribution of contraceptive use prior to pregnancy under study (N=630)

Contraceptive use prior to most recent pregnancy	Frequency	Percent
Yes	391	62.1
No	239	37.9
Total	630	100

Source: - Field survey, 2008.

Respondents of this study reported the following reasons for non-use of contraceptive before recent pregnancy. The most important reasons identified were: wanting as many children as possible (65 percent), lack of awareness (19.2 percent), and fear of side effect (17.6 percent). The least important reasons identified are: husband disapproval (3.3 percent), cultural /religious reason (6.3 percent), and opposition to use (5.4 percent).

Table 4.7 Percentage distributions of respondents by major reasons for nonuse of contraceptives (N=239).

Reasons	Frequency	Percent
Want to give birth	107	48
Opposition to use	13	5.4
Husband disapproval	8	3.3
Cultural/religions reason	15	6.3
Lack of awareness	46	19.2
Fear of side effect	42	17.6
Others.	8	2.5
Total	239	100

Source: - Field survey, 2008

Concerning respondents' pregnancy outcome, 21.6 percent of pregnancies that were unintended end in induced abortion.

Table 4.8 Percentage distribution of unintended pregnancy by its outcome.

Birth outcome	Frequency	Percent
Pregnancy continued	175	72.9
Abortion(failed)	13	5.4
Aborted	52	21.6
Total	240	100

Source: - Field survey, 2008

CHAPTER FIVE

Analysis and findings

This study was designed to investigate determinants and magnitude of unintended pregnancy among selected married women in Hawassa town. In this unit, it is tried to identify some of the socio- economic and demographic characteristics of respondents to show the relation with unintended pregnancy. Furthermore, it is tried to examine the magnitude of unintended pregnancy among participants of the study.

5.1. Determinants of Unintended Pregnancy

An attempt has been made to identify some of the variables that determine unintended pregnancy among selected married women by employing both bivariate and multivariate analysis.

5.1.1. Bivariate analysis

According to bivariate analysis, place of origin of respondents were significantly associated with unintended pregnancy. Respondents from rural origin were more likely to have unintended pregnancy than those with urban origin (44 percent Vs.31 percent).

In bivariate analysis, age at first marriage and number of living children were both significantly associated with unintended pregnancy. respondents with age at first marriage in the age group 10-14 years were more likely to have unintended pregnancy (52 percent) than those with age at first marriage of in the age group 15-19 years (40 percent), or those with age at first marriage of in the age group 20-24 years was (38 percent), or those with age at first marriage in the group 25 or above was (27 percent). Hence, the result of bivariate

analysis shows that increase in age at first marriage reduces unintended pregnancy. respondents with number of living children greater than or equal to 5 were most likely 70 percent) to report their pregnancy as unintended than those with either two or less children (27 percent), or those with 3 or 4 living children (44 percent).

The other important variable in bivariate analysis was educational level of respondents. According to bivariate analysis respondents with low levels of education were more likely to have unintended pregnancy than are better-educated ones. For example, illiterate respondents were more likely to have had an unintended pregnancy than those with tertiary education (55 percent Vs 16 percent).

Unintended pregnancy was also linked with the age of respondents: married women with early reproductive age (15-24 Years) were more likely than women with late reproductive age (35-49 years) to categorize their pregnancy as unintended (42.1 percent Vs 34.2 percent). Even if it is less significant, the result of bivariate analysis shows that there is negative relationship between income and unintended pregnancy.

Table 5.1: percentage distribution of respondents' unintended pregnancy status according to selected characteristics (N=630).

Back ground Variable	Unintended pregnancy Number	Percent
Place of origin (past residence) ***		
Urban	138	34.8
Rural	102	43.6
Age at first marriage ***		
10-14	27	52
15-19	110	39.7
20-24	77	37.6
25 and above	26	27.1
Number of living children***		
0-2	17O	27.2
3-4	27	43.9
5 and above	43	70.3
Age ***		
15-24	71	42.1
25-34	117	37.9
35-49	52	34.2
Level Educational ***		
Illiterates	48	55.1
Primary	59	74.6
Secondary	76	46.7
Tertiary	57	19
Income**		
Low	93	42
Middle	104	34.7
High	43	32.4

