

BARRIERS TO ACCESS TO  
MODERN CONTRACEPTION

BY

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## Table of Contents

	<u>Page</u>
- Certificate of Approval.....	i
- Acknowledgement .....	ii
- Table of Contents .....	iii
- List of Tables.....	vi
- List of Figures .....	vii
- List of Abbreviations .....	viii
- Summary .....	ix
I. INTRODUCTION .....	1
- Global Aspects of Family Planning .....	1
- Policy Guidelines and law pertaining to Family Planning .....	2
- Objective of the Study .....	3
. General Objective.....	3
. Specific Objectives .....	4
- Background Information on Ketena-4 and Addis Ababa .....	5
II. LITERATURE REVIEW .....	6
- Family Planning, Health and Health Risks .....	6
- Factors influencing FP and People's attitude .....	8
- The Present Situation, Policies and Programs of FP in the World .....	9
III. METHODS .....	10
- Study Design .....	10
- Sample Size .....	11
- Selection Hierarchy .....	11
- Questionnaire .....	14
- The Research Team .....	14
- Pilot Study .....	15
- The Main Survey .....	17
- Supervision and Quality Control .....	18
- Data Analysis .....	19
IV. RESULTS.....	20
- Sociodemographic Characteristics .....	20
. Age Distribution of Respondents .....	20
. Ethnic Group .....	20
. Religion of the Study Group .....	20
. The Education Status .....	20
. Marital and Occupational Status .....	21
. Economic Status .....	22

-	Population Dynamics .....	22
	. Abortion .....	22
	. Age at First Delivery .....	23
	. Maternal Mortality .....	23
-	Interest and Knowledge of Family Planning .....	23
	. Knowledge by Religion Ethnic and Age Groups .....	24
	. Knowledge of MC by Educational Status .....	25
	. Source of Knowledge for Modern Contraception .....	26
	. Most important reasons why some of the non-users do not like to know about or to use Family Planning.	27
-	Attitude toward Family Planning .....	28
	. Attitude toward FP by Age Group .....	28
	. Attitude toward FP by Marital Status and Religion...	29
	. Attitude toward FP by Educational Status .....	29
-	Practice of Family Planning .....	30
	. Age at which the Modern Contraception Started .....	30
	. Type of Modern Contraception .....	30
	. Use of pills by Age Group .....	31
	. Cost of MC .....	31
	. Delivery place of MC with or without prescription...	31
	. First most important reasons women preferred to..... go to respective places for MC .....	31
	. The consequences of MC .....	32
	. Use of MC by Socioeconomic factors .....	33
	. CPR by Kefetegna .....	33
	. CPR by Ethnic Group and Religion .....	33
	. CPR by Marital Status .....	33
	. CPR by Educational Status .....	33
	. CPR by Occupational Status .....	34
	. CPR by Economic Status .....	34
-	Partner's attitude toward Modern Contraception .....	35
-	Role of women in FP by Teaching their older Children..	36
-	Sexual practice in relation to Modern Contraception...	37
-	Abortion .....	37
-	Comments by Women or FP, MC, and questionnaire .....	37
	. Positive comments .....	37
	. Negative comments .....	38
V.	DISCUSSION .....	39
-	Representativeness of Sample and Generalization of findings .....	39
-	Fertility .....	39
	. Age of onset of fertility.....	39
	. Family size .....	40
	. Maternal Mortality rate.....	40
	. Abortions .....	40
-	Use of Modern Contraception .....	41
	. Use of MC by Age Group.....	41
	. Use of MC by Marital Status .....	41
	. Use of MC by Educational Status .....	41
	. Use of MC by Occupational Status .....	42
	. Use of MC by Economic Status .....	42
	. Use of MC by Type .....	42
	. Reasons for not using MC .....	43

- Knowledge of MC ..... 43
  - . Knowledge of FP by Age Group ..... 43
  - . Knowledge and desire for knowledge by Educational Status..... 44
  - . Source of MC knowledge ..... 44
  - . Reasons for lack of Desire of knowledge ..... 44
- Attitude toward FP ..... 44
- Accessability to FP Services ..... 45
- Multiple regression ..... 45
- Consequences of MC ..... 45
- Partner's attitude toward MC ..... 46
  
- VI. CONCLUSIONS ..... 17
  - . Recommendations ..... 48
  - . Bibliography ..... 49
  - . Appendix 1

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LIST OF TABLES

	<u>Page</u>
1. CPR of Countries by Economic Group .....	1
2. Comparison of the Study Women with the Population of Ketena-4 and Addis Ababa .....	11
3. Sociodemographic Characteristics of the Study Group ..	21
4. Number of Contraceptive Methods named by women aged 15-49 years who said they knew about Modern Contraception .....	24
5. Knowledge and Use of Modern Contraception by age Group.	25
6. Distribution of Desire for Knowledge and Knowledge of MC by Educational Status .....	26
7. Source of current and preferred information for Modern Contraception .....	27
8. Reason why women did not like to know more about and do not use Modern Contraception .....	28
9. Desire for knowledge and Desire for use of Modern Contraception in non-users .....	29
10. The most important reason why women go to respective places to get MC .....	32
11. CPR by Educational Status .....	33
12. CPR by monthly Family Income .....	34
13. Partners attitude towards Modern Contraception by women desire for use and use of MC .....	36

### List of Abbreviations

AIDS	=	Acute Immuno-Deficiency Syndrome.
CPR	=	Contraceptive Prevalence Rate
D.F.	=	Degree of Freedom
FGAE	=	Family Guidance Association of Ethiopia
FP	=	Family Planning
IPPF	=	International planned Parenthood Federation
IUD	=	Intrauterine Device
KAP	=	Knowledge, Attitude and Practice
MC	=	Modern Contraception
MCH/FP	=	Maternal and Child Health/Family Planning
MOH	=	Ministry of Health
MOs	=	Months
REWA	=	Revolutionary Ethiopia Women's Association
PHC	=	Primary Health Care
Prob.	=	Probability
STD	=	Sexually Transmitted Diseases
T.V.	=	Television
$\chi^2$	=	Chi - Square

## SUMMARY

### BARRIERS TO ACCESS TO MODERN CONTRACEPTION

This study was prompted by a report on maternal mortality associated with a high number of abortions due to unwanted pregnancies, a persistent high birth rate, and the large number of poorly spaced pregnancies. The aim of this study was to analyze the use and the barriers to use of Modern Contraceptive methods and to examine the outcome of unwanted pregnancies. Several hypothesis associated with the barriers to the use of MC were tested.

A community based survey, was carried out from 15 September to 2 October 1987. The study involved the use of a questionnaire and interview. The field staff visited 507 housing units, comprising of 675 women aged 15-49 years. The anonymous data from each questionnaire was entered electronically using an IBM - compatible microcomputer and the analysis was carried out using the Microstat and SPSS software packages.

Among 675 women interviewed 74 per cent of them had either the desire for knowledge or had knowledge of family planning. The contraceptive prevalence rate from the study group, for those who had ever used modern contraception was 25 %, and for those currently using. Furthermore, 54% of the women also either desired to use or were currently using Modern Contraception. The oral contraceptive method was by far the most popular and most utilized by the study group (66 %). The preferred sources for most of the women were MOH health institutions.

In the study group those who had formal education, higher economic and better occupational status, married and younger age group were using the modern contraception more often than their counterparts.

Among 168 women who ever used modern contraception, eighteen of them became pregnant while using modern contraception. The failure of the method was highest with condoms (25%), followed by tubal ligation (12%), oral contraceptive methods (11%) and IUDS (9%).

Among 469 women who became pregnant, 33 of them (5%) had an induced abortion of which 1-2 died.

The estimated maternal mortality rate was 7 to 9 per 1000 live births. The only study on maternal mortality in Ethiopia suggests the rate to be 5.68/1000 live births. The main reasons for not using modern contraception were identified:

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Among 469 women who became pregnant, 33 of them (5%) had an induced abortion of which 1-2 died.

The estimated maternal mortality rate was 7 to 9 per 1000 live births. The only study on maternal mortality in Ethiopia suggests the rate to be 5.6/1000 live births. The main reasons for not using modern contraception were identified:

- not yet Sexually active (26%).
- lack of factual information and desire for additional children (12%).
- fear of contraceptive complications (9%).
- misconceptions or false ideas about FP (6%).
- opposition by the male partners and Religious/Cultural taboos (3% each).

Generally, the age of first intercourse was very close to the start of menarche. Ten per cent of cases, had intercourse before menarche. Furthermore, when looking at the relationship of the age of the women when they had their first child and their first intercourse and menarche, we see adolescent women were at risk for pregnancy and tempted to have an illegal abortion. Considering that many have not yet established a family or may still be in school, significant problems can be expected for these adolescents.

In addition, the role of the spouse in Family Planning is also detailed and finally the solutions for better services are indicated in the discussion.

Of the tested hypotheses all were confirmed except hypothesis four which was related to the relationship of the private vendors of contraceptives. It had been hypothesized that greater numbers with or without prescription would be obtaining them from private sources. This was not so.

## I. INTRODUCTION

### 1. Global Aspects of Family Planning

Many governments of developing countries emphasize the importance of reducing fertility as part of their overall strategy for improving standards of living. Family planning (FP) programs aimed at increasing contraceptive prevalence rate (CPR) are the most widely used approach to bring about fertility reductions<sup>1</sup>.

The overall objectives of FP policy and the nature of their service delivery systems differ from country to country depending on prevailing political, economic, social and cultural factors<sup>2</sup>.

However, it can be observed from programs of different countries that the scope of FP is being widened, its service delivery system being constantly improved, and together with increasing economy and increasing education its acceptors are steadily increasing throughout the world although desired targets are not achieved.

Table 1 shows the increases of CPR with increasing income status.

Table 1 : CPR of countries by economic group

Economic Group	Country	CPR%
Low Income	Ethiopia	2
Lower Middle Income	Bolivia	26
Upper Middle Income	Brazil	65
Industrial Market Economies	USA	68.
East European Non-Market Economies	Czechoslovakia	95

Source: World Development Report, 1987.

This study was prompted by a report on maternal mortality associated with a high number of abortions due to unwanted pregnancies<sup>3</sup>, a persistently high birth rate, and the large number of poorly spaced pregnancies.

An attempt was made to identify the major factors which act as barriers to access to modern contraception. This baseline information could be used to help in planning of appropriate family planning services for women of child bearing age (15-49 years) of Ketena-4 and Addis Ababa as a whole. Ketena-4 is one of the five districts of Addis Ababa and it is almost similar to all Ketenas<sup>4</sup>.

The CPR in Ethiopia has not been well studied and not enough information concerning modern contraception is available. The CPR for Ethiopia in general is estimated to be about 2% (for Addis Ababa, it is not yet clearly known) compared with a rate of about one-third (33%) for the whole world and two-third (67%) developed countries<sup>5,6</sup>.

Family Planning, which was once regarded as synonymous with population control, is now being associated with responsible parenthood, family well-being, mother and child care, and above all, with matching people's needs with available resources. To make such programs effective, Maternal and Child Health / Family Planning (MCH/FP) must include a reasonable number of the other components of Primary Health Care (PHC) package.

Ethiopia is one of the least developed countries in the world and with an estimated population in 1987 of 47 million<sup>7</sup>. It is the third most populated country in Africa<sup>7</sup>. Yet, there is no definite policy statement regarding family planning. There is, however a plan for the implementation of a child spacing policy beneficial to the mother's health, to the child's health, and ultimately to the health of the whole family, the basic biosocial unit of the nation<sup>2</sup>.

## 2. Policy guidelines and law pertaining to Family Planning in Ethiopia

The Family Guidance Association of Ethiopia was established by a small group of volunteers, in 1966. Ethiopia does not yet have an official population policy as such.

