FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA
CENTRAL STATISTICAL AUTHORITY
POPULATION ANALYSIS AND STUDIES CENTER

FERTILITY SURVEY OF URBAN ADDIS ABABA-1995

NOVEMBER 1997
ADDIS ABABA

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3

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PREFACE

The Second National Population and Housing Census was conducted throughout the country in October 1994. One of the major variables collected during the census referred to levels of fertility. The information on fertility collected during the census was of a general nature, and did not allow detailed interpretation on the factors that affect the level of fertility. In-depth analysis of the fertility conditions could only be made through fertility surveys which provide information on the different dimensions of the components of fertility.

According to the 1994 Population and Housing census, the fertility level of Urban Addis Ababa as measured by the reported Total fertility Rate (TFR) was found to be very low. Due to this, the Central Statistical Authority conducted the 1995 Fertility Survey of Urban Addis Ababa to understand the changes in the factors that affect fertility. The results of the survey are presented in this report. The report consists of nine chapters:

Chapter I -briefly discusses the population and fertility features of Addis Ababa. It also presents the objectives of the survey, the sample design, the data collection and data processing procedures;

Chapter II - assesses the quality of the data collected;

Chapter III - presents the background characteristics of the women such as age, place of birth, religious composition literacy status, educational attainment, migration status, work status, ethnicity and marital status;

Chapter IV - deals with marriage conditions such as age at first marriage and marital stability;

Chapter V - analyzes the levels, patterns, trends and differentials of fertility;

Chapter VI - presents the patterns of breastfeeding, postpartum ammenorrhea and abstinence;

Chapter VII - treats the family planning practices of the survey women;

Chapter VIII - assesses the levels of preferred family sizes of the women;

Chapter IX - determines the levels of infant and child mortality;

Chapter X - presents summary of the findings of the survey;

Appendix I - deals with the survey methodology and estimated coefficients of variation for selected variables;

Finally, The Central Statistical Authority in general and The Population Analysis and Studies Center in particular are very pleased to present the results of "Fertility Survey of Urban Addis Ababa-1995" for users. It is believed that the findings of the survey will assist in the understanding of the reproductive behavior of the women residing in the city. The findings are also believed, to certain extent, reflect the fertility conditions in most of the major towns in the country.

Abdulahi Hasen (Ph.D)
General Manager
Central Statistical Authority

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CHAPTER I

INTRODUCTION

1.1 Population and Fertility in Addis Ababa

The 1994 Population and Housing Census revealed that the population of Addis Ababa amounted to 2,112,737 at the time of the census, among which 1,023,452 were males and 1,089,285 females. According to the census, the four major ethnic groups which accounted for more than 90 percent of the total population of the city were the Amaras (48.3%), Oromos (19.2%), Gurages (17.5%) and Tigraways (7.6%). The remaining 7.4 percent of the residents of Addis Ababa belonged to vast number of different ethnic groups.

Marital status of the population 10 years and over was observed to be 60.3 percent were single, followed by 29.4 percent married, 5.6 percent divorced and 4.4 widowed during the 1994 census.

The level of unemployment in Addis Ababa is very high. The 1994 Population and Housing Census estimated the unemployment rate of the city to be 34.73 percent of the total labor force. Youth unemployment was more serious, with more than three fourths of all unemployed in the city having ages less than 30 years.

The reported TFR for Addis Ababa was found to be 3.98 in 1967, 3.81 in 1978, 3.23 in 1984 and 2.6 in 1990. The result of the 1994 Population and Housing Census indicated that the current fertility level of Addis Ababa as measured by the Total Fertility Rate had further declined to 1.8. This rate was considered to be very low for a city in a developing country.

1.2 Objectives of the Survey

The main objective of the 1995 Fertility Survey of Urban Addis Ababa was to evaluate the 1994 Population and Housing Census results with special reference to fertility. The specific objectives were:

1) to determine a plausible level of fertility for Urban Addis Ababa;

2) to gauge the effect of the various proximate determinants of fertility.

1.3 The Survey Coverage

The survey was designed to provide data on fertility and related characteristics of the population of urban Addis Ababa. The prime target of the survey were women aged 15-49 years residing in conventional households. Residents of collective quarters and the homeless were out of scope. 2,339 women were interviewed using women's questionnaires. Women's questionnaire collected detailed information on background characteristics, marital status, fertility levels, breastfeeding and family planning practices and fertility preferences of women. In addition to this, educational attainment of their husbands was obtained.

1.4 Sample Design and Sample Size

A two-stage stratified sample design was adopted. Weredas were treated as strata and Enumeration Areas (EAs) formed the primary sampling units (PSUs). The ultimate sampling units were conventional households from which all eligible members were interviewed.

Among the 2,347 EAs of urban Addis Ababa, 54 were sampled to yield results for major survey items at the city level with

reasonable precision for the available resource. The total sampled EAs were proportionally allocated to weredas and within each wereda the sampled EAs were selected using probability proportional to size, size being number of households obtained from the 1994 census mapwork. From within each of the selected EA, 30 households were systematically selected. The overall response rate was found to be 98.4 percent at household level.

The sampling frame for the selection of EAs was the list of all EAs in urban Addis Ababa with their respective number of households. This list was prepared from the 1994 census mapwork. For the selection of households, a fresh list of households was prepared in each sample EA using a prescribed listing instruction.

1.5 Recruitment and Training of Field Staff

The survey was conducted using the staff of the head office and those attached to its Addis Ababa Branch Office. The supervisors and male enumerators were selected among the regular field workers from the Addis Ababa Branch office, while the female field editors were among the senior professionals of the head office. Female enumerators had been selected from those working in the editing and coding section of the main office. The entire field staff recruited for the present survey were selected among those who had participated in the 1994 Population and Housing Census.

Training on the survey documents was carried out in two stages. The first stage training, concerning the listing activity, was given for 6 field supervisors and 53 male enumerators on 8 September 1995. Female enumerators and field editors were trained on household and women's questionnaires during the first ten days of October 1995. During the training, the field staff were given detailed classroom instruction and field practice.

1.6 Field work

The first stage of the field operation was to make a complete list of households for each selected Enumeration Area (EA). The listing process was conducted using 53 enumerators and 6 supervisors during 4 days (8-11 October, 1995). After the listing of all households in each EA had been completed, the supervisors then made a systematic selection of 30 conventional households within each sampled EA. All women aged 15-49 in the selected households were then interviewed for the survey.

To fill the women's questionnaires, the field work was conducted using six teams. Each team consisted of one male-supervisor, one female-editor and four female-enumerators. The data collection activity was undertaken between 11 October to 4 November, 1995.

The supervisors were responsible for the administrative aspect of the field work and monitoring the task of the field staff with respect to the listing operation as well as enumeration procedures to fill household and women's questionnaires. The responsibilities of female editors were to check the quality of the filled-in questionnaires and make corrections in the field. Female enumerators were assigned to fill household questionnaires and interview women aged 15-49 in the selected households.

1.7 Data Processing

After the questionnaires were retrieved from the field, manual editing and coding was undertaken on selected survey items to enhance data quality and prepare the data for data entry into the computer. The information was then entered into the computer using the data entry component of the IMPS (Integrated Microcomputer Processing System) program. Edit specification for data entry was developed to do the range and skip as well as consistency checks. After data cleaning was completed, data weighting and tabulation on cleaned data were carried out. All the statistical tables were produced using the softwares "SPSSPC+" and "IMPS".