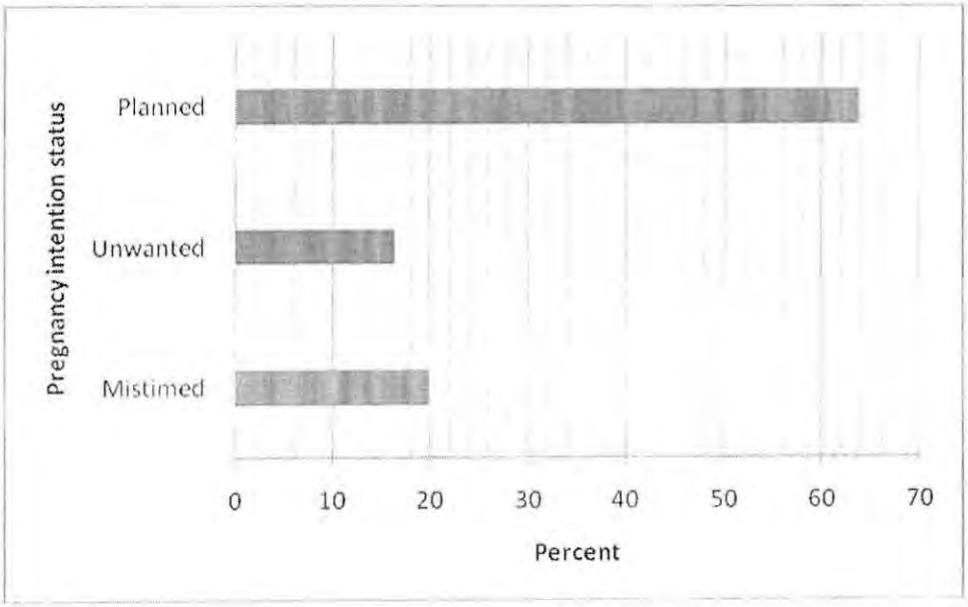
Source: - Field survey, 2008.

***Difference between distributions is significant at p<0.01, ** (p=.056)

5. 2. Magnitude of unintended pregnancy

Of the total 630 cases 36.2 percent of respondents reported that their most recent pregnancy had been unintended, of which 16.3 characterized the pregnancy as unwanted and 19.9 percent classified it as mistimed.

Figure 3. Percentage distribution of pregnancy intention status of respondents (N=630).



Source: - Field survey, 2008.

The most frequent reason mentioned by the participant of this study for unintended pregnancies were method failure (51.5 percent) and lack of awareness (24.1 percent).

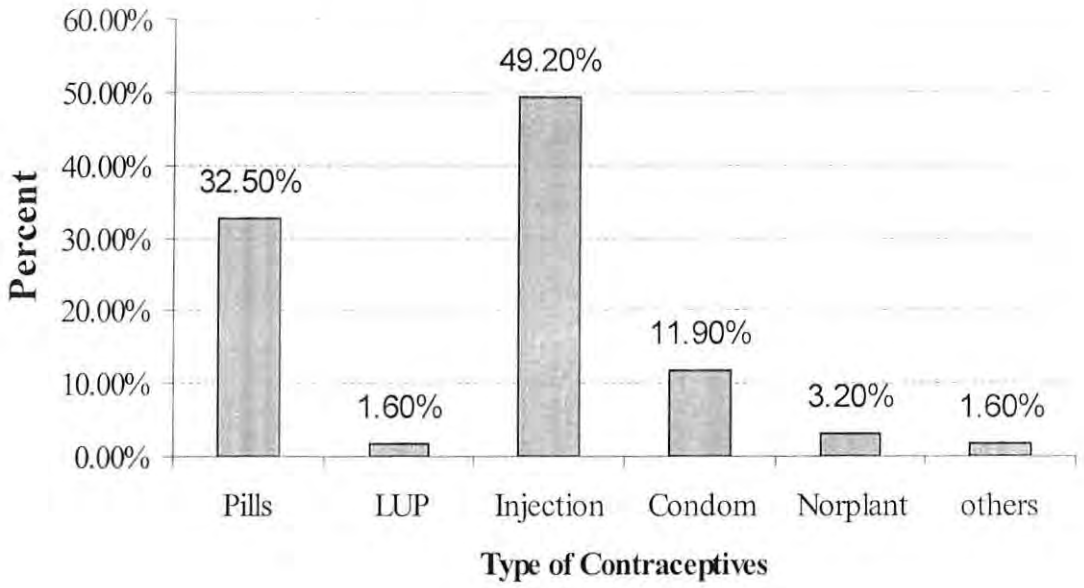
Table 5.2. Percentage distributions of respondents by reasons for unintended pregnancy [N=630]

Reasons	Frequency	Percent
Lack of awareness	58	24.3
Method failure	124	51.9
Husband disapproval	27	11
Lack of accessibility	13	54.4
Fear of side effect	14	5.9
Others	4	1.7
Total	240	100

Source: - Field survey, 2008.

Majority of respondents, who mentioned methods failure as a reason for unintended pregnancy, use pills (32.5) and injection (49.2).

Figure 4.-Percentage distribution of respondents' methods failure by type of contraceptive used (N=126).