Fortunately however, the government has fully realized the potential contribution of FP to the overall development strategy of the country and has been actively supporting the program.<sup>1</sup>

In 1980, the Ministry of Health of the Ethiopian Government has for the first time opened a division which is responsible for MCH/FP; coordinators for this section were also assigned to all regional health departments. In 1981, the Council of Ministers of the Ethiopian Government decided the following:

- " 1. FP services should be made available to those families/individuals who want to postpone procreation and to protect the health of mothers and children by spacing.
2. FP Services should be provided at all levels of the health services infrastructure.
3. The technical activity of Family Guidance Association of Ethiopia (FGAE) should be closely controlled by the Ministry of Health."

Furthermore, in the ten year perspective plan 1984/85 to 1993/94 one of the targets set was provision of health services to 80% of the population which also include, FP services<sup>8</sup>.

With regards to abortion, the penal code of Ethiopia mentions the following: the deliberate termination of pregnancy, at whatever stage or however effected, is punishable, except termination of pregnancy on medical grounds to save the pregnant woman from grave and permanent danger to life or health<sup>9</sup>.

With regards to the policies of the Ministry of Education, health education concerning FP is not taught in the schools.

### 3. Objectives of the study

The aim of this study is to analyse the use and the barriers to use of modern contraceptive methods together with related pregnancy and health outcomes.

It was decided to carry out a population-based household survey of women of reproductive age group with the following objectives:

#### 3.1 General Objective

- to determine the patterns of use and barriers to the use of modern contraceptive methods.

#### 3.2 Specific Objectives

- to determine the knowledge, attitude, and behavior to modern contraceptive usage.

- to determine the prevalence of use of different contraceptive methods by educational status, religion, and sociodemographic variables with special attention to poverty.
- to determine the accessibility and its determinants in the use of modern contraceptive methods.
- to determine the role of the partner as a barrier to the use of modern contraceptive methods.
- to determine the role of health professionals (positive or negative) in health institutions in the use of modern contraception.
- to examine some aspects of the relationship of the lack of Family Planning and maternal mortality including the issue of abortion and its complications.
- to develop a tool (questionnaire about FP) which can then be used in other parts of Ethiopia (rural areas) with the necessary modifications.

In addition, several hypothesis of association with the barrier to the use of modern contraception are proposed as follows:

- H1. CPR is directly related to the educational status of the users.
- H2. The utilization of contraception is directly related to the economic status of the users.
- H3. The rate of contraception use among christians is higher than among muslems.
- H4. The usage of contraceptives is higher from pharmacies and drug vendors with and without prescriptions than from health institution.
- H5. The usage of contraception from drug vendors or pharmacies is greater in single than in married women.
- H6. The usage of contraception is greater in younger age groups.

4. Background Information on Ketena-4 and Addis Ababa

Ketena-4 is similar to Addis Ababa in most sociodemographic characteristics<sup>4</sup>. Addis Ababa, the capital of Ethiopia, had a reported population of more than 1.5 million in 1987<sup>5</sup>. Ketena-4, one of five Ketenas in Addis Ababa, had a reported population of 300,000 with a sex ratio of 48 males to 52 females in 1987<sup>5</sup>. In 1984, the estimated crude birth rate for the Ketena was 21.3 per 1000 with a fertility rate of 81.6 per 1000, and an average annual population growth rate of 5.0% with a rate of natural increase of 1.62%, the remaining growth coming from rural to urban migration. The infant mortality was 67.5 per 1000 live births for the Ketena; this is similar to that of Addis Ababa. This represents only half of the national infant mortality rate (144 per 1000) but is five times greater than the rate in developed countries<sup>5,10</sup>.

The majority of Ketena-4 residents are governmental workers with a family income between 100 and 199 Birr per month. Over 80% of the population in the Ketena have attended school and less than 15% are illiterate. The Ketena has twelve health institutions, out of which nine are rendering FP services free of charge. Eighteen pharmacies and drug vendors provide modern contraceptive methods as well, but prices vary and some are expensive (5-10 Birr). Family Planning information (education) is rarely offered by the mass media. Furthermore, the health institutions offer little health education about FP. Generally, health education concerning FP is not taught in the schools. Furthermore, it is not given properly by the health facilities in the Ketena, or in Addis Ababa at large, except by the FGAE.

## II. LITERATURE REVIEW

Eventhough access to the literature on family planning and especially that pertaining to our study was very limited in the country, a concerted effort was made to refer to all available material.

### 1. Family Planning, Health & Health Risks

The timing and spacing of births through family planning enables women to have children when they are best prepared. Maternal and child health care and family planning are part of PHC and aim at promoting and protecting the health of children and women of child bearing age, so that all children have the possibility for health, growth and development; and so that the reproductive life of woman is compatible with a state of health and well-being. It is a vital part of national strategies for PHC; it concerns some 60-70 % of the population in all developing countries, it deals with health problems of great magnitude; and it is basic to the achievement of a healthy population in the future. Spacing allows more time to breast-feeding each child, to prepare weaning foods, or to care for a sick child. Other responsibilities are less physically straining if the mother has fewer young children to care for. Increased birth spacing may also mean that there is more food available for the family and illness and disease may be reduced because of less crowding in the home."<sup>12</sup>.

Contraception reduces maternal mortality by reducing the number of pregnancies, especially those to women in high risk groups, that is, older women and women with many births. At the same time, contraception itself also carries a small but measurable risk. In developed countries, as mortality due to child birth has decreased deaths due to fertility control have become relatively more important<sup>13</sup>.

Illegal abortion from unwanted pregnancies causes some 25 to 50% of maternal deaths, simply because women do not have access to the Family Planning services they want and need, or have no access to safe abortions or safe treatment for the complications of abortion. For the thousands of women who die in pregnancy and child birth, millions more are permanently disabled. Many of them are ostracized by their families and communities. For every death, it is estimated that 10 to 15 women are handicapped in one way or another<sup>14</sup>.

Despite rumors of infertility or birth defects, recent large studies show that couples become fertile again and have healthy children after using modern family planning

methods. While intrauterine devices (IUDs) increase the risk of infection and possible infertility, this risk is slight except among women exposed to sexually transmitted diseases. Family Planning programs need effective communication strategies to dispel false rumors, to provide accurate information in a convincing way, and to alert women to any reproductive problems that require prompt medical attention. Otherwise, women who are unduly alarmed by suspected dangers may not use contraception at all. Then they face instead the real and far greater dangers of unwanted or high risk pregnancies<sup>15</sup>.

African women with infertility are more likely than those from other regions in the world to have had pelvic-inflammatory disease from sexually transmitted diseases and pregnancy complications arising from induced abortions. Illegally induced abortion ranks as the main cause of maternal death in some urban areas in Africa. Prevention of unwanted pregnancies through effective methods of family planning will eliminate deaths and ill health from this cause but this is not happening because even where contraceptives are available, religious beliefs and traditional cultural practices discourage their use. The answer to health problems of women lies in universal formal Education with elimination of mass illiteracy. Family Planning can prevent maternal deaths in two ways. The first is prevention of pregnancy among women at high risk of complicated pregnancy and delivery including illegal abortions. The second is simply prevention of pregnancy and thus prevention of exposure to the risks of complications. Prevention in public health, should strike directly at the "roots". It was strongly supported that improvement of education for women of developing countries would help improve the quality of their lives. One, however, can doubt that education, even if accompanied by general improvement in the status and living conditions of women, can greatly reduce maternal mortality. Once pregnant, perhaps 10 - 15 % of women will have serious complications of pregnancy or delivery, no matter what the setting". The world does not seem content to wait for socioeconomic development to prevent the deaths of Third World infants. Surely, women deserve as much attention<sup>16</sup>.

Females in the sexually and potentially active reproductive age group, are still dying from preventable causes of death like criminal abortion, hemorrhage or septicaemia. For example, a report on maternal mortality in Addis Ababa, Ethiopia, for 1982/83 estimated it to be 5.6/1000 live births. The mortality was highest among nulliparas, unmarried women, maids/janitors and students. The most prominent cause of death identified by the study was abortion<sup>3</sup>.

## 2. Factors influencing FP and people's attitude

A study conducted on barriers to modern contraceptive used in a Peruvian highland community shows that contraceptive choice is strongly related to a couple's life experiences, their contact with urban centers, their economic status, and their emphasis on cultural values. Among contraceptive users, husbands are concerned with family size and encourage their wives to seek information about the use of modern contraceptives. A discrepancy in attitudes exists between spouses: the men's positive attitude toward modern contraception contrasts with the women's traditional desire for a large family. The majority of the couples practice natural and traditional family planning methods which are not reliable. Villagers do not use modern contraceptives as a result of cultural barriers created by family planning services that do not take into account the life style of these people, insufficient knowledge of human physiology, comments from dissatisfied users, and women's reliance on their reproductive role for self-esteem<sup>17</sup>.

Cook and Maine showed that a spouse, usually the husband, can veto a partner's use of family planning services; where spousal veto acts as a barrier to family planning services, it represents a serious threat to the lives and health of women and children. In Sub-Saharan Africa, for example, if all women who wanted no more children were using effective contraceptives, it is estimated that 5 to 8% of maternal deaths could be averted. Removal of spousal authorization requirements has been shown to increase the use of family planning services; the Family Planning Guidance Association of Ethiopia, for example, removed this requirement in 1982 and clinic utilization increased by 26 % within a few months<sup>18</sup>.

In recent decades contraceptive use in general and reliance upon highly effective methods in particular have substantially increased among married and unmarried couples in the United States. Concurrent with the "Contraceptive Revolution", there has been considerable discussion in the media, the medical community and other professional groups and among the public about specific contraceptive methods. While different attitudes and perceptions regarding contraceptive methods have precipitated this debate, the publicity has undoubtedly influenced public opinion as well. Today a wide variety of contraceptive methods are available for fertility regulation. The decision about which method to choose is likely to be heavily influenced by the perceived attributes of the methods, such as perceived safety, effectiveness, convenience and availability<sup>19</sup>.

Religious differences in contraceptive practices have been noted for over half a century in the United States. A number of studies show important changes and differentials in the contraceptive practice of the largest American religious groups, Protestant and Catholic couples. Indeed, changes in contraceptive patterns have been as revolutionary for these groups as for America as a whole. The effects of religious affiliation on contraceptive patterns persist even after controlling for relevant socioeconomic characteristics. Thus, religious affiliation remains an important determinant of contraceptive practice in the United States<sup>20</sup>.

3. The present situation, policies and programs of FP in the World

The world fertility survey, indicated that some 400 million couples need and want to determine the size and spacing of their families but lack either the availability, accessibility or means to FP services. Demographers have projected that if one quarter of these couples can be reached by 1990, global population stabilization can be reached at 8 billion rather than at 10 billion or more<sup>21</sup>.

Since the World Population Conference in 1974 and the World Conference of the International Women's Year in 1975, many governments have come to recognize family planning as one of several initiatives to improve the welfare of mothers and children and to raise the status of women, enabling them to take a more active part than they have to date in the national development process. Unless there is definite intervention by the Government of the country and MOH, the magnitude of the problem may escalate among the above vulnerable groups. Frequent pregnancies of short intervals are detrimental to the health of women and infants<sup>22</sup>.

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### III. METHODS

As mentioned in the introduction, a sample survey was carried-out of women of reproductive age group (15-49 years) in Ketena-4, Addis Ababa. The study involved the use of questionnaire interviews. The questionnaire had been developed by the principal investigator after reviewing the FP literature. It was finalized and verified by the supervisor. Systematic sampling was preferred to obtain a fair distribution throughout the Ketena and so that the representativeness of the sample would be ensured.