CHAPTER II

DATA QUALITY

2.1 Introduction

The data obtained from the 1995 Fertility Survey of Urban Addis Ababa is based on retrospective information. Thus its accuracy can be affected by various types of errors. The errors arise from recall lapse which result in the misplacement of dates and omissions of vital events as well as lack of knowledge to report precise dates. These tendencies can distort the interpretation of the results by enhancing or under-estimating the existing fertility and mortality levels and trends. Moreover, these errors may be related to other background characteristics of the women which result in the distortion of differentials among the diverse social groups. In view of this, the present section will be confined to an evaluation of data and will involve checks of internal consistency as well as comparisons with other sources of data. The assessment will be undertaken regarding age and births reported by women of reproductive ages (15-49 years).

2.2 Evaluation of age data

The precision of age reporting is crucial in determining the accuracy of estimates in the demographic analysis. In fact, age of a woman is an important determinant of fertility and mortality exerting a direct influence through biological factors and indirectly being closely linked with parity, birth order, marital status, level of education, etc. Age mis-reporting can cause bias in the estimates of age-specific fertility rates which relate births to the age of the mother as well as in the indirect estimates of infant and child mortality rates.

In the survey, each respondent was queried on the month and year of her birth if it was possible, or estimate of her age in completed years otherwise. Among all women interviewed, 40.8 per cent knew both the month and year of their birth and 43.4 per cent provided only the calendar year. The remaining 56.6 per cent reported their date of birth in terms of age at the time of the survey. Nevertheless, respondents may mis-report their ages as a result of preferences for certain digits (age heaping) or state their ages either higher or lower than their true ages (age transference). The simplest way of checking the problem of age mis-reporting is to examine the distribution of women by single year of age. Under the circumstances where no exodus of population and drastic reduction in mortality prevailed, the single year age distribution is expected to decrease as age increases.

From Figure - 2.1 and Table 2.1, heapings can be clearly seen mainly on ages ending in digits 0, 5, and 8, while those ending in digits 1, 6 and 9 being avoided by the majority of the respondents. Another important index of age reporting is the Myers' Index which measures the extent of preference or rejection of each of the digits between 0 and 9. Table 2.2 presents the Myers' Blended Index computed for ages ranging from 20 to 49 years. The value of the index is found to be 7.8, which, compared to 19.8 for the 1990 National Family and Fertility Survey (NFFS), indicates that age reporting has improved in the present survey. However, the patterns of digit preferences and dislikes are observed to be similar in both the surveys showing maximum digit preference for digit 5 followed by 0 and 8 respectively. According to the index, the preference for digit 5 is 7.5 followed by 6.3 for digit 0 and 5.2 for digit 8. Digits 1 and 6 are highly disliked by the respondents (see Table 2.2).

Table 2.1 Single Year Age Distribution of Women Aged 15-49 years, Urban Addis Ababa, 1995.

Age	Number (Weighted)	Proportion
15	29223	5.0
16	32822	5.6
17	29830	5.1
18	46872	8.0
19	28414	4.9
20	29350	5.0
21	25554	4.4
22	27126	4.7
23	22738	3.9
24	17932	3.1
25	25029	4.3
26	14599	2.5
27	18654	3.2
28	15342	2.6
29	13741	2.4
30	19159	3.3
31	9225	1.6
32	11987	2.1
33	13808	2.4
34	15183	2.6
35	16540	2.8
36	9488	1.6
37	14037	2.4
38	18063	3.1
39	10724	1.8
40	13462	2.3
41	6869	1.2
42	8002	1.4
43	4654	0.8
44	6608	1.1
45	12212	2.1
46	5447	0.9
47	4515	0.8
48	3715	0.6
49	2578	0.4
Total	583502	100.0

Figure - 2.1 Percentage Distribution of Women aged 15-49 by Single Year of Age, Urban Addis Ababa. 1995.

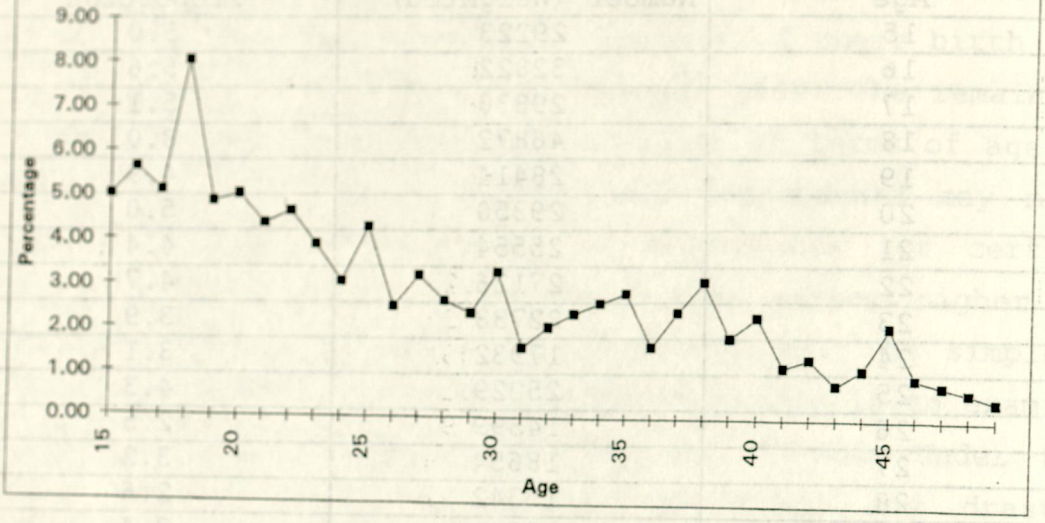
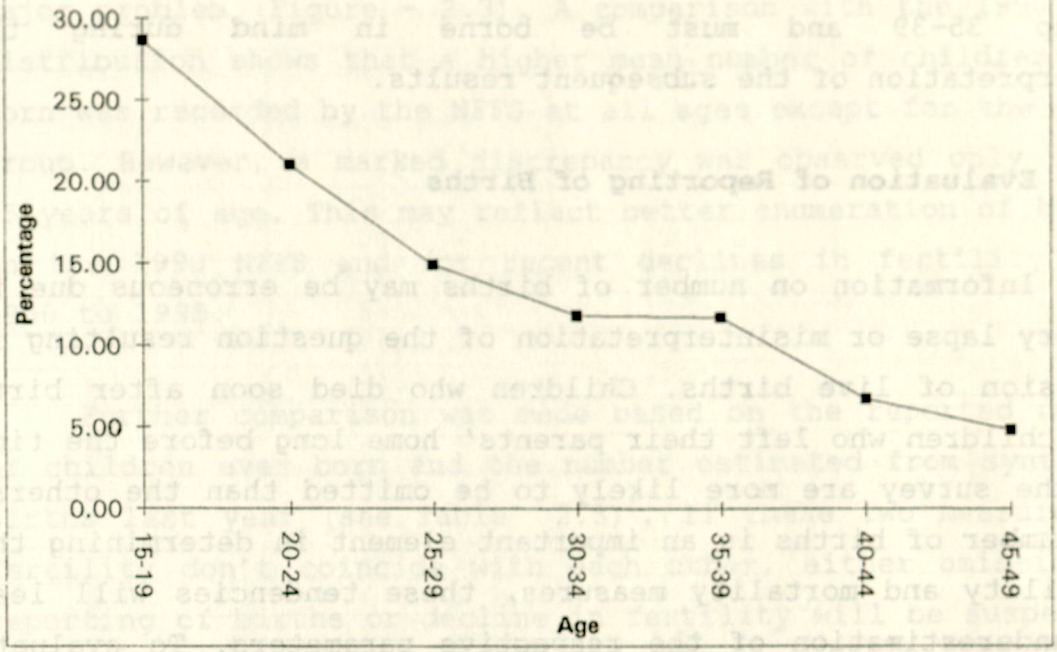


Table 2.2 Myers' Blended Index of Terminal Digit Preference for Women aged 20-49 (1990 NFFS and 1995 Fertility Survey of Urban Addis Ababa)

Terminal Digit	Deviation from 10 Percent	
	1995	1990
0	+ 6.3	+ 2.3
1	- 6.0	- 2.9
2	+ 0.8	- 0.7
3	- 2.6	- 0.7
4	- 1.8	- 0.1
5	+ 7.5	+ 3.1
6	- 2.6	- 2.3
7	- 2.1	+ 0.7
8	+ 5.2	+1.6
9	- 4.7	- 1.2
Summary Index	19.8	7.8

Figure - 2.2 Percentage Distribution of Women aged 15-49 by five-year age group, Urban Addis Ababa, 1995.