Source: - Field survey, 2008

5.2.2. Multivariate analysis

In the preceding section an attempt was made to find out whether or not there is association or a relationship between unintended pregnancy and various socio-economic and demographic characteristics of respondents by employing cross tabulation and a chi-square test. By doing so, it has been possible to identify explanatory variables that are significantly associated with the response variable, unintended pregnancy.

In the multivariate analysis a multiple model containing the explanatory variables was set to estimate the effect of each explanatory variable. As it has been mentioned earlier, the binary logistic regression model is appropriate to use when the response to a set of explanatory variable is in a binary form, which in this case unintended pregnancy or planned pregnancy.

In logistic regression model estimates of unintended pregnancy have been computed based on the odds ration, Exp (B). From the logistic regression, the log of odds ratios (which in this study is the ratio of proportion of women who classified their pregnancy as unintended) is expressed as a function of the various independent variables (predictors]. Unintended pregnancy greater than one indicates an increased likelihood for the outcome. In addition, the sign of B (logistic coefficient) points out the direction of the change.

Educational level, place of origin, age at first marriage, age, number of living children, and household income of respondents were predictor variables that are considered to build the model. Thus, the categories are given codes. The coefficient of the reference category is zero which makes exp (B) value or value of odd ratio one. The reference category is used to measure the extent to which the respondent has the possibility to possess the outcome variable as a change in the status from the reference to the next category.

From table 5.4 regarding research participants' unintended pregnancy as related with their place of origin (previous place of residence), the likelihood of unintended pregnancy tends to step down by a factor 0.878 as respondents previous place of residence changes from rural to urban even if statistically it is not significant.

As the value of odds ratio or exp (B) suggests age at first marriage is significantly related with unintended pregnancy. The likelihood of having Unintended pregnancy increases as age at first marriage decreases. For example, respondents with age at first marriage 15-19 years, or 10-14 years is more than twice more likely to categorize their pregnancy as unintended than respondents who first entered at marriage at age 25 or above.

Considering the age of respondents, the result depicted that older respondents were not at overall higher risk of unintended pregnancy than were younger ones. For example, respondents' of late reproductive age (35-49 years) is 48 percent less likely, than those of early reproductive age (15-24 years) to report their pregnancy as unintended. In general the multivariate analysis shows that age is negatively related with unintended pregnancy

It is also observed that the tertiary level of respondents' education had strong positive relation ship with unintended pregnancy of women. The likelihood of unintended pregnancy of respondents with tertiary level education increases 2.4 times as compared to illiterates.

Finally, concerning number of living children of women multivariate analysis shows that the likelihood of Unintended Pregnancy strongly decreases for respondents with fewer numbers of children. For example, the likelihood of unintended pregnancy among research participants with 5 or above number of

living children is increased by factors 2.6 when it is compared to those with 2 or less number of children .On the other hand, the family income of respondents didn't indicate significant difference in unintended pregnancy of research participants.

Table 5.3. Parameter estimates for binary logistic regression model using selected predictors(N=630).

Background variable	B	S.E	Sig.	Exp (B)
Pace of origin (past residence)				
Urban				
rural (RC)	-0.131	.21	.547	.878
Educational level of respondents				
Illiterate (RC)				
Primary	.516	.315	.101	1.675
Secondary	.297	.313	.342	1.346
Tertiary	.875	.352	.013	2.398
Age of respondent				
15-24 (RC)				
25-34	-.228	.330	.490	.796
35 - 49	-.646	.262	.014	.524
Age at first marriage				
10-14	.784	.394	.047	2.190
15-19	1.057	.418	.011	2.878
20-24	1.005	.466	.031	2.732
25 and above (RC)				
Number of living children				
0-2 (RC)				
3-4	0.542	.388	.000	1.72
5 and above	0.970	.37	.000	2.638
Income				
Low (RC)				
Middle	.304	.240	.205	1.355
High	.081	.299	.786	1.084
Constant	-2.393	.492	0.000	.091

N=630, RC-Reference Category

Source: - Field survey, 2008.

CHAPTER SIX

Discussions on the key Findings

In the previous chapter the results of some of the predictor variables with their linkage with respondents' unintended pregnancy were assessed. Based on these results, the impacts of some socio-economic and demographic factors are discussed in this chapter.

6.1-Discussions on determinants of unintended pregnancy

Age at first marriage

Among the variables considered in this study age at first marriage is important predictor of unintended pregnancy. Both bivariate and multivariate analyses reveal that respondents with low age at first marriage were at a particularly high risk of unintended pregnancy. For example, respondents whose age at first marriage in the age group 10-14 or 15-19 years experienced unintended pregnancy twice more than those women with higher age at first marriage (25 or above years). The finding of the quantitative part is also consistent with result of the qualitative part. Most of the focus group discussants agreed that those women with low age at first marriage are more likely to be influenced by their husband to bear unintended children.