#### 1. Study Design

Ketena-4 is divided administratively and geographically into five Kefetegnas (subdistricts) and fifty-four Kebeles (neighborhoods). All houses had already been numbered for administrative purposes by the respective Kebeles. All Kefetegna and Kebele housing units were included to ensure that the result would be a representative sample. All women in the sampled housing units were offered the interview. The preparation of the study took place from July to September 1987.

The organization of the survey was facilitated by using the existing administrative divisions. As it was stated in the health profile of Ketena-4, all Ketenas of Addis Ababa are similar in sociodemographic and other major characteristics<sup>4</sup>.

With regard to the detailed analysis of the health profile of Ketena-4 and Central Statistics Office report, the distribution of the study group of women were nearly identical to those of both Ketena-4 and Addis Ababa as a whole. Hence, table 2 summarizes the comparison of study women with the general population of Ketena-4 and Addis Ababa in regard to key sociodemographic variables:

Table 2 : Comparison of the study women with the population of Ketena-4 and Addis Ababa.

Selected Variables	Study group	Ketena-4	Addis Ababa
	Per cent	Per cent	Per cent
Ethnic group - Amara	65	60.4	49.2
Oromo	17	13.4	17.1
Marital Status - Married	50	39.2	40.9
Single	27	33.7	32.6
Religion - Orthodox Christian	94	91.1	86.1
Muslim	4	6.1	11.4
Educational Status - Literate	82	85.2	82.1
- Illiterate	18	14.8	17.9
Monthly Family income - 0-199 in Birr	66	60	>50

Therefore these findings support the representativeness of the sample to Ketena-4 and Addis Ababa. In view of the similarity between Ketena-4, and Addis Ababa the study findings information can be extrapolated to the entire city.

## 2. Sample size

We considered the sample size required for the most important variables together with the logistics of such a study. It was decided in consultation with supervisors to have a minimum of 600 women.

## 3. Selection Hierarchy

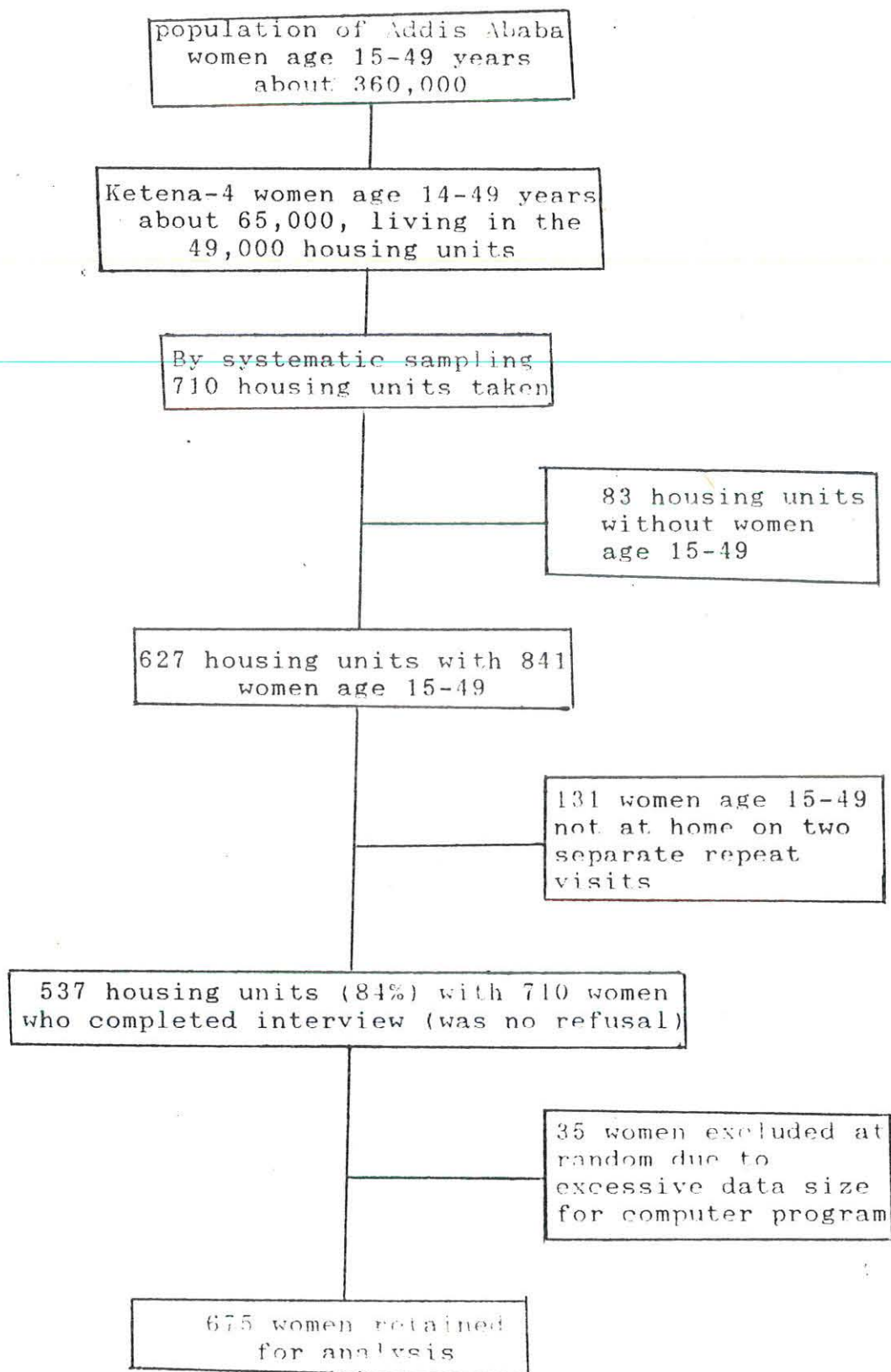
We estimated that, from 49,000 housing units in the Ketena, there would be about 65,000 women of reproductive age group.

A systematic sample was used to obtain a fair distribution throughout the Ketena and to ensure representativeness of the sample.

The smallest Kefetegna and the smallest respective Kebele were considered as a starting point. The first study housing unit number from the smallest Kebele was taken using a random table and with the calculated interval (seventy), 710 housing units were selected.

Figure 1 summarizes the study design and selection hierarchy for this study. It is shown in the figure that from the selected 710 housing units, 83 housing units were without women age 15-49. All women age 15-49 years were asked for an interview in the selected housing units. Housing units without women aged 15-49 years were not replaced. Abolished houses were replaced by the next house number. Furthermore, 131 women age 15-49 years were not at home for the initial visit and on two separate repeat visits due to different reasons. Thus, 537 housing units with 710 women (84% of coverage) completed the interview. However, 35 women who completed the interview were excluded at random due to the fact that the computer could not handle more than 675 cases with such a large number of variables. Therefore, 675 women were retained for analysis.

Figure 1: Study Design and Selection Hierarchy



#### 4. Questionnaire

The questionnaire ( shown in appendix 1) contains items on the social, cultural and economic characteristics of the target group including the family and male partner; knowledge, attitude, and practice of FP and the major barriers to FP use.

In addition, questions regarding the consequences of contraceptive methods, the role of the partner in FP practices, the reasons for the preference of health institutions to obtain contraceptive methods, the experience of abortion in the last ten years and its legality in the future, and maternal death were included in the survey. The questions were mainly closed; some were open, and all were coded.

The questionnaire had separate sections for women in different situations (users and nonusers of contraception). The women answered between 50 and 70 questions each. The questionnaire lasted 25 to 35 minutes, and it was well accepted. None of the women complained about its length.

#### 5. The Research Team

The staff included ten interviewers, two supervisors, one research assistant, one housing unit guide, four drivers and the principal investigator. A clerical assistant was also employed for a total of 16 weeks and started work two weeks prior to the survey. Most of the interviewers were selected from among Ketena-4 residents and the supervisors were selected from among the Ketena-4 health management team. The supervisors selected were female nurses who had experience in MCH/FP of ten or more years. They were given training for 3 days on the general aspects of the research project and on how to guide the interviewers on crucial issues concerning the questionnaires. Ten female interviewers were chosen who had completed 12th grade and were at least 30 years old. They were trained by the principal investigator and research assistant for one week on how to handle the questionnaires and on the overview of the research protocol. The supervisors and interviewers were trained both in the office and in the field from August 25 to September 1, 1987. A procedures manual was prepared for the field staff (interviewers and supervisors).

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The manual included:

- The aim of the survey.
- The supervisors' and interviewers' tasks.
- The housing unit number list categorized by Kefetegna and Kebele.
- The questionnaire.
- Instructions on the method of completion of the questionnaire.
- The interview technique
- Guideline on repeat visits, non-respondents and replacement of housing unit and other items too.

The manual was prepared in Amharic because it was thought that this would facilitate ongoing reference during the survey. This manual is available from the author upon request. The purpose of the training was to orient supervisors and interviewers to the problems of FP services in general; to specify the survey objectives, the importance of the data, the importance of interviewers and the appropriate interviewing techniques, and to ensure a full understanding of every item on the instruction manual and questionnaires. Training also worked at standardization in questioning and recording. It was stressed that the survey should have a positive approach, with the emphasis on FP services (health of women) rather than others like maternal death, socioeconomic items, to facilitate obtaining reliable information.

The questionnaire was designed and printed in English after thorough discussions and corrections with the principal investigator, supervisor and consultant. The translation into Amharic was then verified independently by two competent individuals. There were some language ambiguities with such terms as "abortion", "livebirth" and "types of modern contraception", for which there are no words in Amharic or other Ethiopian languages. The training manual included Amharic definitions of the above terms.

## 6. Pilot Study

During the pilot study, conducted between 3-10 September 1987, thirty preselected housing units in Ketena-4 were visited. The selection was done by systematic sampling.

The objectives of the pilot study were:

- . To improve research technique.
- . To work out any difficulties or misinterpretations.
- . To standardize the questionnaire technique.
- . To determine an appropriate daily work load.
- . To determine the time required for interviews and to evaluate the assumptions used to determine the sample size.

In each housing unit selected:

1. The identity of the supervisor and interviewer were introduced.
2. The reason for the visit and the study purpose were explained.

Furthermore, the respondents in each household were told in the beginning that every conversation would be kept confidential and a strict anonymity of respondents would be observed. Privacy was also kept during the interview.

The cooperation of each kebele office and public (community) was excellent despite the fact that some women had difficulty understanding why their housing units were selected while their neighbors were not. This occurred even after explaining to them the rationale (objectives) of the study, the selection process and showing them the letter from Kefetegna and ketena-4 health management offices. None of the women refused the questionnaire.

The average time for the completion of the questionnaire was 30 minutes excluding time for introduction and searching for a private room. All females aged 15-49 years who lived in the selected housing units were interviewed, starting with younger age group to avoid resistance by their mothers, older sisters, aunts or others. If in the first visit one or more of the respondents were absent, a maximum of two repeat visits were made. If after both repeat visits the required women were absent, these were considered as non-respondents. Despite the adverse physical and geographic conditions, with the available vehicles and selected housing units guides (Ketena-4 Epidemiology and Information Section Head and one searcher) 30 houses

were visited in 3 days time. Furthermore, in order to ensure the quality of interview, the final (third) housing unit interview was carried out in the presence of the principal investigator.

From the pilot study certain problems like technical error in filling the boxes and misinterpretation of some questions were identified. Moreover, some inappropriate questions were deleted and some pertinent questions were added. After completing the pilot study, some corrections and thorough discussions were made and modifications were placed before undertaking the main survey.

## 7. The Main Survey

One month before the survey began, the principal investigator discussed the study with the Ketena-4 Political Party Office (First Secretary), Ketena Revolutionary Ethiopia Women's Association chairperson (REWA) and the five kefetegna chairmen. The kefetegna office in turn informed all 54 kebeles about the study verbally and through letters. The principal investigator also informed each kebele office through a letter to facilitate a conducive atmosphere to obtain reliable information. The duration of the main survey was 6 weeks from 15 September to 22 October 1987.