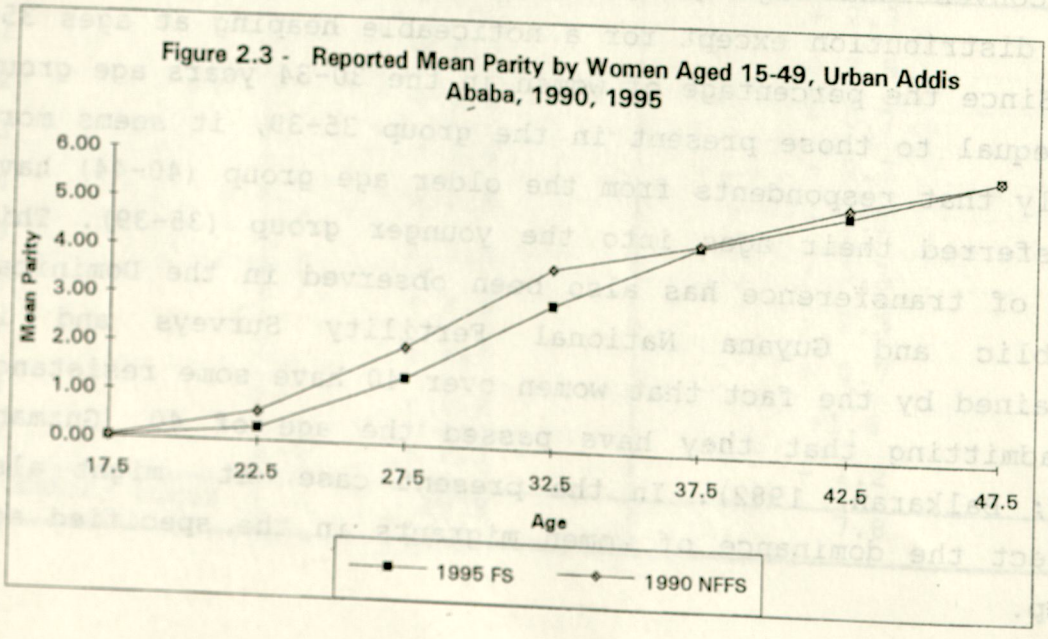
Though the quality of age reporting is far better than the previous survey, it can be noted that the single year age distribution is slightly distorted due to digit preferences. To minimise this distortion, conventional age groupings will be considered. The classification of the women according to the conventional age groups (Figure- 2.2), presents a more even distribution except for a noticeable heaping at ages 35-39. Since the percentage of women in the 30-34 years age group are equal to those present in the group 35-39, it seems more likely that respondents from the older age group (40-44) have transferred their ages into the younger group (35-39). This type of transference has also been observed in the Dominican Republic and Guyana National Fertility Surveys and is explained by the fact that women over 40 have some resistance to admitting that they have passed the age of 40 (Guzman, 1980; Balkaran, 1982). In the present case, it might also reflect the dominance of women migrants in the specified age group.

More or less, the above groupings presented reasonably regular distributions, however, the problem is not totally resolved due to the concentration of women observed at age group 35-39 and must be borne in mind during the interpretation of the subsequent results.

2.3 Evaluation of Reporting of Births

Information on number of births may be erroneous due to memory lapse or misinterpretation of the question resulting in omission of live births. Children who died soon after birth and children who left their parents' home long before the time of the survey are more likely to be omitted than the others. As number of births is an important element in determining the fertility and mortality measures, these tendencies will lead to underestimation of the respective parameters. To evaluate the completeness of the birth data, the evolution of mean parity with respect to age of the women will be examined. The experience of most developing countries shows that mean parity tends to rise steadily with age, reaching its maximum in the 45-49 age group and remains constant thereafter.

Figure 2.3 - Reported Mean Parity by Women Aged 15-49, Urban Addis Ababa, 1990, 1995



Parity as reported in the survey increases steadily from about 0.03 among women 15-19 years to 5.80 children among those aged 45-49 years, suggesting that omissions may not be a major problem (Figure - 2.3). A comparison with the 1990 NFFS distribution shows that a higher mean number of children ever born was recorded by the NFFS at all ages except for the 45-49 group. However, a marked discrepancy was observed only up to 35 years of age. This may reflect better enumeration of births in the 1990 NFFS and /or recent declines in fertility from 1990 to 1995.

Further comparison was made based on the reported number of children ever born and the number estimated from synthetic births last year (see Table 2.3)[1]. If these two measures of fertility don't coincide with each other, either omission in reporting of births or decline in fertility will be suspected. The cumulative fertility, based on information on number of children ever born, usually tends to be downwardly biased due to memory lapse of women, particularly among women of higher ages. On the other hand, synthetic estimates of children ever born, based on births of last year are likely to be complete.

[1] The parity for the synthetic cohort is found by cumulating the age specific fertility rates for births that occurred during the last 12 months.

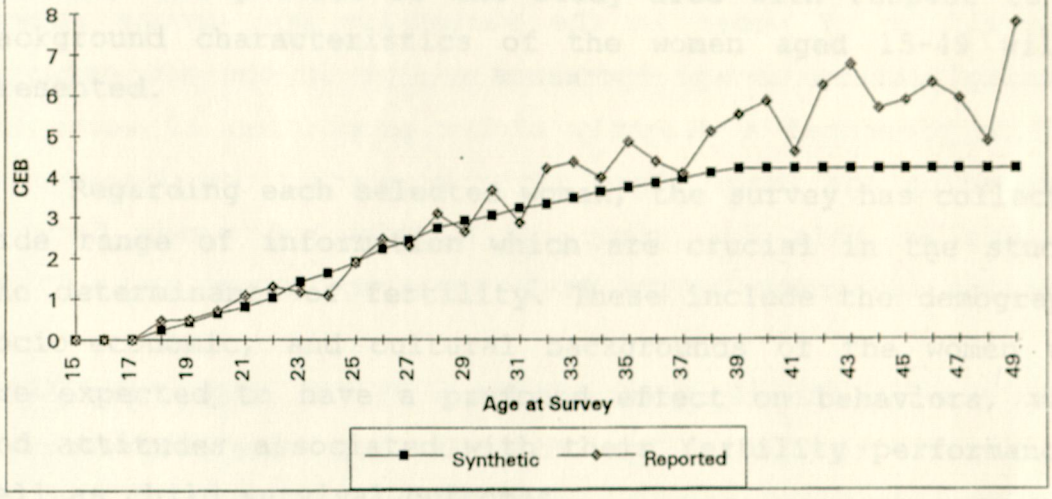
Table 2.3 Reported Mean Number of Children Ever Born and the Number Derived from Synthetic Births in the Past 12 Months by Single Year of Currently Married Women Aged 15-49, Urban Addis Ababa, 1995.