Literature on the relationship between unintended pregnancy and age at first marriage also explain that the decrease in age at first marriage increase the likelihood of unintended pregnancy. Solomon and Mesganaw (2006) revealed that in Harar women with age at first marriage less than 20 years had a higher chance of experiencing unintended pregnancy (OR=2.1).

Educational level

Educational level of research participants was also found to be significant determinant of unintended pregnancy. The multivariate analysis indicated that the risk of unintended pregnancy among highly educated (tertiary level) respondents were more than twice that of illiterate ones. This is not consistent with the result obtained from bivariate analysis. The bivariate analysis indicated that increase in education decreases the likelihood of unintended pregnancy.

Almaz (1997) revealed that education might increase individuals' willingness to accept new procedures that reduce fertility more effectively, thereby reducing the number of unintended pregnancy. Therefore, it is expected that better educated married women less frequently categorize their pregnancy as unintended than poorly educated women. However, the multivariate analysis (OR=2.4) was found to be contrary to the common belief that an increase in education reduces the level of unintended pregnancy.

To the contrary, it is also argued that education can expose women to new knowledge, however, knowledge about and access to contraceptive by no means guarantee its use or efficiency (Brown and Eisenberg, 1997). The reason could also be higher educated women could have fully informed intentions at the time of conception and can readily categorize their pregnancy as mistimed, unwanted or planned.

Number of living children

Number of living children is strongly associated with the likelihood of unintended pregnancy. The result of multivariate analysis shows that research participants with large number of living children were more likely to have unintended pregnancy .For example, respondents with five or above children were more than twice to have unintended pregnancy than respondents with two or less children. This result is also consistent with the result of bivariate analysis.

Evidences based on literature also explain that the more children a woman already had, the more likely she was to report that her current pregnancy was unintended. For instance, Bongaart(1997) also suggested that as family size increase, unintended pregnancy also increases. The reason could be that married women with more children may have limited access to services or may experience particular difficulty in practicing contraception.

Place of Origin

Multivariate analysis shows that there is weak association between place of origin (urban\rural) and unintended pregnancy. Respondents with urban origin had a little lesser chance (12 percent) of having unintended pregnancy than married women of rural origin. In contrast, in bivariate analysis, place of origin had association with unintended pregnancy. Respondents from rural origin were (44 percent) more likely to have unintended pregnancy than those with urban origin (31 percent).Elizabeth (1999) suggested that ideal family size of rural women tends to shift downward when they move to large cities, where living space is limited and the cost of living is higher. Even if family planning services are available, women who have recently migrated may lack knowledge and skills needed to achieve their modified reproductive preferences.

Age

Age level of respondents was among the predictors that were found to be significant determinants of unintended pregnancy. The multivariate analysis asserted that the risk of unintended pregnancy among respondents of late reproductive age (35-49 years) were 48 percent less likely than those of early reproductive age (15-24 years). This result is consistent with the result of bivariate that shows increase in age will reduce the risk of unintended pregnancy.

Elizabeth (1999) revealed that although older women in general are less likely to have been pregnant than are younger women, an older woman who becomes pregnant is more likely to have planned to do so. This might be younger and

older married women differ in their experience and also planned pregnancy seeking behavior is likely to increase as age increases.

Income

The results of both bivariate and multivariate analysis show insignificant relationship between family income and unintended pregnancy. Elizabeth (1999) suggested that married women in low-income household would not able to afford the family planning services that are probably more accessible to high-income ones. In contrast, interesting results were received from focus group discussants concerning family income as related to unintended pregnancy. Discussants argued that in Hawassa town there are family planning services that are open both to low and high family income and easy access to have information from different electronic/ non-electronic media makes their awareness level similar. However, discussants had expressed their doubt on equity in quality family planning services.

6.2-Discussions on magnitude and major reasons for unintended pregnancy

According to this study, about 36 percent of conception among respondents is unintended. This makes the result of this study comparable to the national average. The result is a little lower than the result of a study conducted in Ecuador (Elizabeth, 1999), which is 39 percent for married women. The difference could be attributed to the progress in the awareness and availability of services in the country and other related factors to the study area.

More and more women of all over the world are opting for fertility by choice not by chance. As a result, over half of the world's couple uses contraceptives to avoid unintended pregnancy (PRB, 2005). Contraceptive is saving the lives of women around the world from hazards of unintended pregnancy. At the same time, significant proportions of unintended pregnancy occur because of method

related reasons. In this study, methods failure was the most frequent reason mentioned for unintended pregnancy followed by the lack of awareness. Methods failure was also among reasons mentioned for unintended pregnancy in shangai. Yan and John (2004) suggested that in shangai 21 percent of pregnancies occurring between marriage and first birth were reported as unintended. Of which 81 percent results from contraceptive failure.