The same procedures stated in the pilot phase were used in the main survey.

Two teams of five interviewers were responsible for data collection. One supervisor and one housing unit guide were assigned to each team.

The average time spent in one Kebele was 4-6 days. The best time selected for interviewing was early morning and late afternoon. Most interviews were conducted on weekends when the respondents were available at home. The Ketena vehicles were used for transport during office hours and public transport at other times. This worked out well for the majority of the study areas. At the start of the interview in a new area, the interviewer familiarized herself with the lay out of the housing units in the Kebele, often with the assistance of a worker from the Kebele Administrative office. On top of this, one guide was assigned to each interviewer permanently in each Kebele to facilitate the activity. Administration of the data collection instruments presented no problem. But in one area where Dorze ethnic groups were concentrated, a Dorze interviewer was trained and assigned.

The interviewers found that they could usually visit more than five housing units a day. Requests to visit more than 5 housing units were discouraged to minimize error in data collection. Nevertheless, there were no personnel attrition.

#### 8. Supervision and Quality Control

During the first two days of the field survey, the supervisors and research assistant endeavoured to visit each interviewer daily. On the third day of the field survey, completed questionnaires were collected from all the interviewers and edited by the principal investigator in collaboration with the research assistant and the two supervisors. It was clear from reviewing the questionnaires that the several questions were not understood clearly with some technical errors in filling the boxes, and that further instruction was necessary. During the end of the first week of the survey, all staff were called together for two study days, when the above items and queries were discussed. The second study day was taken for role-play practice and additional discussion for the role-play. From the second week onward interviewers were visited by the supervisors at least every other day, at which times supplies were distributed, completed forms collected and problems discussed. As completed questionnaires were collected, the supervisors, research assistant, and finally the principal investigator checked the accuracy of the recording of each item in each questionnaire.

In each of 54 Kebeles in the Ketena, one "study" housing unit was randomly selected to recheck the interview data. The houses were visited by the research assistant and supervisors and interview of one individual per house repeated. Questionnaires of 50 women out of 54 were identical. There was one mistake, in the one questionnaire and the others had 3 mistakes only, each, but all were minor.

A review of all completed questionnaires was done, and 15 questionnaires out of 675 were found to have incomplete information or technical errors in recording. These were corrected by revisiting the respective housing units.

9. Data Analysis

As mentioned earlier, the name of the interviewee was never recorded to ensure strict confidentiality. Each woman was therefore identified by study number only.

This anonymous data from each questionnaire was entered electronically using an IBM - compatible micro-computer.

Data analyses were carried out using the Microstat<sup>23</sup> and SPSS<sup>24</sup> software packages.

The data was first described using frequencies. It was then analyzed using  $\chi^2$  and t-tests.

Stepwise multiple regressions will be carried out prior to the publication of scientific papers, but are not included in this thesis due to their time requirements.

#### IV. RESULTS

The results of the questionnaire are presented below, giving emphasis to the key variables and related major predisposing factors. Questions about age of children of study women, breast-feeding, interval of the refill for MC were part of the questionnaire. These were not analyzed for the thesis due to their time requirements. They will however, be analyzed in the future, for later publications.

##### 1. Sociodemographic Characteristics

Selected sociodemographic variables of the study group are summarized in table 3 below, comprising of:

###### 1.1 Age Distribution of Respondents

The mean age of the respondents was found to be 29 years, the mean number of women per house was 1.33 with a range of 1 to 6 women per house. Only six houses surveyed had six women. Approximately 50% of women in the study were less than 30 years. Only 15% were more than 40 years and the other 35% were between 30 and 40 years.

###### 1.2 Ethnic Group

Two thirds of the women studied were members of the Amhara ethnic group. The smallest ethnic group in the study was Dorze (2%).

###### 1.3 Religion of the study group

Orthodox Christian was the most prevalent religious group (94%), followed by muslims (4%), other religions comprised of 2%.

###### 1.4 The Educational Status

The educational status of women in the study was determined on the basis of literacy and of the number of years of schooling.

Seventy nine per cent of the study group were literate. The illiterate group were 3%. Those who had one, formal education were 72%.

### 1.5 Marital and occupational status

Fifty per cent of women in the study group were married; this was followed by single (27%), divorced (11%) and separated (4%).

With regards to occupational status, 40% of women in the study group were housewives; this was followed by students (15%), and governmental employees (11%). The smallest grouping was mass organization and non-governmental employees.

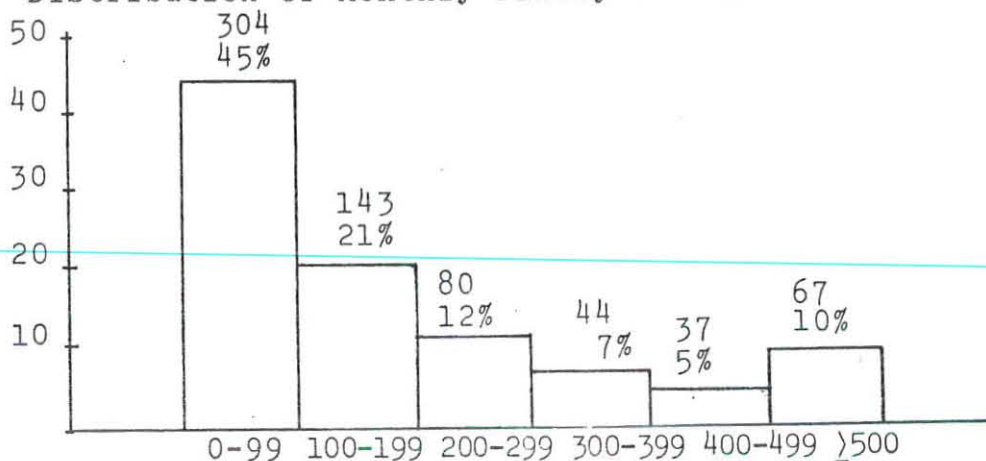
Table 3: Sociodemographic characteristics of the study group.

Selected Characteristics	Distribution	
	Number	Per cent
Total	675	100
Age		
15-19	145	22
20-24	89	13
25-29	111	16
30-34	123	18
35-39	104	15
40-44	56	8
45-49	47	7
Ethnic group		
Amhara	438	65
Oromo	114	17
Tigre	47	7
Gurage	43	6
Others	33	5
Religious group		
Orthodox	635	94
Muslim	27	4
Others	13	2
Educational status		
Illiterate tever attended literacy	142	21
Completed literacy	49	7
1-6 completed grade	214	31
7 or more completed grade	270	41
Marital status		
Married	330	50
Single	184	27
Divorced	74	11
Separated	57	8
Widowed	30	4
Occupational status		
House wife	295	45
Student	102	15
Governmental employee	74	11
Prostitute	27	4
Other	177	25

## 1.6 Economic Status

The economic status was examined by reviewing the monthly family income. Figure 2 shows that two thirds of the monthly family income was between 0 and 199 Birr.

Figure 2: Distribution of Monthly Family Income.



Monthly Family income in Birr

## 1.7 Population Dynamics (Fertility)

From 675 women in the study 469 women (70%) reported to have ever been pregnant and 63 women did not answer this question. The majority of women (277) had been pregnant 1-4 times (59%) and 150 women 5-8 times (32%). Nine per cent (42 women) have had 9 or more pregnancies.

### 1.7.1 Abortion

From the above 469 women who had one or more pregnancy, 33 of them (7%) have had induced abortions. Twenty (60%) of the 33 women with an abortion ended up at a health institution. Ten women (30%) had their abortion initiated and completed at home. Abortions of 10% (3 women) occurred in other locations.

Eighteen of the 33 abortions (55%) acknowledged having had complications and all of them claimed loss of blood following the abortion.

### 1.7.2 Age at first delivery

The age of women in the study group when they were having their first child was examined. Of 455 women, who reported a first live birth 53% gave birth for the first time between 13 and 18 years of age and 95% before age 25 years. Two women were between 37 and 42 years.

### 1.7.3 Maternal Mortality

The maternal mortality rate was estimated by asking a question: "Was there a woman in this house who died within the past ten years due to pregnancy, delivery or within six weeks after delivery?" Four women answered "Yes" to the question, and the maternal mortality rate was estimated by the following methods:

1. Assuming a population growth rate of zero per cent for the last ten years, the expected number of women-years of exposure would be  $675 \times 10 = 6,750$ .

Given the general fertility rate of the Ketena (81.6/1000), we should have expected  $81.6/1000 \times 6,750 = 551$  live births.

Given the 4 maternal deaths reported, the maternal mortality rate is calculated as  $4/551 = 7/1000$  live births.

2. When considering the current growth rate of 5% with the same general fertility rate, the number of women-years of exposure becomes 5,473 and the expected livebirths 447. The maternal mortality is then calculated as  $4/447 = 9/1000$  live births.

## 2. Interest and Knowledge of Family Planning

Seventy four percent of 675 women in the study answered "Yes" to the following two questions - (1) "Do you know about modern contraception and child spacing?", or (2) "Would you like to know more about modern contraception and child-spacing?" This suggests that the majority of women are interested in the subject of contraception.

Fifty-four per cent answered "No" to question 1 above. Of the 46% who answered "Yes", there was a wide variation in the extent of their knowledge when that was tested. The method most known about was oral contraception and the others were coitus interruptus and abstinence. Four had indicated knowledge of family planning and child-spacing but could not name any method (see Table 4).

Table 4: Number of contraceptive methods named by women aged 15-49 years who said they knew about modern contraception (Test of Knowledge)

Total No. of Methods known by women	Number	Per cent
0	4	1
1	123	41
2	75	25
3	65	21
4	25	8
5	9	3
6	1	1
7	0	-
8	1	1
<b>Total</b>	<b>303</b>	<b>100</b>

While oral contraceptive method was the method best known to most of the women (303 women), a higher percentage of married women (53%) than single women (18%) were familiar with it. On the other hand, the condom was slightly better known to single women (38%) than married women (34%).

#### 2.1 Knowledge By Religion, Ethnic and Age Groups

There was no statistical difference among Orthodox-Christian, Catholics, Protestants and and Muslims in overall knowledge of Family Planning.

Furthermore, there was also no statistical difference by ethnic group. A further analysis of the data on knowledge and use of modern contraception by age group is presented in table 5 and shows that women who were between 20 and 39 years at the time of the study had greater knowledge of FP than their younger or older counterparts.

Table 5: Knowledge and use of modern contraception by age

Age group	Number in Age group	Number Knowledge <sup>+</sup>	Number Use <sup>*</sup>	Per cent Knowledge	Per cent Use
15 - 19	145	36	2	25	1
20 - 24	89	53	19	60	21
25 - 29	111	74	36	67	32
30 - 34	123	63	30	51	24
35 - 39	104	47	22	42	21
40 - 44	56	23	7	41	12
45 - 49	47	8	2	17	4
<b>Total</b>	<b>675</b>	<b>304</b>	<b>118</b>	<b>45</b>	<b>17</b>

<sup>+</sup> X <sup>2</sup>	=	69.635	<sup>*</sup> X <sup>2</sup>	=	55.89
DF	=	6	DF	=	6
Prob.	=	2.900 E-13	Prob.	=	3.071E-10

NOTE : 253 individuals neither use nor did know about modern contraception.

## 2.2 Knowledge of MC by Educational status

Table 6 Summarizes knowledge and desire for knowledge of MC. The higher the educational status the higher the knowledge and desire for knowledge of contraception.