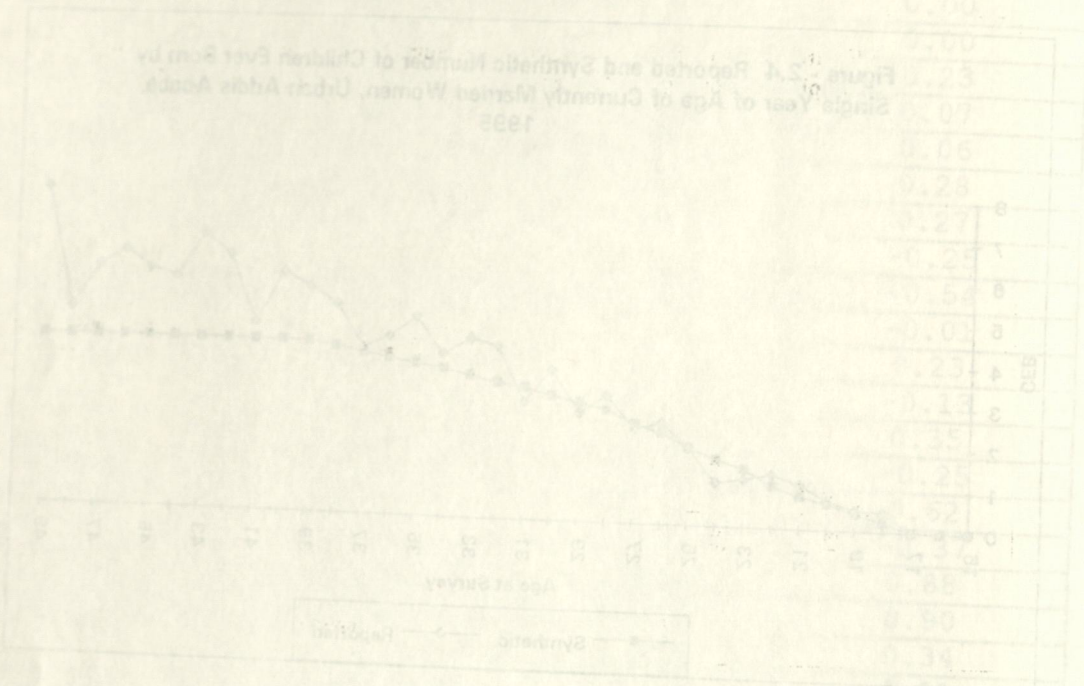
Age of Women	Reported CEB (a)	Synthetic CEB (b)	Difference (a)-(b)
15	0.0000	0.0000	0.00
16	0.0000	0.0000	0.00
17	0.0000	0.0000	0.00
18	0.4705	0.2379	0.23
19	0.4955	0.4292	0.07
20	0.7025	0.6437	0.06
21	1.0856	0.8042	0.28
22	1.3031	1.0354	0.27
23	1.1720	1.4192	-0.25
24	1.0819	1.6266	-0.54
25	1.8874	1.8979	-0.01
26	2.4647	2.2309	0.23
27	2.2975	2.4240	-0.13
28	3.0810	2.7326	0.35
29	2.6486	2.9026	-0.25
30	3.6601	3.0414	0.62
31	2.8608	3.2266	-0.37
32	4.2029	3.3246	0.88
33	4.3613	3.4637	0.90
34	3.9728	3.6287	0.34
35	4.8443	3.7329	1.11
36	4.3627	3.8317	0.53
37	4.0740	3.9362	0.14
38	5.1083	4.0918	1.02
39	5.5052	4.1920	1.31
40	5.8396	4.1920	1.65
41	4.6027	4.1920	0.41
42	6.2249	4.1920	2.03
43	6.7458	4.1920	2.55
44	5.6558	4.1920	1.46
45	5.8651	4.1920	1.67
46	6.2933	4.1920	2.10
47	5.9098	4.1920	1.71
48	4.8555	4.1920	0.66
49	7.7684	4.1920	3.58

The data indicates that the synthetic estimate of the mean number of children ever born are lower than the reported number. The greater disparity between these two measures is particularly observed above 30 years of age (see Table 2.3 and Figure - 2.4). Though some irregularities are seen in the

reported mean number of children ever born which may result from age misreportings, no major problem of omission in reporting of births is marked. Thus, this finding possibly reflects a declining trend in the fertility level of urban Addis Ababa during recent times. According to the result, a decline of 1.6 children per woman is shown by age 40 and 3.6 children by age 49.

Figure - 2.4 Reported and Synthetic Number of Children Ever Born by Single Year of Age of Currently Married Women, Urban Addis Ababa, 1995





CHAPTER III

BACKGROUND CHARACTERISTICS OF THE WOMEN AGED 15-49

3.1 Introduction

The prime purpose of the survey was to determine a plausible level of fertility for urban Addis Ababa, however, it also offers information on some background characteristics of the interviewed women in the reproductive ages. In this section, the profile of the study area with respect to some background characteristics of the women aged 15-49 will be presented.

Regarding each selected woman, the survey has collected a wide range of information which are crucial in the study of the determinants of fertility. These include the demographic, socio-economic, and cultural backgrounds of the women which are expected to have a profound effect on behaviors, values and attitudes associated with their fertility performance as well as child survival outcomes.

In view of analyzing the level of fertility and estimate the differential effect of each of the major background variables collected in the survey, it is necessary to bring forward an overview of some of the characteristics of the women covered in the study. The most pertinent demographic and socio-economic variables to be covered here include age, education, migration status, ethnicity, religion, marital status and work status of the respondent as well as education of the respondent's husband. These characteristics will also be examined in contrast to the data provided by the 1994 population and housing census of the area in order to evaluate the representativeness of the sample population. Such a comparison is essential to have some idea on the limitations

of the data for the interpretation of the results and make generalizations from the sample estimates for the entire study area.

3.2 Age Distribution

The age distribution of the women considered in the 1995 Fertility Survey (Table 3.1) shows a typical pattern observed in most developing countries presenting a predominantly young population resulting from high fertility and declining mortality. The proportion of women in the successive age groups shows a decreasing pattern as age increases except in the age group 35-39, which presented a slightly higher proportion of women than the preceding age range. This might be due to the dominance of immigrants in this age group or shifting of women from the neighboring age groups to the 35-39 years age group.

To examine the representativeness of the sample population with respect to their age distribution, the corresponding proportions in the sample are compared with that of the population reported in the 1994 census. To compare the sample proportions with that of the entire population from which the sample is selected, the chi-square goodness of fit test is applied. The chi-square "goodness of fit " tests provide a means for deciding whether a particular distribution of a sample is a close enough approximation to the distribution of the population from which the sample was drawn (Hay, 1980). The hypothesis that the current age distribution of the sample is exactly like that of the census is accepted at the .05 level. The age distribution of the women interviewed in the 1995 Fertility Survey is not significantly different from that of the entire population in the study area. Thus in terms of its age distribution, the 1995 Fertility Survey presents no sampling fluctuations.