During the focus group discussions it was explained that the tendency of women to use modern methods that are less effective like injection and pills had contributed to the rise of methods failure as a reason for unintended pregnancy. In this regard, the majority of the focus group discussants stress the need for awareness raising on methods that are more effective like Sterilization Norplant and Intrauterine device.

CHAPTER SEVEN

Summary, Conclusions and Recommendations

7.1 Summary

In chapter one through six, review and analysis of determinants and magnitude of unintended pregnancy have been made in relation to socio-economic and demographic variables that have influenced unintended pregnancy of married women. The main predictors of the variable were also examined using bivariate and multivariate analysis.

The study was based on a sample of 630 selected married women, whose recent most pregnancy occurs between January, 2006 and January, 2008. The data collection period was between January 1,2008 and January 20,2008.The results indicate that almost half (49 percent) of the respondents were in peak reproductive age (25-34years), with 47.7 percent tertiary level of education, while small number respondents (13.4 percent) were illiterate. Almost half of the respondents (48 percent) live in middle-income households.

Regarding respondents reproductive history, more than half of the respondents (57 percent) are current user of contraceptive while 62 percent of the respondents had used a modern method prior to their most recent pregnancy. Concerning knowledge of contraceptive about 96 percent have expressed to have known at least one type of modern contraceptive.

About 36.2 percent of respondents' recent pregnancy was found to be unintended, of which 16.3 was characterized as unwanted and 19.9 percent as mistimed. The result of this study is similar to the national average (35 percent) reported by CSA on the basis of EDHS(2005). Among the variables considered in the bivariate analysis, age, age at first marriage, numbers of

living children, educational level of respondents, family income, and place of birth have shown an association with unintended pregnancy.

The variables that were considered in multivariate analysis as a determinant of unintended pregnancy and statistically significant were number of living children, age at first marriage, educational level, and age of respondents. The result shows that respondents with large number of living children and low age at first marriage are at increased risk of unintended pregnancy.

7.2. Conclusions

Despite the decrease in overall fertility and increase in contraceptive prevalence many married women in Ethiopia are met with unintended pregnancy. The result of this study reveals that 36.2 percent of respondents classified their most recent pregnancy as unintended. This result is comparable with national average that is according to EDHS (2005) 35 percent.

In Ethiopia, the relationship between family planning and improvement of birth outcomes has been amply demonstrated. However, the availability and use of contraceptive methods, as well as its effectiveness, leave much to be desired. As a result, because of methods failure, significant proportions of pregnancies are unintended. In this study, almost half of the respondents mentioned methods failure for unintended pregnancy.

Majority of respondents who mentioned methods failure for unintended pregnancy use less effective methods like pills and injection. This shows that there is lack of awareness on type of contraceptive used. During the two groups discussion it was explained that the tendency of women to use methods that are less effective like injection and pills had contributed to the risk of unintended pregnancy. Participants of focus group discussion stressed the

need for awareness raising to methods that are more effective like sterilization, Norplant and Intrauterine Device (IUD).

Among the variables that independently raised the likelihood of unintended pregnancy were, low age at first marriage, large number of living children, and tertiary level of education. In contrast, variables that significantly lowered unintended pregnancies are pregnancy at late reproductive age group (35 – 49 years).

The results discussed above suggested that there is a strong need for appropriate interventions addressing married women family planning need.

7.1.3. Recommendations

On the basis of the findings and conclusions with regard to unintended pregnancy of respondents, the following recommendations are forwarded:

1 The estimate of the magnitude of unintended pregnancy indicates that it is one of the major reproductive health problems among participants of the study. Thus, interventions must be made to reduce the apparently high level of unintended pregnancy.

2. The result of this research further showed that particular group respondents are at increased risk of unintended pregnancy. Therefore, family planning programs, which have been targeting to reduce unintended pregnancy, should focus not only on repeating similar kind of program execution rather the identified specific context of areas should be taken in to account. In this regard, respondents' with large number of living children and low age at first marriage particularly need family planning services that are adored to their needs.

2 Almost half of unintended pregnancies in this study were because of methods failure. Failure to avoid unintended pregnancy by using

contraceptive is perhaps a result of poor counseling at the time of method provision and related quality of care issues. Hence, the role of quality of care in improving respondents' ability to achieve their reproductive goals and reduce their number of unintended pregnancy should also be given special attention, since disrespect for clients, inadequate information or limited method choice might lead respondents to underutilize services.

3 Majority of participants of this study who reported methods failure for unintended pregnancies use less effective methods like injection and pills. Hence, respondents' should be encouraged to use the more effective methods like sterilization, Norplant and Intrauterine device (IUD). In this regard, efforts on raising awareness are recommended.

4 All findings under this study are potential areas for undertaking further research. However, as a matter of priority, research on the causes of methods failure is recommended.