Table 6 : Distribution of Desire for knowledge and knowledge of Modern Contraception by Educational Status

Educational Status	Number			Per cent	
	Number in group	Desire <sup>+</sup> for knowledge	knowledge*	Desire for knowledge	knowledge
Illiterate	21	3	2	14	9
Ever attended literacy	121	35	44	29	36
Completed literacy	49	10	14	20	29
1 - 3	76	22	26	29	34
4 - 6	138	35	72	25	52
7 - 9	93	36	45	39	48
10-12	150	54	79	36	53
>12	27	3	22	11	81
<b>Total</b>	<b>675</b>	<b>198</b>	<b>304</b>	<b>29</b>	<b>45</b>

+	X <sup>2</sup>	=	44.618	*	X <sup>2</sup>	=	47.737
	DF	=	7		DF	=	7
	Prob.	=	2.864E-07		Prob.	=	4.085E-07

### 2.3 Source of knowledge for Modern Contraception

The source of knowledge for modern contraception is detailed in Table 7. The majority of the women (about 38%) to the question: "If you know about FP and child spacing (Modern contraceptive method) how did you get the information?", answered that they obtained the knowledge from health institutions (hospitals, health centers, health stations or clinics and FGAE. The second most common source was from friends (31%), followed by school (8%) and mass media (7%).

Table 7: Source of current and preferred information for modern contraception

Source of information	Current		Preferred	
	No.	Per cent	No.	Per cent
Health facility	114	38	118	48
Friend	95	31	-	-
School	24	8	36	15
Radio/T.V.	20	7	33	14
Reading	10	3	20	8
REWA/Kebele	7	2	29	12
Partner	4	1	-	-
Others	29	10	8	3
<b>Total</b>	<b>303</b>	<b>100</b>	<b>244</b>	<b>100</b>

- N.B. - \* 1. no answer.  
 - 53 individuals neither have information nor wish to get information.

In this category of others (10%), working places and relief centers were included. In Table 6 we also observed that 48% of women in the study group preferred to get information about MC from healthy facility, followed by schools (15%) and radio/T.V. (14%).

#### 2.4 Most Important Reasons why some of the non-users do not like to know about or to use Family Planning

Table 8 summarized the reasons why women do not like to know about modern contraception. Most of the women who did not want knowledge of modern contraception gave as first reason, their desire for more children (31%) followed by menopause before 30 years (23%), not yet sexually active (21%), a medical problem such as irregular menstrual periods, goitre, thrombophlebitis, dyspepsia, etc. (7%), contraceptive complications (6%), religious or cultural taboos (4%) and contraception was said to need more care and balanced diet (3%).

The other less common reasons were the absence of a health facility and the oppositions of male partner (less than one percent each). In the category of others, pregnancy, widowhood and absence of male partner were included.

Table 8: Reasons why women did not like to know more about and do not use modern contraception.

Type of reasons	First Reasons not to use		*Reason not like to know	
	Number	Per cent	Number	Per cent
Not yet sexually active	143	26	36	21
Lack of information	72	13	-	-
Desire for more children	68	12	54	31
Medical problem	66	12	12	7
Side effects	48	9	10	6
Menopause before 49 year	40	7	39	23
Rumors (needs more care)	32	6	5	3
Religious/cultural taboos	18	3	-	-
Partner against	18	3	1	<1
Expensive and no facility	2	<1	1	<1
Others	50	9	8	5
Total	557	100	172	100

Note : \* 1. no answer.

Table 8 also, summarized the reasons why women don't like to use MC. The most common stated reason was that they were not yet sexually active (26%), followed by lack of information (ignorance) about FP (13%), desire for more children and medical problem (12%), each), and contraceptive complications (9%).

The least stated reasons were that the rumors 6% (MC needs "special care", or "balanced diet", or it is "harmful" if taken before the first delivery), religious or cultural taboos and partner's opposition (3%, each). Only two women stated the reason that the cost of the method was greater than they could afford. However, lack of a health facility was not cited as a problem for not using MC.

### 3. Attitude Toward Family Planning

#### 3.1 Attitude Toward FP by Age Group

The majority of women in the sample expressed a positive attitude towards all forms of modern contraception. As seen in Table 9, 79% replied affirmatively to the questions: "Would you like to know more about modern contraception?", or "Would you like to use modern contraceptive methods?" 17% did not think "it would be a good thing" to either desire to use or have contraception knowledge, while an insignificant

proportion expressed no opinion. Therefore the desire for knowledge and desire to use have a strong direct relationship.

Table 9: Desire for knowledge and Desire for use of Modern Contraception in non-users by age group.

Age Group	Number in age group	Number		Per cent	
		Desire <sup>+</sup> for knowledge	Desire <sup>*</sup> for use	Desire for knowledge	Desire for use
15-19	143	88	81	82	57
20-24	70	30	48	83	68
25-29	75	18	36	49	47
30-34	93	32	38	53	40
35-39	82	20	31	34	38
40-44	49	8	8	24	18
45-49	45	2	2	5	4
Total	557	198	244	35	44

$$*X^2 = 70.575 \quad DF = 6 \quad PROB = 3.400E-13$$

$$+X^2 = 55.890 \quad DF = 6 \quad PROB = 3.071E-10$$

### 3.2 Attitude Toward FP by Marital Status and Religion

The attitude toward Modern Contraception was also determined by marital status. Married women tended to be more favourably disposed toward FP than did single women. Even, if divorced and separated women were considered in the single category, still married women tended to be more favourable followed by widowed women.

Nevertheless a greater proportion of catholics (60%) than muslims (22%) and orthodox christian (17%) approved of FP.

### 3.3 Attitude toward FP by Educational Status

Also, when women were examined by educational status, it was found that the favourable attitude toward FP was directly proportional to the educational status (See Table 5).

#### 4. Practice of Family Planning

Whereas the level of knowledge of FP was relatively high and attitudes toward it were also positive, the level of actual use of modern contraception was very low among the women in the sample. This may be clearly seen in Table 7, 8 and 11. Table 7 shows that only 17% of the women sampled were currently using modern contraception whereas 25% had ever used any form of Modern Contraception.

Those women who were not using modern contraception, 557 (83%) when asked the question: "If you are not using modern contraception, what are you using?" a majority of them in the sample were unprotected (60%) i.e. those who expressed using no form of modern contraception, followed by rhythm, withdrawal methods and abstinence (15%). Three women answered that they had been using traditional herbs and the other 25% answered that they were not sexually active or were currently pregnant or in the menopause before age 49 years.

##### 4.1 Age at which the Modern Contraception Started

The mean age of starting modern contraception was 24 years with a standard deviation of 5.2 and a range of 14 to 38 years. Twelve per cent of the women started modern contraception between 14 and 18 years and five per cent of them started at the age of 34 to 38 years.

##### 4.2 Types of Modern Contraception

###### 4.2.1. Used in the past

The oral contraception method was by far the most popular having been practiced by the largest proportion (41%), while only 25% and 22% ever used an IUD and condom, respectively.

###### 4.2.2 Currently used

The oral contraceptive method was by far the most popular and was utilized by the largest proportion of women (69%) who employed contraception. The second most commonly used method was IUD (20%) followed by surgical method (6%) and condom (3%). The least used method was included in the category of others. Spermicides were not used by sampled women.

#### 4.3 Use of pills by Age group

A larger proportion of younger women (15-34 years) versus the older (35-40) age group ever used the oral contraceptive method (57% versus 43%, respectively).

#### 4.4 Cost of Modern Contraception

The cost of oral contraceptive method was asked as part of the question: "How much do you pay for one month of contraception?", and the majority of women answered between 1 to 10 Birr. Half of the women were paying between 1 to 5 Birr per month. Ten per cent of them paid 6-10 Birr per month. However there were 47 women (40%) who received pills free of charge from their respective health facilities.

The cost of IUDs ranged also from free to 10 Birr. The majority of women (35%) were paying 5-10 Birr for an insertion of IUD. Fifteen per cent of them were paying 1-5 Birr; the rest 50% were receiving the service free of charge.

There were 8 women who had tubal ligation, the cost of the operation ranged from 0 to 200 Birr. The age at which the operation was performed ranged from 25 to 35 years.

#### 4.5 Delivery place of Modern Contraception with or without prescription.

The majority of women with prescriptions from MOH health institutions (67%), FGAE (40%); the least frequent delivery place was a private seller (7%). Nevertheless, with regards to without prescription, the majority of women were obtaining MC from private sellers (93%), FGAE (59%) and MOH health facilities (33%).

##### 4.5.1 First Most important Reason Women preferred to go to respective places for MC.

Table 10 summarizes the most important reason why women preferred to go to respective places to get modern contraception.

For more than half of the women, examination by health professional or short distance were the most important reasons.

Table 10: The Most Important Reason Why Women go to respective places to get modern contraception.

First Important Reason	Number	Per cent
Exam. by health professionals	34	29
Short distance	26	22
Place of work	14	12
Physician preference	9	8
Unfriendly medical staff	7	6
Instructed by health professionals	6	5
Short time	6	5
Low cost	5	4
More available	2	2
Antenatal clinic	2	2
No prescription	1	1
Others	4	4
<b>Total</b>	<b>117</b>	<b>100</b>

NOTE : 1 no answer.

#### 4.6 The Consequences of Modern Contraception

There was a total of 168 women who had ever used modern contraception. From these women who ever use MC, 18 of them (11%) became pregnant while using modern contraception. In those using condoms, 25% became pregnant. The pregnancy rates for tubal ligation, pill and IUD were 12%, 11% and 9%, respectively.

The cause of the pregnancy on contraception was studied. The majority of ever pregnant on modern contraception completed full term pregnancy (67%), followed by spontaneous abortion (22%) and induced abortion (11%).

The women who were using pills (82 of them) were asked: "What do you do when you forget your Pill?" The majority of them (47%) answered that they have never forgot up to the day of the survey and they would not predict what they would do if they forgot. The second most common action taken was to take it together with the next dose (25%) followed by, taking only the next dose (10%), and taking it as soon as they remember (2%).

#### 4.7 Use of Modern contraception by Socioeconomic factors

##### 4.7.1 CPR by Kefetegna

There is no statistically significant difference in the CPRs between the five Kefetegnas; the rate for the whole Ketena being 17%.

##### 4.7.2 CPR by Ethnic group and Religion

There is also no statistically significant difference of MC use by Ethnic group and religion in the study women.

##### 4.7.3 CPR by Marital Status

The majority of women in the sample who were using MC were married (27%); this was followed by widowed (17%), separated (12%) and divorced (11%). The smallest group of users of MC was single (4%).

##### 4.7.4 CPR by Educational Status

Table 11 summarizes the use of modern contraceptive methods by educational status. Educational status has a strong direct relationship with the use of modern contraception, i.e.; the higher the educational status, the higher the acceptance and use of contraception.

Table 11: CPR by Educational Status

Level of Education	Number in the group	Users	
		Number	Per cent
Illiterate	21	1	5
Ever attended literacy	121	13	11
Completed Literacy	49	2	4
Completed 1-3 grade	76	13	7
Completed 4-6 grade	138	38	27
Completed 7-9 grade	93	21	23
Completed 10-12 grade	150	24	16
Completed > 12 grade	27	6	22
<b>Total</b>	<b>675</b>	<b>118</b>	<b>17</b>

$\chi^2 = 21.266$   
 DF = 7  
 Prob. = 1.022E-03

#### 4.7.5 CPR by Occupational Status

The majority of MC users were non-governmental employees (33%), followed by governmental employees (27%) and housewives (24%). Furthermore, the informal sector members (prostitutes) were 22%, unemployed 14% and students 3%.

#### 4.7.6 CPR by Economic Status

The contraceptive prevalence rate for Ketena-4 by monthly family income is shown in Table 12.

The majority of women who were using modern contraception during the study had higher monthly family income. The use of modern contraception and monthly family income have a strong direct relationship. The pronounced increase of use of modern contraception was seen in the group with a family income above 200 Birr monthly.