Table 3.1 Distribution of women aged 15-49 by Age Group in the 1994 Census and 1995 Fertility Survey of Urban Addis Ababa (Percentage Distribution and Weighted Number of Women)

Age Group	1995 FS	1994 Census	Chi-square
15-19	28.6 (167161)	28.4	
20-24	21.0 (122701)	22.3	
25-29	15.0 (87365)	16.7	
30-34	11.9 (69361)	10.6	
35-39	11.8 (68852)	11.0	
40-44	6.8 (39594)	6.2	
45-49	4.9 (28467)	4.8	
Total	100.0 (583501)	100.0	9.83*

*Not significant at 5% level compared to the tabulated value with 6 degrees of freedom (χ^2_6=12.59).

3.3 Socio-economic characteristics

The distribution according to the different socio-economic characteristics of women interviewed in the survey is presented in Table 3.2. Regarding the 1995 Fertility Survey of urban Addis Ababa, the number of women (weighted) in each category with the corresponding percentages is presented. In addition to this, the percentage distribution of women of reproductive ages in the 1994 census is also presented to evaluate the representativeness of the sample.

In the survey, information regarding the level of education of each selected woman was collected using two

different questions. First the interviewer asked if the woman has ever attended any school program. For those who attended school, the highest grade attended was asked. Over all, seven different categories of respondents were obtained from the above two questions. These include the never attended, literacy program, other non-formal, primary, junior high school, senior high school and university/other higher education. In the present case, data in categories "literacy program" and "other non-formal" will be combined and presented as Non-formal due to small number of cases. The data on education show that the majority of the respondents (78.7%) are literate while only 21.2% are illiterate[2]. About three-fourth of the women have attended formal education. Women who have attained at least senior secondary school level constitute about two-fifth of the total sample. To evaluate the representativeness of the sample women with respect to their level of education, the corresponding frequencies in the sample are compared with the distribution obtained in the 1994 census. The result shows that the distribution of the sample regarding the education variable is different from that observed for the total population of women of reproductive ages in urban Addis Ababa. The proportion of the sample women who attained primary and senior secondary school levels accounts for 17.4 and 35.5 per cent, respectively. The corresponding figures for the total population of women in the reproductive ages reported in the 1994 census were 24.3 and 31.1, respectively. This finding indicates that women who attained senior secondary education are over-represented while those who had only primary education are under-represented in the sample.

As regards the educational attainment of husbands, about 86 per cent of husbands of women interviewed in the survey are

[2] The literate population includes women who had completed formal education of primary level and above including those who have attended some primary level education (but did not complete) or attended some non-formal education programs and were able to read and write a letter or simple statement in any language easily.

literate whereas only 14 per cent of them are illiterate. Compared to women, the proportion of husbands who are literate is higher. The proportion of husbands who have attained primary level education is 21.5% while 17.4% of women have had the same level of education. About 15 per cent of husbands in the area have attained university/higher level education compared to only 7.3 per cent of the interviewed women having the same level of education. The data also reveal that the proportion of women who have attained at least senior secondary level education is equivalent to husbands who have achieved the same level, i.e. about 42 per cent.

Compared to the information obtained from the 1990 National Family and Fertility Survey data, the proportion of women who are illiterate declined from 28.8% in 1990 to 21.2% in 1995. Comparable Figures for husband's education are 19.4 and 14.0 per cent, respectively. On the other hand, the proportion of women who have attained at least junior secondary level has increased from 49.4% in 1990 to 56.9% in 1995. Among husbands, it was 43.3 and 56.5 per cent in that order. This indicates that educational attainment has improved in the five year period separating the two surveys, for both the women and their husbands.

The major ethnic groups in the city are Amara, Oromo, Gurage and Tigraway. These four major ethnic groups accounted for 96.7 per cent of the total population covered in the survey. The rest are regrouped into "others" category due to very small number of cases. The data reveal that the Amaras constitute the single largest group (52.8%) followed by the Oromos (18.6%). The Gurages occupy the third position (16.3%) while the fourth position is taken by the Tigraways (9.0%). The pattern of ethnic distribution observed in the sample also holds for the corresponding distribution noted in the 1994 population and housing census. However, the representation in the sample of each ethnic group is different from that

observed for the entire population. Women from the Gurage and Tigraway ethnic groups are over represented in the sample while the Amaras and Oromos are slightly under represented.

The religious composition of the respondents shows that the majority of the women (85.1%) are followers of the Ethiopian Orthodox Christian church followed by Muslims (7.4%), Protestants (6.1%), and Catholics (0.9%). Those belonging to "other religion" category constitute only 0.5% of the total sample population. According to the 1994 population and housing census, the Orthodox Christians, Muslims, Protestants and Catholics constituted 83.8, 10.3, 4.5 and 0.8 per cent of the entire women of reproductive ages in urban Addis Ababa. However, the actual religious composition of the population of urban Addis Ababa is 81.8, 3.9, 0.8, 12.8 and 0.7 percent for Orthodox Christians, Protestants, Catholics, Muslims and other religious groups. Compared to the 1994 census, the pattern of the sample distribution by religion shows a similar rank order, however, its representation is observed to be different from the distribution observed in the census. Christians are over-represented while Muslims and other religion groups are under-represented in the sample.

In the survey, data were also collected on the migration status of the respondents. According to the findings, 58.3 per cent of them are migrants while the remaining 41.7 per cent are reported to be non-migrants. The proportion observed in the 1994 census was 57 and 43 per cent in that order. The examination of the representativeness of the sample with respect to migration status revealed that no significant difference is observed between the sample and the entire women of reproductive ages in urban Addis Ababa. Thus, concerning their migration status, the distribution of the women interviewed in the present survey well corresponds with the distribution of the entire population from which the sample has been selected. For those who have not always lived in

Addis Ababa, information on woman's birth place was collected by asking whether the mother was living in a rural or urban area at the time of birth. Among the migrants, 72 percent were from rural origin while only 28 per cent were born in urban areas.

As regards the current work status of women in the sample, most of them (55.2%) are not working. Working women constitute 44.7% of the interviewed women. Out of those who are working, the absolute majority are employees (66.1%) followed by self employed (26.4%). Family workers constitute only 7.0 per cent.

Table 3.2 Distribution of women aged 15-49 by Selected Background Characteristics in the 1994 Census and 1995 Fertility Survey of Urban Addis Ababa (Percentage Distribution and Weighted Number of Women)

Characteristics	1995 FS	1994 Census
Educational Attainment (Respondent)		
Illiterate	21.2 (123878)	18.4
Non-formal	4.4 (26143)	4.5
Primary	17.4 (101675)	24.3
Junior Secondary	14.1 (82019)	15.6
Senior Secondary	35.5 (207109)	31.1
University/Higher	7.3 (42392)	6.0
Not Stated	0.1 (285)	0.1
Total	100 (583501)	100

Table 3.2 (Cont'd)

Religion		
Orthodox	85.1 (496488)	83.8
Protestant	6.1 (35794)	4.5
Catholic	0.9 (5004)	0.8
Muslim	7.4 (43283)	10.3
Other Religion	0.5 (2962)	0.6
Total	100 (583501)	100
Ethnicity		
Amara	52.8 (307805)	53.1
Oromo	18.6 (108665)	18.9
Gurage	16.3 (94980)	11.3
Tigraway	9.0 (52748)	7.9
Others	3.1 (18369)	8.7
Not Stated	0.2 (934)	0.1
Total	100 (583501)	100
Migration Status		
Migrants	58.3 (340343)	57.0
Non-migrants	41.7 (243158)	43.0
Total	100 (583501)	100

Note: The Figure in the parenthesis refers to number (weighted) of cases.

Table 3.3 Distribution of women aged 15-49 by Selected Background Characteristics, Urban Addis Ababa, 1995.