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APPENDIX-A: SURVEY OF STRUCTURED QUESTIONNAIRE FOR SELECTED MARRIED WOMEN IN HAWASSA TOWN, SNNPRS.

ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

Inclusion criteria:

Only married women whose most recent pregnancy occurred between Jan, 2006 and Jan, 2008.

Questioner Number_____ (To be given by the researcher)

Consent form

The purpose of this study is to assess the Determinants and Magnitude of unintended pregnancy among selected Married women in Hawassa town .You are selected to be one of the participants in the study. The study will be conducted through interviews. We are asking you for a little of your time, about forty five minutes, to help us in this study. In the end, it is hoped that the information you give us could help to design appropriate reproductive health services for married women in Hawassa town. The interview involves intimate and private life questions .So private setting is needed in which you and the interviewer will Carryout the interview .We would like to assure you that this privacy should strictly be maintained throughout the research work.A code number will identify every participant and no name will be used. Your responses to any of the questions will not be given to anyone else and no reports of the study will ever identify you. If a report of results is published, only information about the total group will appear.

Are you willing to participate in the study?

[ ] Yes **[ ] No**

Name and signature of Data collector

Name_____ Signature_____Date_____

Supervisors/editor's Name and signature_____

PART I. Demographic Characteristics

NO	Questions	Coding categories	Coding
101	Family size?	----------	
102	What is your age?	----------	
103	How old are you when you first got married?	----------	
104	What is your birth place;	1 urban 2.Rural	

PART II Socio-economic Characteristics

201	What is your educational status?	1. Illiterate 2.Attend elementary school 3. Attend high school. 4. Attend higher education.	
202	What is your occupation?	1. Government employee. 2. Private employee. 3. Self employee. 4. House wife. 5.Others(specify)----------	
203	What is your religion?	1. orthodox 2. Muslim	

		3. catholic 4. protestant 5. Others (specify)----------	
204	What is your ethnicity?	6. Sidama 7. Welaita. 8. Amhara. 9. Oromo 10. Others (specify)----------	
205	What is your family income?	----------Birr per month(estimate of respondents)	
206	How do you classify your Family's economic status by comparing with that of your neighbors?	1. Low 2. Middle 3. High	

PART III Knowledge and attitude of modern contraceptives

301	Do you approve of family planning?	1. Yes 2. No (Skip to 304)	
302	From where do you mostly get information on family planning methods?	1. Husband 2. Friends 3. Family/relatives 4. Mass gathering(kebele,Idirs) 5. Government (hospital/clinic/professionals) 6. Mass media	

		7. Community level/volunteers/workers 8. Others (specify)	
303	Do you know the place where modern contraceptive could be obtained?	1. Yes 2. No	
304	Have you ever attended family planning education in your community?	1. Yes 2. No	
305	Which of the following methods do you know?	Yes No 1. Pills 1 2 2. IUD 1 2 3. Injection 1 2 4. Female sterilization 1 2 5. Male sterilization 1 2 6. Diaphragm, 1 2 7. Implant 1 2 8. Condom 1 2 9. Others(specify)----------	
306	Where do you or your spouse usually obtain supplies of this method?	1. private clinic/hospital 2. Government clinic/hospital 3. NGO/clinic/programs 4. Shops/kiosks 5. Others(specify)----------	

PART.V Practice of modern contraceptive

501	Have you ever used a contraceptive method to prevent or delay pregnancy?	1. Yes 2. No	
502	Can you please tell me to which group you belong regarding modern contraceptive practice?	1. Current user. 2. Ever used. 3. Never used.	
503	Are you (Husband) currently using any method to avoid pregnancy?	1. Yes 2. No (skip to 506)	
504	Right before your recent pregnancy, did you/your husband use any of modern contraceptive?	1. Yes 2. No (skip to 506) 3. Do not know	
505	If your answer is Yes for(Q504), what modern contraceptive did you/your husband used?	1. Pills 2. IUD 3. Injection 4. Female sterilization 5. Male sterilization 6. Diaphragm,Foam,Jelly 7. Implant 8. Condom 9. Others(specify)----------	

506	If your answer for (Q504) is No, what is the main reason that you didn't used any modern contraceptive methods? Yes No 1. Desire to have child 1 2 2. Opposed to family planning 1 2 3. Husband disapproves 1 2 4. Religious/cultural prohibitions 1 2 5. Lack of knowledge of the source 1 2 6. Difficult to reach the source 1 2 7. Others(specify) ----------		

PART.VI Reproductive history

601	Have you ever been pregnant?	1. Yes 2. No	
602	How many pregnancies have you had still know?	Enter----------	
603	How many live birth have you had?	Enter----------	
604	If you could go back to the time you did not have any children and could choose exactly the number of children to have in your life	Male ------ Female -------- Total ----------	