Table 12: CPR by Monthly Family Income

Monthly Family Income (Birr)	Number in the group	Users	
		Number	Per cent
0 - 99	304	40	13
100 - 199	143	21	15
200 - 299	80	19	24
300 - 399	44	10	23
400 - 499	37	10	27
> 500	67	18	27
<b>Total</b>	<b>675</b>	<b>118</b>	<b>17</b>

$\chi^2$	=	14.16
DF	=	5
Prob.	=	0.0146

The CPR by number of rooms in the housing unit was also examined. It was noted that as the number of rooms increased the proportion of users also increased ( $P = 1.0245E-5$ ).

In order to plan for future health education, the availability of amenities (Radio, T.V. and Telephone) was studied and 20%, 18% and 28%, respectively were working in the housing unit, at the time of study.

Furthermore, the CPR by housing index was also examined. The housing index was calculated by taking the construction material of the wall, floor, and roof. Hence, the higher the housing index, the greater number of women using modern contraception (60% versus 40%, respectively).

In addition, the CPR by the source of water supply as well as toilet facilities were studied. It was noted that the differences were not statistically significant.

#### 4.8 Partner's attitude Toward Modern Contraception

Table 13 presents the attitude about modern contraception expressed by partners of women who wished to use or were using modern contraception and reported by the women. In general 50% of the male partners had positive attitudes (supportive) toward the use of modern contraception while about 20% were against. Nevertheless, in women who were using modern contraception only 10% of the partners were against.

In women who wanted to use modern contraception but did not, the proportion of opposing partners was greater than in users (57% versus 14%). The prominent reasons why partners were against the desire for use and the use of modern contraception were stated:

1. Desire for more children (65%). This was either because they did not have children or they wanted a child of the opposite sex to the present one.
2. Rumors heard about the bad effects of modern contraception (25%).
3. Lack of trust in their partners (4%).
4. Religious/cultural taboos (2%).
5. Other related personal reasons (4%).

Table 13: Partners Attitude Towards Modern Contraception By Women Desire for use and use of Modern Contraception

Partner's Attitude	*Number of partner in the Group	Number of women		Per cent	
		+Desire for use	*Users	Desire	Users for use
Against	80	69	11	86	14
Neutral	12	11	1	92	8
Supports	191	91	100	48	52
No knowledge	41	35	6	85	15
Cannot tell	30	30	0	100	0
Others	8	8	0	100	0
<b>Total</b>	<b>362</b>	<b>244</b>	<b>188</b>	<b>67</b>	<b>33</b>

NOTE: \* 16 no answer

+ X<sup>2</sup> = 24.250  
 DF = 5  
 Prob.= 1.939E-04

.\* X<sup>2</sup> = 66.022  
 DF = 5  
 Prob. = 4.486E-07

#### 4.9 Role of women in FP by Teaching their older children

There were 257 women (38%) who answered "Yes" to the question: "Do you have children aged 10 years or more at home?" These were asked: "Do you teach them about FP?" Twenty per cent only answered "Yes".

The reasons for those who were not teaching their children were stated as:

- the mothers do not have adequate knowledge of modern contraception to teach their children (40%).
- they lack trust in their children (17%).
- due to cultural/religious taboos (6%).
- others thought that their children were not old enough to know about FP, they could decide by themselves when to learn, or they thought that male children don't need to know about it (38%).

However, women who were not teaching their children about MC preferred other sources of information for their children. Most of them preferred school (60%),

health facilities (8%), mass organization (6%) and mass media (5%), respectively.

#### 4.10 Sexual Practice in Relation to Modern Contraception

The mean age of menarche in the study was 14.5 year with standard deviation of 1.4 and range of 10 to 21 years. Two thirds of the women started to have sexual intercourse by the age of 16 years, 96% by the age of 21 years and almost 100% by the age 26 years. The mean age was 15.6 years with standard deviation 3.3 and the range was 7 to 36 years.

The majority of women in the sampled study were sexually active (80%) and out of them only 50% had knowledge of modern contraception. Fifty four percent had a favorable attitude toward use of modern contraception. Of those who were sexually active, the proportion of women who were currently using modern contraception was 22%.

#### 4.11 Abortion

There was also a question on abortion asked to all women: "Do you think abortion on demand should be legalized?" Forty seven per cent answered "yes" and 48% said "no". Only 5% had no opinion. Of those who answered "no", most of them stated that "It is against God's will", and "It has grave complications".

#### 4.12 Comments by Women on FP, MC and the Questionnaire

The final question asked was: "Do you have comments concerning FP/Child Spacing, MC and this Questionnaire?".

The majority of women (85%) answered "Yes", and the most common stated comments were:

##### Positive (affirmative) comments by 570 women

- "Birth control is good for both the mother and child's health" (303 women or 53 %).
- "It is a good thing because it prevents unnecessary pregnancy followed by illegally induced abortion and then possibly death" (140 women or 25 %).
- "It would have been nice the methods were been offered to married and single women, excluding students". (60 women or 11 %).

- It would be better if modern contraception were "free", particularly for those of "low income" (34 women or 6 %).
- "Health education pertaining to FP should be disseminated to all youths including males through mass media. The service should be also extended to rural towns" (22 women or 4 %).
- "I had no knowledge of FP, because of this questionnaire I have learned about it and am also interested (11 women or 2 %).
- Others (4 women or 1 %).

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Negative Comments by 101 Women

- I did not think, "it would be a good thing", "because it is against" God's will" (40 women).
- It is not good because it "affects the population growth" (26 women).
- It is not a good thing, "it increase infant mortality when it is used" (17 women).
- It is not a good thing, "because it requires a balanced diet and needs special care" (12 women).
- Others (6 women).

## V. DISCUSSION

### 1. Representativeness of Sample and Generalization of Findings

The distribution of the study group of women aged 15-49 were nearly identical to those of both Ketena - 4 and Addis Ababa in terms of:

- Age
- Ethnic groups
- Religion
- Education
- Marital, Occupational and Economic Status

This shows the representativeness of Sample for Ketena - 4. These data and other socio-demographic indicators comparing Ketena - 4 and Addis Ababa contained in the health profile<sup>1</sup> of Ketena - 4 lead us to believe that the study results can be generalized with confidence to the city of Addis Ababa as a whole.

However, our study, in highlighting the socio-economic characteristics prevailing in Addis Ababa has, once again, shown the gulf between the capital city and the rural areas. Whether one looks at education, environmental conditions (housing, water and sanitation), or income, the differences are striking. This study can therefore not be extrapolated to the rest of Ethiopia.

### 2. Fertility

#### 2.1 Age of onset of Fertility

In our study we reported the mean age of menarche (14 years, with a range of 10-21 years), the age of the first sexual intercourse (15 years, with range of 7-30 years) and the age of women when having their first baby (19 years, with range of 13-42 years).

Generally, the age of first intercourse is very close to start of menarche. In fact, in approximately 10% of cases, young girls had had intercourse before menarche. Furthermore, when looking at the relationship of the age of the women when they have their first child and the start of first intercourse and menarche, we see that adolescent women are both at risk for pregnancy and many of them do end up having babies (53% of women have their first child below age 18). Considering the age of first intercourse, many have not yet married or may still be in school; significant problems can be expected for these young women and their offsprings.

## 2.2 Family Size

The other important issue to address under the heading of fertility is that of family size. Women in our study had an average of 4 babies (range, 1-13 with S.D 2.49). Several studies have shown an inverse relationship between number of children and infant mortality<sup>6,12</sup>. Furthermore, each pregnancy exposes the mother to additional risk and inadequate spacing of pregnancies can lead to maternal exhaustion, anemias, and other problems<sup>6</sup>.

## 2.3 Maternal Mortality Rate

Our data indicates a maternal mortality of between 7 and 9 per 1000 live-births, depending on population growth estimates over the past 10 years (0% and 5%, respectively). These estimates are similar to the rate of 5.66 per 1000 live births identified by Barbara Kwast and her colleagues, in the study of maternal mortality in Addis Ababa<sup>3</sup>. This confirms her previous findings and re-emphasizes the magnitude of these largely avoidable deaths in young women.

## 2.4 Abortions

It is common knowledge that abortion is a frequent and important problem both in developed and in developing countries such as Ethiopia. In our study, 33 women (5%) had had one or more induced abortion (s). Almost all of these abortions were initiated outside the health institutions; more than half of them had complications and many required attention in hospital.

Several studies have shown that abortions were one of the most frequent causes of maternal deaths. For instance, Barbara Kwast, Widad Kidane Mariam and her colleagues in the study quoted earlier, cited that 54% of the maternal deaths were attributable to induced abortions, accounting for over 3 maternal deaths per 100 live births<sup>3</sup>.

Abortions should not be considered an appropriate means of family planning. The fact, however that 47% of interviewed women felt that abortion should be legalized, probably reflects their acute awareness of the complications and suffering of back-alley abortions.

### 3. Use of Modern Contraception

Whereas the level of knowledge of Modern Contraception was high (45%), and attitudes toward it were very positive, the level of actual use of modern contraception was low (17%) among the women in the sample, and not much higher in those who were sexually active (22%) or in of women who had used, at one time or another, modern contraception (25 %). Although these rates are many times higher than those reported for rural Ethiopia (2%)<sup>6</sup>, they are much lower than the world's average (33%) or that of developed countries (67%).

#### 3.1 Use of Modern Contraception by Age Group

Our study results indicate a strong association between age and contraceptive use. In the previously identified high risk group of adolescent women, the CPR was only 1%. These data reiterate the need to make this group a priority in our intervention strategies.

The CPR is highest in women aged 20-34 (72%) and then decreases with age. This is probably due to a cohort effect more than to an age effect, these mature women having been brought up in a generation with different family planning values.

Hence, our hypotheses, H6 stating that the usage of contraception is greater in younger age groups is partially verified; CPR is low below age 20, but is much higher between 20 and 34 as compared to 35-49.

#### 3.2 Use of Modern Contraception by Marital Status

Previously married women had the highest contraceptive prevalence rate (41%), followed by currently married (27%) and single (4%).

As we saw in the fertility section of our discussion, women are at risk of pregnancy at a very young age. Single women are therefore at significant risk of pregnancy and yet are low MC users. They therefore constitute a priority group for FP intervention.

#### 3.3 Use of Modern Contraception by Educational Status

We observed a strong, direct relationship between education and contraceptive use (from a CPR of 3% in the illiterate to 37% in the ones who had completed 7th to 12th grade.

Our study strengthens the findings of several other studies which had identified such a relationship. Together, they suggest a causal relationship between education and MC use. Improving education in Ethiopia should therefore have a positive impact on the health of women and children, not only through increased MC use, but also through other previously identified mechanisms.

Our stated hypothesis "H1 CPR is directly related to the educational status of the women" is supported by our study findings.

#### 3.4 Use of Modern Contraception by Occupational Status

In our study, women with better occupational status had a much higher contraceptive prevalence rate, confirming the study of Okun Ayanegade in Nigeria, who found that these women had better knowledge, and were more likely to obtain the contraceptives on their own from private sources<sup>25</sup>.

#### 3.5 Use of Modern Contraception by Economic Status

MC use was found to be strongly and directly associated with economic status, whether we measured it by family income, housing condition, number of rooms, thus strengthening the results of previous studies<sup>5,6,12,25</sup>.

Hence, our hypothesis, " H2, the utilization of contraception is directly related to the economic status of women", is supported by our study findings.

Our study, together with those cited above, suggest a causal relationship between economic status and MC use. Improving Ethiopia's economy would therefore have a positive impact on family planning practices, and also generally on the health of the people.

#### 3.6 Use of Modern Contraception by Type

Our study showed that the pill was the preferred contraceptive method (64% of users), followed by the IUD (19%), tubal ligation 7%, condom 3%, and others 1%.

The pill confers a high degree of protection and is simple to use.