Characteristics	Number (Weighted)	Proportion
Work Status		
Working	260896	44.7
Not Working	321831	55.2
Not Stated	774	0.1
Total	583501	100
Employment Status		
Own Account Worker	69170	26.4
Employee	173053	66.1
Family Worker	18243	7.0
Others	429	0.2
Not Stated	774	0.3
Total	261670	100
Place of Birth		
Addis Ababa	243159	41.6
Other Urban	94957	16.3
Rural	245036	42.0
Not Stated	349	0.1
Total	583501	100
Literacy Status (Respondent)		
Illiterate	123878	21.2
Literate	459338	78.7
Not Stated	285	0.1
Total	583501	100

Characteristics	Number (Weighted)	Proportion
Work Status		
Working		
Not Working		
Not stated		
Total		
Employment Status		
Own Account Worker		
Employee		
Family Worker		
Others		
Not Stated		
Total		
Place of Birth		
Addis Ababa		
Other Urban		
Rural		
Not stated		
Total		
Literacy Status (Respondent)		
Illiterate		
Literate		
Not Stated		
Total		

CHAPTER IV

NUPTIALITY PATTERNS

4.1 Introduction

Nuptiality is often considered as one of the proximate determinants of fertility levels. Although some births occurred outside socially accepted marital unions, marriage in Ethiopia is traditionally considered as the appropriate form of union for child bearing.

In a society where birth control is not widely used, the mean age at first marriage and the proportion of married women are important determinants of the level of fertility. A trend towards delayed age at first marriage and marital dissolution such as widowhood and divorce have a depressing effect on fertility due to loss of potential reproductive time.

In the present survey, data were collected on current marital status, marital stability, number of marriages and age at first marriage for each eligible woman. The topics of nuptiality covered in the present chapter include current marital status, age at first marriage and marriage stability.

4.2 Current Marital status

The information on current martial status was collected using two different questions. First the interviewer asked if the woman has ever been legally married or lived with a man. Those who replied "yes" were further asked the specific marital status. Over all, five different categories were obtained from the above two questions. These include the never-married, currently married, living with a man, widowed and divorced.

In the present analysis, data in category "living with a man" will be combined with "currently married" group for two reasons: negligible number of cases in the former group (i.e., only 1.98 percent) and to facilitate comparisons with information obtained from previous sources. The marital status distribution of the women in the 1995 Fertility Survey (Table 4.1) indicates that the majority of the women in the reproductive ages were never married (52.5%) followed by currently married (31.5%).

The proportion of women whose marriages were dissolved accounted for about 16 percent (i.e.,11.2% divorced and 4.78% widowed). The evaluation of the representativeness of the sample data with respect to its marital status distribution indicates that the marital status distribution of the women enumerated during the 1994 census is more or less similar to those selected in the present sample.

Table 4.1 Percentage Distribution of Women aged 15-49 by Current Marital Status, Urban Addis Ababa, 1995.

Marital Status	1995 FS	1994 Census
Single	52.5 (306230)	53.9
Currently Married	31.5 (183908)	33.3
Divorced	11.2 (65465)	8.7
widowed	4.8 (27900)	4.1
Total	100	100

To Compare changes in marital status composition between 1967 and 1995, the percentage martial distribution of women aged 15-49 for the different periods is illustrated in Table 4.2. Between 1967 and 1995, the proportion of women who never married increased from 15.6 to 52.5 percent. Meanwhile, the percentage of women who are currently married declined from 55.9% to 31.5%

between the two periods. The slight difference observed in the pattern of the single and currently married women for the 1995 Fertility Survey can be attributed to changes in definition, i.e., the inclusion of the living with a man category with currently married.

Table 4.2 Percentage distribution of Women aged 15-49 by Current Marital Status, Addis Ababa, 1967-1995.

Marital Status	1967	1978	1984	1990	1994	1995
Single	15.6	25.0	32.6	43.9	53.7	52.5
Currently Married	55.9	44.5	43.6	43.3	33.3	31.5
Divorced	20.8	9.1	14.8	9.2	8.7	11.2
Widowed	7.7	20.8	9.0	4.6	4.1	4.8
Total	100	100	100	100	100	100

Table 4.3 Percentage distribution of Women aged 15-49 by Current Marital Status and Age, Urban Addis Ababa, 1995.

Age	Never Married	Currently Married	Divorced	Widowed	Total
15-19	94.4	2.4	3.0	0.2	100
20-24	77.5	14.8	7.3	0.4	100
25-29	41.8	39.3	14.7	4.2	100
30-34	16.9	61.0	16.3	5.8	100
35-39	5.4	63.4	18.6	12.6	100
40-44	1.9	60.3	25.5	12.3	100
45-49	1.6	61.6	20.8	16.0	100

The marital status distribution of women by current age is presented in Table 4.3. The percentage distribution of currently married women by age group shows an increasing trend as age increases up to age 35-39, while it slightly declines afterwards due to higher divorce rates in the last two age groups. The proportion of widowed women also increases as age advances. This

is expected as mortality of males increases with age. The data revealed that the proportion of women who are never married decreases substantially as age increases, i.e., from 94.4 percent in the age group 15-19 to less than 2 percent for those in the ages of 40 and above. At the age group 45-49, almost all women were married, i.e., 98.4 percent, indicating the prevalence of universal marriage in urban Addis Ababa.

Table 4.4 Percent Distribution of Never-Married and Ever-Married Women by current Age for Selected years.

	Never Married					Ever Married				
Age	1978	1984	1990	1994	1995	1978	1984	1990	1994	1995
15-19	81.2	89.1	96.3	94.8	94.4	18.8	10.9	3.7	5.2	5.6
20-24	29.0	52.6	65.7	74.5	77.5	71.0	47.4	34.3	25.5	22.5
25-29	6.5	18.6	27.1	44.5	41.8	93.5	81.4	72.9	55.5	58.2
30-34	2.3	7.3	5.6	18.4	16.9	97.7	92.7	94.4	81.6	83.1
35-39	1.2	2.9	1.1	6.8	5.4	98.8	97.1	98.9	93.2	94.6
40-44	0.8	2.0	1.0	3.4	1.9	99.2	98.0	99.0	96.6	98.1
45-49	1.1	1.7	1.0	2.1	1.6	98.9	98.3	99.0	97.9	98.4

Though marriage has remained universal in urban Addis Ababa, structural changes in the timing of first marriage have taken place over the last 17 years. This may be illustrated by an examination of trends in the age pattern of the never married and ever married women during the periods 1978-1995 (see Table 4.4). From the data, substantial increases in the proportions of never married women are clearly seen among all age groups. The proportion never married among women aged 15-19 increased from 81.2 percent in 1978 to 94.4 percent in 1995, and for those aged 20-24 it increased from 29.0 percent to 77.5 percent. While proportion single increased among all age groups, the largest increases occurred among women aged 20-24 followed by those aged 25-29 and 30-34, respectively. It should be borne in mind that the specified age groups are the most fertile age ranges. From the above data it can be noted that a change in the nuptiality patterns of women in the reproductive ages, i.e., from younger

age pattern of marriage to late marriage pattern has occurred over the time under consideration. The observed changes in the proportions entering a marital union at the successive age groups particularly at ages 20-34 can be a good indicator of a postponement of marriage among the younger generations showing a rise in age at first marriage during the period under review.

4.3 Age At First Marriage

In the 1995 Fertility Survey of urban Addis Ababa, information on age at first marriage was collected for all ever married women by asking "How old were you when you got married for the first time?".