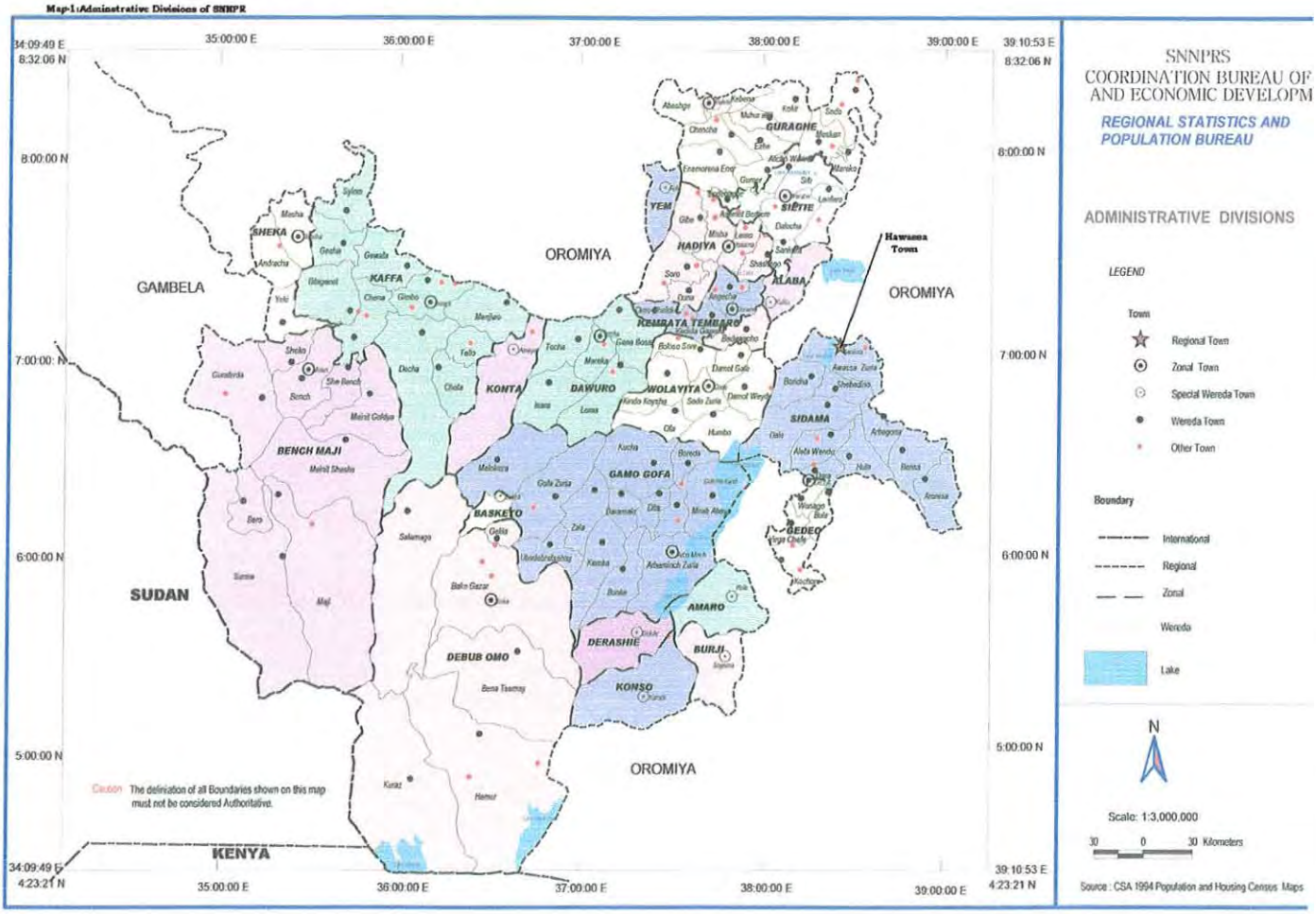
	.How many would that be?		
605	How many children do you have know?	Enter----------	
606	Do you want to have additional children?	1. Yes 2. No 3. Not decided 4. God knows 5. Do not know	
607	Have you ever been pregnant when you did not want to?	1. Yes 2. No 3. Do not know	
608	If, yes how many pregnancies were unwanted?	Enter	
609	Right before your recent pregnancy, would you say you wanted baby at some time in the future?	1. Yes 2. No (skip to 611)	
610	If your answer for(Q609) is yes how do you feel about the pregnancy?	1. Too soon 2. Right time 3. Later than wanted	
611	If your pregnancy was unwanted or sooner than wanted what is the reason you could not avoid becoming pregnant?		