Given the high incidence of sexually transmitted diseases (STD) in Addis Ababa and the attendant risk of pelvic inflammatory disease, one should question the appropriateness of the IUD except in women with stable, long-term partners.

Given the STD situation in Addis Ababa, the new major public health threat of AIDS, the protection afforded by condoms and their ease of use, the observed proportion of condom users is discouragingly low. Condom use should receive greater emphasis in family planning and STD control programs.

### 3.7 Reason for not Using Modern Contraception

In our study, the most frequently cited reasons for not using modern contraception, excluding those women who were not yet sexually active, were: lack of information (13%), followed by desire for children and perceived medical problems (12%, each) and perceived complications of MC use (9%).

These reasons not to use modern contraception would have not been cited, if the target group and the community had had adequate information concerning family planning. This lack of information needs prompt intervention through health education pertaining to primary health care strategies.

## 4. Knowledge of Modern Contraception

Almost three quarters (74%) of the study group had either the knowledge (45%) or the desire for knowledge of FP (29%). Despite this, only 17% of women were using contraception. In the following pages of the discussion, we will examine possible reasons for this gap between knowledge and practices.

When we tested the level of knowledge by asking women to name different types of MC, we found that 61% knew only one method, 25% knew two and 14% knew more than two. This, once again, indicates a very low level of FP knowledge.

### 4.1 Knowledge of FP by Age Group

The analysis of the data on knowledge of FP versus age shows that the age group between 20 and 34 had greater knowledge than their younger or older counterparts. This confirms the results found by Oyeka in Nigeria<sup>26</sup>.

#### 4.2 Knowledge and Desire for Knowledge by Educational Status

Much like MC use, FP knowledge was directly and strongly associated with educational status, again emphasizing the importance of education for Ethiopia's women.

#### 4.3 Source of MC Knowledge

Thirty eight per cent of women reported health institutions as their most important source of information. This highlights the vital role of the health services network in a comprehensive approach to a family planning/child spacing policy by the Government of Ethiopia.

Surprisingly, the least common source of information were schools, mass media and male partners. This shows that up to now, powerful health education media (such as schools and the mass media) have been grossly underutilized in FP programs and generally in the implementation of PHC. This in turn resulted in men being largely unaware of FP issues.

#### 4.4 Reasons for Lack of Desire of Knowledge

Aside from wanting children and not being at risk of pregnancy, the most important reasons were related to inaccurate information or misconceptions. Still this issue needs prompt intervention through health education and other strategies mentioned elsewhere.

### 5. Attitude Toward FP

Fifty-three per cent women had a favorable attitude towards FP as identified by either their use (17%) or their desire for use (36%). This indicates a great receptivity toward fertility issues on the part of women of the capital city of Ethiopia.

Much like MC use and knowledge, a favorable attitude was directly and strongly associated with age, educational and marital status, thus, supporting of the work of other studies<sup>25</sup>.

## 6. Accessibility to FP Services

Our hypothesis, "H4, that the usage of contraception is higher from pharmacies and drug vendors than from health institutions" was not accepted; in fact, 30% of women were securing their contraception from health institutions. Furthermore, the most important reason for choosing a MC delivery site was, examination by a health professional. These data reiterate the key role of the health services network in the delivery of FP services.

## 7. Multiple Regression

We intended to further elucidate the inter-relationships (interactions) between certain key variables by carrying out a series of five multiple regressions with the following dependent variables:

1. Knowledge of FP
2. Desire for knowledge of FP
3. Use of FP in the past
4. Currently use of FP
5. Desire for use of FP

and independent variables:

1. Number of women age 15-49 in the house
2. Age of the respondent
3. Educational status of the respondent
4. Monthly family income
5. Housing condition index
6. Number of rooms
7. Source of water supply
8. Toilet facility
9. Number of pregnancies
10. Presence of male partner
11. Attitude of male partner toward FP
12. Age of male partner
13. Educational status of male partner
14. Age of the first sexual intercourse.

These results will be presented in the paper(s) to be submitted for publication.

## 8. Consequences of Modern Contraception

From 168 women who ever used modern contraception, 18 of them (11%) of them became pregnant while using modern contraception. The pregnancy outcomes were:

Full term pregnancy (78%) spontaneous abortions (22%) and induced abortions (11%).

The condoms had the highest failure rates (25%) followed by tubal ligation (12%), pill (11%) and IUD (9%).

These unwanted pregnancies could be reduced dramatically through better health education and other strategies mentioned elsewhere.

#### 9. Partner's attitude Toward Modern Contraception

In our study, half of the partners had a positive attitude (supportive) toward the use of modern contraception. There were few partners against modern contraception (20%).

Rebecca J. Cook<sup>18</sup>, showed in her study on spousal veto over FP service, that a spouse, usually the husband, can veto a partner's use of modern contraception. Removal of spousal authorization requirements has been shown to increase the use of FP services.

Eventhough the acceptance and choice of contraception is a personal affair, since, in Ethiopia, men often have a prominent role in family decisions, they should have greater knowledge so as to foster a conducive and mutually respectful attitude.

In our concluding chapter, we will focus on the key findings of this study and develop a set of recommendations for decision makers.

## VI. CONCLUSIONS

A Community based survey was carried out to determine why the use of modern Contraception was not more common than it is. This was done with a view to preparing a FP program of that would be useful and acceptable to the community.

The study results demonstrate that:

- (1) Less than half of the women of child bearing age had knowledge of modern contraception.
- (2) Only 25% of this group had ever used modern contraception and ever less than this number were currently using much methods (17%).
- (3) Most of the women studied (75%) had favorable attitudes to the concept of active family planning.
- (4) The use of modern contraception was highest among the younger age group, the married, and those of higher economic and educational status.

The main reasons for not practicing modern contraception were:

- (1) Lack of factual information.
- (2) Desire for more children particularly of the opposite sex.
- (3) Fear of the effects or complications from the use of contraceptives.
- (4) Religious and cultural pressures.
- (5) Spousal opposition.

A Family Planning Program that could effectively counteract these factors must be based on an educational program that is (1) factual, (2) easily understood, (3) is acceptable within the cultural and religious views of the community, (4) affordable and supported by both men and women. It must be provided at all levels of the community organizational level. This will only be successful if concomitantly, emphasis is placed on improving the general economic and educational status of the community.

There must be a stated national policy that encourages citizens to consider family planning/child spacing as one factor in improving the health and welfare of the family. Its national policy must encourage educational programs at all levels including schools and must confirm the government's position that this program is important to the country's development and prosperity.

## RECOMMENDATIONS

1. There must be a clearly stated National Policy, that FP/child spacing is couple's responsible choice.
2. There is no doubt that improvement of the economy of the country as a whole has impact on the health of women and children. Therefore, the Government should facilitate the FP services along with taking measures to improve the economy.
3. Health education, especially pertaining to FP must be included in the curriculum of Ministry of Education; this program should also be strengthened through mass media and health institutions; the program should give emphasis to adolescents.
4. There should be established and strengthened Awraja (Ketena) Health Services infrastructure, comprehensive health centers (those could provide all the components of PHC) in each Kefetegna and strong community health service in each Kebele; all with respective appropriate resources.
5. The PHC program implementation should be strengthened; this will result in appropriate accessibility of FP Services and increase of knowledge about FP.
6. We recommend also detailed further study of pregnancy complications (giving emphasis to abortion) and major causes of maternal death.
7. We also suggest that similar studies in rural areas of Ethiopia be conducted.

## B I B L I O G R A P H Y

1. Studies in Family Planning, Volume 15, Number 4, July/August 1984.
2. Background Paper on Family Guidance Association of Ethiopia, August 1982, Addis Ababa.
3. Barbara E. Kwast, et al. 1981/82. Maternal Mortality in Addis Ababa, Ethiopia.
4. Agonafer Tekalegne et al. December 1987. Ketena-4 Health Management Report on Health Profile and Action Plan of Ketena-4.
5. World Bank 1987. World Development Report, 1987.
6. World Bank, September 1988. Sector Review, Ethiopia Population Health and Nutrition.
7. Family Guidance Association of Ethiopia, May 1986. Special Issue Commemorating the 20th Anniversary of the FGAE.
8. Ministry of Health, MCH/FP Division, Addis Ababa, 1987/88. Official Guidances of the Government on Population and FP programs.
9. Government of Ethiopia, 1957. Penal code of Ethiopia of 1957 Negarit Gazeta Extraordinary Issue Number 1, Addis Ababa. Section II, Art 528-534.
10. Office of the Population and Housing Census of Ethiopia, January 1987. Analytical Report on Results for Addis Ababa.
11. World Health Organization (WHO/MPC/Rep. 81.1) 1986. Analysis of the Content of the Eight Essential Elements of Primary Health Care.
12. United Nations Children and Education Fund, 1986. The State of the World's Children.
13. American Journal of Public Health, February 1986, Volume 86, Number 2.
14. The Central African Journal of Medicine, Volume 1, Number 4, April 1985.
15. Population Council, No. 1, Number 28, September / October 1984. After Contraception: Dispelling Rumors about Later Child Bearing.

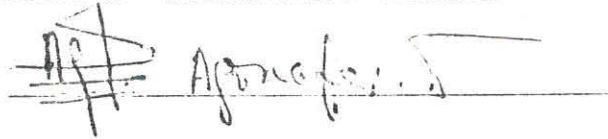
16. International Planned Parenthood Federation Open File, 24 April 1987.
17. Studies in Family Planning volume 17, Number 8, Part 2, April / May 1986.
18. American Journal Public Health, Volume 77, Number 3.
19. Studies in Family Planning Volume 17, Number 6, Part 1, November / December 1986.
20. Studies in Family Planning Volume 15, Number 3, May / June 1984.
21. United Nations Children and Education Fund and World Health Organization, 1986. Geneva Declaration, 1986.
22. International Planned Parenthood Federation Open File, 10 April 1986.
23. Microstat (1985) Ecosoft Inc., USA.
24. SPSS (1987), Statistical Package for the Social Sciences (SPSS) Inc. 444N Michigan Avenue, Chicago, Illinois 60611, USA.
25. Okun Ayangade, Characteristics of Contraception Acceptors in an Urban Nigeria, Family Planning Project, Faculty of Health Sciences, University of Ife, Ife-Ife, Nigeria 1983.
26. I.C.A. Uyeka, Family Planning Among Nigeria Post Secondary Female Students. Studies in Family Planning, Volume 17, Number 3, May / June 1986.

DECLARATION

I, the undersigned, declare that this thesis is my work and that all source of material used for this thesis have been duly acknowledged.

Name AGONAFER TEMALEGNE, (M.D.)

Signature

A handwritten signature in black ink, appearing to read 'Agonaferr Temalegne', is written over a horizontal line. To the left of the signature, there is a scribble consisting of several overlapping diagonal lines.

Place Addis Ababa, Ketena-4

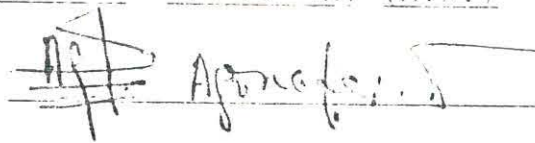
Date of Submission: \_\_\_\_\_

DECLARATION

I, the undersigned, declare that this thesis is my work and that all source of material used for this thesis have been duly acknowledged.

Name AGONAFER TEKALEONE, (M.D.)

Signature

A handwritten signature in black ink, appearing to read 'Agonafir Tekaleone', written over a horizontal line. The signature is somewhat stylized and includes a large initial 'A'.

Place Addis Ababa, Metana-1

Date of Submission: \_\_\_\_\_

Questionnaires For Barriers To Access To  
Modern Contraction

1. Study No

--	--	--

1-4

2. I.D. of the interviewer

--	--

5-6

Date      Month      Year

		1980
--	--	------

E.C

3. Higher

--	--

7-8

4. Kebele

--	--

9-10

5. House No. and No. of interviewee

--	--	--	--	--	--	--

11-14

15-16

17

6. No. of women age 15-49 in the house

--	--

18-19

7. Age of the interviewee

--	--

20-21

8. Ethnic group of the interviewee

1. 