The percentage distribution of ever married women in the reproductive ages 15-49 years by age at first marriage and current age is presented in Table 4.5. According to the data, about 50 percent of women residing in urban Addis Ababa married before the age of 15 years. Out of the ever married women, the proportion who entered into marital union before attaining the age of 20 years is about three-quarters of the total women interviewed in the survey. Out of the total ever married women, the proportion who married before the age of 18 years is 63.6 percent. This is slightly lower than the result obtained from the 1990 Family and Fertility Survey data which was 64.9 percent. The mean age at first marriage for urban Addis Ababa is 16.5 years which is slightly higher than that obtained from the 1990 Family and Fertility Survey (16.2). The evolution of the mean age at first marriage among women of different age groups shows an increasing trend up to age 30 and it tends to decrease for those older than 30 years. The smaller mean age at marriage for the ever married women in the younger age groups is due to the fact that the rate refers to young women, while the decreasing tendency after age 30 indicates the entrance into marital union of the older generations at relatively earlier ages than the younger ones. The mean age at first marriage among women aged 45-49 was 14.6 which is about 3 years younger compared to 17.4 among women aged 30-34 years.

Table 4.5 Percentage Distribution of Ever Married Women According to Age At First Marriage by Current Age, Urban Addis Ababa, 1995.

	Age At First Marriage							
Current Age	<15	15-17	18-19	20-21	22-24	25-29	30+	Mean
15-19	60.5	19.9	19.6					14.6
20-24	34.1	18.9	20.0	18.5	8.5			17.0
25-29	37.7	14.4	14.3	13.6	11.1	8.9		17.3
30-34	45.1	11.7	14.5	10.9	5.5	8.2	4.1	17.4
35-39	55.5	12.9	11.0	7.6	4.9	4.5	3.6	16.4
40-44	57.5	13.1	10.3	7.8	3.9	4.7	2.7	15.9
45-49	66.9	16.7	9.4	2.9	3.0	1.1	-	14.6
Total	49.5	14.1	13.3	9.8	6.1	5.2	2.0	16.5

The mean age at first marriage was also examined by controlling for some background variables (see Table 4.6). The highest differential in the mean age at first marriage was observed among women of different educational categories. Women who attained university or higher levels of education marry at much higher ages (23 years) compared to those who have had no education (14 years). Education is generally known to affect the timing of marriage through the number of years spent in school. There was also a substantial variation in the mean age at first marriage of women of different religious groups. The highest age at first marriage was reported by catholic women (24 years). Adherents of Islam and Orthodox Christian Church enter into marital union at an earlier age (16 years). The results further indicate that mean age at first marriage for migrant women was lower than that reported by non-migrant women. For migrant women, the mean age at first marriage was 16 years. The corresponding age provided by the non-migrants was 19. Among the migrants, those born in rural areas marry at earlier ages (15 years) than those born in Addis Ababa and other urban areas who marry at a

relatively higher age (19 years). On the other hand, the mean age at first marriage for the four major ethnic groups shows very little variation, while regarding the work status of the women, no difference appeared between the working and the non-working women.

Table 4.6 Mean Age at First Marriage of Ever Married Women by Some Background Variables, Urban Addis Ababa, 1995.

Background Variables	Mean Age At 1st Marriage	Background Variables	Mean Age At 1st Marriage
Migration status		Work Status	
Non-migrant	19	Working	17
Migrant	16	Not working	17
Educational Level		Ethnic Group	
Illiterate	14	Amara	16
Non-formal	15	Gurage	17
Primary	15	Oromo	17
Junior Secondary	17	Tigraway	17
Senior Secondary	20	Others	17
University/Higher	23	Not Stated	21
Not Stated	13		
Place of Birth		Religion	
Rural	15	Orthodox	16
Addis Ababa	19	Protestant	18
Other Urban	19	Catholic	24
		Muslim	16
		Other Religion	22

Another important measure of changes in the age at first marriage over time is the singulate mean age at marriage. The Singulate Mean Age at Marriage (SMAM) is an estimate of the average number of years lived in the single state by a cohort of women before their first marriage. The value of SMAM shows an

average rise in the age at first marriage of women in the reproductive ages during the successive periods between 1967 and 1995 (see Table 4.7). SMAM of women in Addis Ababa has increased from 19.0 in 1967 to 26.5 in 1995, i.e., a rise of 7.5 years. The slight distortion in the mean age at first marriage for the 1995 FS might be due to the exclusion of special enumeration areas and collective quarters such as hotels and hostels that are expected to be occupied by high proportion of single women.

Table 4.7 Singulate Mean Age At Marriage for selected years.

Period	1967	1978	1984	1990	1994	1995
SMAM	19.0	20.9	23.2	24.5	26.7	26.5

Table 4.8 shows the trend in the mean age at first marriage by year of marriage. The result indicates a continuous rise in the mean age at first marriage during 1966-1995. The mean age at first marriage was 12.3 before 1966 and it increased to 22.5 years in the early 1990's. Thus women who entered into marital union in the early 1990's have postponed their marriage by about 10 years compared to those married before 1966. This means a 10 year reduction in the reproductve span of a woman.

Table 4.8 Mean Age at First Marriage by Year Of Marriage, Urban Addis Ababa, 1995.

Year of Marriage	Mean age
Before 1966	12.2
1966-1970	14.0
1971-1975	15.1
1976-1980	15.9
1981-1986	17.5
1987-1991	19.8
1992 +	22.5
Total	16.5

4.4 Marriage Stability

Regarding each woman who ever married or lived with a man/partner, information was asked about the number of marriages or unions she ever has contracted. Since marriage history was not included in the survey questionnaire, information was not available regarding the duration and reason of marriage dissolution. However, from the data, the stability of first marriage can be examined without further investigating the reason of dissolution.

The data revealed that about 48 percent of the first marriages of women in the reproductive ages was intact (i.e., they are still living with their first husband), while the remaining 52 percent of the first marriages were dissolved either due to divorce or death of the husband[1] (see Table 4.9). Similar results were obtained from the 1990 NFFS of Addis Ababa. According to this result, the proportion of first marriages which were intact accounted for 49 percent.

Variations in marital stability are also examined with regard to some background variables. When status of first marriage by age at first marriage is examined, the data indicates that the dissolution of first marriages due to divorce and death of a spouse were higher for women who got married at their early ages (up to 17 years). The Proportion of first marriages dissolved due to divorce and death of the husband accounted for 78.3% and 54.8% for those who got married under the age of 15 years and at the age group of 15-17 years, respectively. The finding shows that marriage stability increases with increasing age at first marriage, from 21.7% for women who got married under the age of 15 years to 89.5% for those who got married at the age group of 22-24 years. Thus, with regard to marriage stability, the ideal age at first marriage seems to be the age group 22-24 years.

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[1] In the present survey, women who are currently separated without being legally divorced are considered as currently married.

When data was examined by migration status, high rate of marital dissolution was obtained for migrant women. This result may have emerged due to the high rate of divorced in-migrants from other regions of the country, particularly those coming from the rural areas. It is evident that these women are exposed to very early age at first marriage arranged by their parents and are victims to divorce and migration. The rate of dissolution of first marriages also differs depending on the place of birth of respondents. The figures presented in Table 3.9 illustrate the high rate of marital disruption among women born in rural areas (i.e., 62.6%), while those born in Addis Ababa experience the lowest rate (35.6%).