	Yes	NO
1. Lack of awareness	1	2
2. Poor access to contraceptive	1	2
3. Husband disapproval	1	2
4. Method failure	1	2
5. Other (specify)----------		

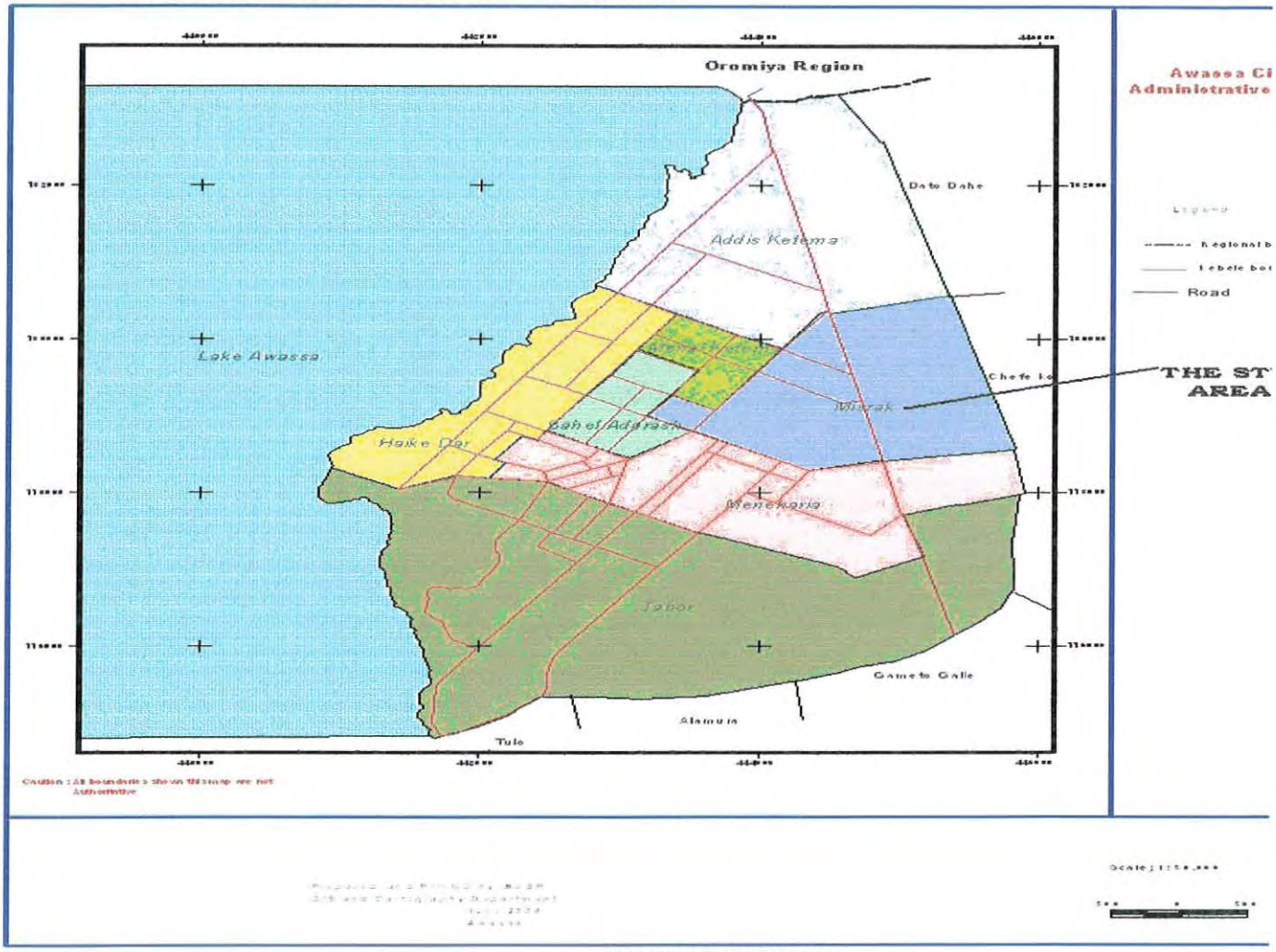
612	If it was due to method failure, what was the method you used then?	Specify the method----------	
613	What did you do for your recent pregnancy that was unwanted or sooner than wanted?	1. Nothing, the pregnancy continued. 2. Attempted to stop pregnancy, but failed 3. Attempted to stop pregnancy and succeeded	
614	If you had induced abortion, who performed the abortion?	1. Health professionals. 2. Untrained people. 3. Self induced 4. No response	

THANK YOU!

ANNEX THREE:-MAPS OF THE STUDY AREA



Map-2: Location Map of the Study Area



Source : Awassa City Administration 2014

Declaration

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

Akalework Bezu		15 July 2008
Student	Signature	Date

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

Tenfe Degefa		15 July 2008
Advisor	Signature	Date