--

- 2.  Oromo
- 3.  Gurage
- 4.  Tigre
- 5.  Dorze
- 6.  other, specify \_\_\_\_\_

9. Religion of the interviewee

- 1.  Orthodox
- 2.  Muslem
- 3.  Protestant
- 4.  Catholic
- 5.  other, specify \_\_\_\_\_

10. Marital status of the interviewee

1.  Married

2.  Single

3.  Divorced

4.  Separated (  $\geq$  one month)

5.  Widowed

24

11. Educational status of the interviewee

0.  Illiterate

3.  Ever attended literacy

5.  Completed literacy

10x \_\_\_\_\_ Higher grade completed

--	--	--

25 - 27

## 12. Occupational status of the interviewee

0.  Unemployed
1.  Governmental
2.  Non-governmental
3.  Mass organization
4.  Self-employed/family employed
5.  Student
6.  House wife
7.  Prostitute
8.  other, specify \_\_\_\_\_

28

13. Monthly total family (household) income  
in Birr:

1.  0 - 99

5.

2.  100 - 199

3.  200 - 299

4.  300 - 399

5.  400 - 499

6.   $\geq 500$

29

Housing Conditions

14. Type of wall

1.  Not coment

2.  Coment

+

Type of roof

1.  Thatched

2.  Not thatched

6.

Type of floor

1.  Earth

2.  Not earth

= \_\_\_\_\_.

30

15. No. of rooms

1.  1

2.  2

3.  3

4.  4

5.   $\geq 5$

31

16. Source of water supply

1.  River

2.  Well/Spring

3.  Tap outside compound

4.  Tap inside compound

5.  Tap inside the house

32

17. Type of toilet facility

1.  None

2.  Drypit - shared

3.  Drypit - private

4.  Flash - private

33

18. Do you have currently working radio in the housing unit?

0.  No

1.  Yes

34

19. Do you have currently working television in the housing unit?

0.  No

1.  Yes

35

20. Do you have currently working telephone in the housing unit?

0.  No

1.  Yes

36

21. How many pregnancies did you have?

\_\_\_\_\_.

37-38

22. How many live-babies did you have?

\_\_\_\_\_.

39-40

23. How old is your first child?

\_\_\_\_\_ Years.

41-42

24. How old is your second child?

\_\_\_\_\_ years

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43-44

25. How old is your third child?

\_\_\_\_\_ years

--	--

45-46

26. How old is your fourth child?

\_\_\_\_\_ years.

--	--

47-48

27. How old is your fifth child?

\_\_\_\_\_ Years.

--	--

49-50

28. How old is your sixth child?

\_\_\_\_\_ Years.

--	--

51-52

29. How old is your seventh child?

\_\_\_\_\_ years.

--	--

53-54

30. How old is your eighth child?

\_\_\_\_\_ years.

--	--

55-56



36. Do you know about Family Planning and Child-spacing (Modern contraceptive method)?

0.  No

1.  Yes— go to Q. 40

66

For those who answered "no to q.36

37. Would you like to know more about it?

0  No

1.  Yes— go to Q.39

67

38. If "no" to Q. 37, Why not?

1.  Religious/cultural Taboo

2.  It is because of side effects

3.  It is because of it needs care

4.  Lack of facility

5.  Due to a medical problem

6.  Desire to have more children

7.  It is because your partner does not agree

8.  Others, specify \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

39. If "yes" to A. 37, how would you like to get the information? Through:

1.  School

2.  REWA/Kebele

3.  Radio/T.V

4.  Readings

5.  Health facilities

6.  Family Guidance Association

7.  other, specify \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

40. If "yes" to Q. 36, how did you get the information?

1.  Friend
2.  Partner
3.  Health facility
4.  School
5.  REWA/Kebele
6.  RAdio / Television
7.  Reading
8.  Other, specify \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

For those who answered "yes" to Q. 36

41. Can you try and name as many methods of modern contraception as possible?

Pills  
+

IUD  
+

Condoms  
+

Spermicides (foam, Jelly,  
cream, tablets)  
+

Tubal ligation or Hysterectomy

other, specify \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Total \_\_\_\_\_

71

42. Have you ever used modern contraception in the past?

0.  No — go to Q. 47      1.  Yes

43. If yes to Q. 42 what did you use?

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

73

44. If "yes" to Q. 42, have you ever been pregnant on contraception?

0.  No— go to Q. 47

1.  Yes

74

45. If "yes" to Q. 44, on what type?

1.  Pills

2.  IUD

3.  Condom

4.  Spermicides (foam, jelly,  
cream, tablets)

5.  Tubal ligation (or Hysterectomy)

6.  other, specify \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_

75

46. If "yes" to Q. 44, what was the outcome of the pregnancy?

1.  Spontaneous abortion

2.  Induced abortion

3.  Term pregnancy

76

47. Do you use modern contraceptive method at present?

0.  No—— go to Q. 61

1.  Yes

77

For Contraceptive Users Only

48. At what age did you start contraception?

\_\_\_\_\_ years.

78-79

49. What type of contraceptive method do you use?

1.  Pill—— go to Q. 50

2.  IUD

3.  Condom
4.  Spermicides (foam, jelly,  
cream, tablets)
5.  Tubal ligation  
(or hysterectomy)— go to Q. 55
6.  other, specify \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

80

For pill Users

50. What do you do when you forget your pill?

1.  Take it as soon as you remember
2.  Take only the next dose
3.  Take both taht you forgot and  
the next dose
4.  other, specify \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
5.  Do not know

81

For pill, IUD, condom and spermicide users

51. What is the usual interval of the refill  
(Replacement if IUD)?

\_\_\_\_\_ months

--	--

82-83

52. Do you feel comfortable with the refill  
(or replacement) interval?

0.  No

1.  Yes — go to Q. 54

--

84

53. If "no" to previous question, what interval  
should it be?

\_\_\_\_\_ months

--	--

85-86

54. How much do you pay for one month of  
contraception?

\_\_\_\_\_ Birr — go to Q. 57

--	--

87-88

For women who have had tubal ligation  
or hysterectomy

55. At what age did you have your tubal  
ligation (or hysterectomy)?

\_\_\_\_\_ years

--	--

91-93

56. What was the total cost of your operation and hospital stay?  
\_\_\_\_\_ Birr — go to Q. 66

--	--

91-93

57. Where do you get the contraceptive method you use?

- 1.  Drug vender
- 2.  Pharmacy
- 3.  Private clinic
- 4.  Governmental clinic
- 5.  Health center
- 6.  Hospital
- 7.  Family Guidance Association
- 8.  other, specify \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

--

58. State the one most important reason why you get the contraceptive method you use from the above place.

1.  No registration
2.  Does not need prescription
3.  Short time
4.  Unfriendly staff at the health institutions
5.  Short distance
6.  Physician preference
7.  Examination by health professionals
8.  Cheaper (economical)
9.  More available
10.  other, specify \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

--	--

59. State the second most important reason why you get the contraceptive method you use from the above place.

1.  No registration
2.  Does not need prescription
3.  Short time
4.  Unfriendly staf at the health institutions
5.  Short distance
6.  Physician preference
7.  To be examined by health professionals
8.  More available
9.  other, specify \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

--	--

60. Do you use prescription to get the contraceptive method?

0.  No

1.  Yes

99

Questions for non-users

61. State the first most important reason why you do not use contraceptive method?

1.  Lack of information

2.  Religious/cultural taboo

3.  Due to medical problem

4.  It is because of side effects

5.  It is because your partner does not agree

6.  No facilities to have the service

7.  It is because that it is expensive

8.  Desire to have more children

9.  other, specify \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

--	--

100-101

62. State the second most important reason why you do not use contraceptive method?

1.  Lack of information

2.  Religious/cultural taboo

3.  Due to medical problem

4.  It is because of side effects

5.  It is because your partner does not agree

6.  No facilities to have the service

7.  It is because that it is expensive

8.  Desire to have more children

9.  other, specify \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

102-103

63. Would you like to use a modern  
contraceptive method?

0.  No — go to Q. 65

1.  Yes

104

64. If "yes" to Q. 63, where do you  
like to go and get the service?

1.  Drug vender

2.  Pharmacy

3.  Private clinic

4.  Governmental clinic

5.  Health center

6.  Hospital
7.  Family Guidance Association
8.  other, specify \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

105

65. If you are not using modern contraception,  
 what are you using?

1.  Nothing
2.  Natural method
3.  Traditional herbs
4.  other, specify \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

106

Question for everybody

66. Do you have a regular partner(s)?

0.  No— go to Q. 75
1.  Yes

107

For women with partner

67. What is the attitude of your partner about modern contraceptive methods?

1.  Against
2.  Neutral
3.  Supports
4.  He has no knowledge about contraceptive methods
5.  Cannot tell
6.  Other, specify \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

108

68. If you answered he is "Against" to Q. 67 what is the reason?

1.  Desire to have more children
2.  He heard bad things against contraceptives

3.  May be no basic trust

4.  Religious/cultural taboo

5.  Other, specify \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

109

69. How old is your partner?

\_\_\_\_\_ years

110-111

70. Educational status of your partner

0.  Illiterate

3.  Ever attended literacy

5.  Completed literacy

10x \_\_\_\_\_ Highest grade completed

112-114

71. Occupational status of the partner

0.  Unemployed

1.  Governmental
2.  Non-governmental
3.  Self employed/Family employed
4.  Student
5.  Other, specify \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

115

72. Monthly income of your partner in Birr:

1.  0 - 99
2.  100 - 199
3.  200-299
4.  300 - 399
5.  400 - 499
6.   $\geq$  500

116

## 73. Religion of the partner

1.  Orthodox
2.  Muslem
3.  Protestant
4.  Catholic
5.  Other, specify \_\_\_\_\_

117

## 74. Ethnic group of your partners

1.  Amhara
2.  Oromo
3.  Gurage
4.  Tigre
5.  Dorze
6.  other, specify \_\_\_\_\_

117

78. How would you like them to be taught?

1.  By yourself
2.  REYA/BEHA/Kebele
3.  At school
4.  Through radio
5.  " television
6.  By reading
7.  Health institutions
8.  Family Guidance Association
9.  Other, specify \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

122-123

79. Was there a woman in this house who died within the past 90 (90) days due to pregnancy, delivery or illness weeks after delivery?

0.  No — go to Q. 81

1.  Yes

124

80. If "yes" to Q.79, how old was she?  
\_\_\_\_\_ years

125-126

81. Have you had induced?  
abortion (s) in the last 5 (Five)  
Years?

0.  No — go to Q. 85

1.  Yes

127

82. If "yes" to Q. 81, where did you have  
it?

1.  At home

2.  Private

3.  Hospital

4.  Clinics

5.  Other, specify \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

128

83. If "yes" to Q. 81, have you had any complication?

0.  No — go to Q. 85

1.  Yes

129

84. If "yes" to Q. 83, what type of complication have you had?

1.  Loss of blood (Haemorrhage)

2.  Female organs infection

3.  Infection that went into the blood

4.  Perforation of uterus

130

85. At what age was your Menarche?  
 \_\_\_\_\_ years.

131-132

86. Have you started sexual intercourse?

0.  No

1.  Yes

133

87. If "yes" to Q. 86, at what age did you start?

\_\_\_\_\_ years

134-135

88. Do you think abortion on demand should be legalized ?

0  No

1  Yes

2  No opinion

136

89. Do you have comment concerning Family Planning/Child Spacing, modern contraception and this questionnaire?

0.  No

1.  Yes \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

137