The status of first marriage by educational attainment also indicates large variation in the prevalence of dissolution. Marital stability is higher among highly educated women and it exhibits a declining tendency when women's educational attainment decreases. This may be explained by the fact that women who have higher level of education are more likely to marry at older ages while those who attained lower educational levels tend to marry at earlier ages.

Variations are also revealed in the marital stability among women of different religious groups. The results indicate that marriage dissolution is highest among Orthodox Christian women (54.5%) followed by Muslim women (38.3%). The lowest rate of marital disruption occurred among the catholic (11.8%).

An examination of the status of first marriage by different ethnic groups shows that marriage dissolution is highest among the Amara ethnic groups (59.1%) followed by Gurages (53.4%), Tigraways (42.1%), Oromos (36.7%) and others (26.2%), respectively.

Table 4.9 Percentage Distribution of Ever Married Women by Status of First Marriage and some Background Variables, Urban Addis Ababa, 1995

Background variables	Status of first Marriage		
	Intact	Dissolved	Total
Age At First Marriage			
<15	21.7	78.3	100.0
15-17	45.2	54.8	100.0
18-19	64.0	36.0	100.0
20-21	75.4	24.6	100.0
22-24	89.5	10.5	100.0
25-29	84.2	15.8	100.0
30+	85.3	14.7	100.0
Not Stated	46.3	53.7	100.0
Migration status			
Non-migrant	64.4	35.6	100.0
Migrant	43.5	56.5	100.0
Educational Level			
Illiterate	31.3	68.7	100.0
Non-formal	35.8	64.2	100.0
Primary	40.7	59.3	100.0
Junior Secondary	60.1	39.9	100.0
Senior Secondary	72.1	27.9	100.0
University/Higher	81.6	18.4	100.0
Not Stated	-	100.0	100.0
Place of Birth			
Rural	37.4	62.6	100.0
Addis Ababa	64.4	35.6	100.0
Other Urban	64.0	36.0	100.0

Table 4.9 (Cont'd)

Religion			
Orthodox	45.5	54.5	100.0
Protestant	67.7	32.3	100.0
Catholic	88.2	11.8	100.0
Muslim	61.7	38.3	100.0
Other Religion	68.6	31.4	100.0
Ethnic Group			
Amara	40.9	59.1	100.0
Oromo	63.3	36.7	100.0
Gurage	46.6	53.4	100.0
Tigraway	57.9	42.1	100.0
Others	73.8	26.2	100.0
Total	48.1	51.9	100.0
Number	133288	143983	277271

CHAPTER V

FERTILITY LEVELS, PATTERNS, TRENDS AND DIFFERENTIALS

5.1 Introduction

Fertility is widely recognized as the most important component of population dynamics which plays a significant role in changing the size and structure of the population of an area. Ethiopia, as most countries of Sub-Saharan Africa, is characterized by high levels of fertility resulting in high rate of population growth. However, there exist large fertility variations between geographical regions as well as urban rural areas. According to the results of the 1990 National Family and Fertility Survey, the overall level of fertility in Ethiopia as measured by the reported total fertility rate (TFR) was about 6.4 births per woman. The Total Fertility Rates for urban and rural areas were found to be about 3.5 and 6.9, respectively. The corresponding figures were 2.61 for Addis Ababa and 4.0 for other urban areas. From this result it can be clearly seen that fertility level was lowest in Addis Ababa, highest in the rural areas and moderate in the other urban areas. Furthermore, data from the 1994 population and housing census of Ethiopia revealed a considerable decline in the fertility level of the urban areas of the country particularly Addis Ababa with a TFR of 1.8 children per woman.

In view of this, the present analysis attempts to evaluate the above result and estimate a plausible level of the Total Fertility Rate. It also tries to examine the changing fertility behavior of various subgroups in the study area, using the data collected from every woman of reproductive ages, 15-49. Information on current fertility was obtained by asking the number of live births a woman has had during the 12 months prior to the survey. Data on

retrospective fertility was collected from each eligible woman by asking the total number of children ever born by sex, number of children living with their mother, number living elsewhere and those who had died.

The data on both current and retrospective fertility are subject to errors of various forms. Data on current fertility is often erroneous due to misplacement of dates while information on the total number of children ever born is usually under reported due to memory lapse resulting in omissions of live births. These errors are probable due to lack of birth history data[1] in the present survey and should be borne in mind during the interpretation of the fertility measures to be computed.

Under this topic, the levels, and patterns of current fertility are reviewed using the total and age specific fertility rates. Trends in fertility can be inferred by comparing the completed fertility of women using data on children ever born with the level of current fertility. In addition to this, data from previous population censuses and demographic surveys conducted in the area are used in the trend analysis. To compute adjusted level of fertility, indirect estimation techniques are used. Finally, emphasis is given to fertility differentials using some background characteristics of the respondents, based on reported and standardized mean parity. TFR may not be used for the purpose of differential analysis due to very small number of cases in the different cells.

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[1] The sequential approach adopted by the World Fertility and Demographic and Health Surveys to build full birth history enables respondents to reconstruct birth history more accurately since it helps to minimize memory lapse and misplacement of events.

5.2 The Age Pattern and Shape of Fertility

In an effort to better understand the rate of child bearing in urban Addis Ababa, the analysis of the age pattern and shape of fertility will be undertaken. For this purpose, the percentage distribution of the age specific fertility rates is presented in Table 5.1. Age Specific Fertility Rates represent the number of live births per woman in each age group. The rate of child bearing was low among adolescents then it exhibits an increasing trend up to age 29 and starts declining thereafter. No births occurred to the sample women in the last two age groups during the 12 months prior to the survey. The age pattern of fertility presents a broad peak extending over ages 25 to 39, with maximum fertility occurring at ages 25-29. This indicates that the shape of fertility schedule for the area may be described as a "late peak" type. Compared to the result obtained from the 1990 National Family and Fertility Survey, the frequency of child bearing in the present survey is more concentrated at ages 25 to 39. The age pattern of fertility shows an important decrease at the younger ages (women under 25) as well as the two oldest age groups (40 and above). The proportion of births for women aged under 25 and for those aged 40 years and above, has decreased by 9.0 and 13.5 percentage points, respectively. The corresponding increase for ages 30-39 is 23.1 percentage points (see Table 5.1).

The mean age of child bearing can also indicate the pattern of child bearing. The computed value of this measure is 30.6 which is almost the same compared to that obtained from the 1990 National Family and Fertility Survey (30.5). However, the mean age of child bearing is valid under the condition of constant fertility.

Table 5.1 Percentage Distribution of Reported Age Specific Fertility Rate (ASFR) and the Mean Age of Childbearing (M), Urban Addis Ababa, 1990,1995.

Age of Women	1990		1995	
	ASFR	Percentage	ASFR	Percentage
15-19	0.0118	2.3	0.0087	2.5
20-24	0.1134	21.7	0.0434	12.5
25-29	0.1680	32.2	0.1099	31.6
30-34	0.0849	16.3	0.0952	27.3
35-39	0.0733	14.0	0.0908	26.1
40-44	0.0606	11.6	-	-
45-49	0.0104	1.9	-	-
Total	0.5224	100	0.3480	100
TFR	2.61		1.74	
M	30.5		30.6	

5.3 Reported Fertility Levels and Trends

5.3.1 Current Fertility

The current level of fertility is measured based on the information on number of live births during the last 12 months prior to the survey date. Based on this information, the Age specific Fertility Rates and Total Fertility Rate (TFR) were computed. Total Fertility Rate shows the number of children a woman would have, if she experienced the current rate of childbearing at each age assuming that she survived the whole of her reproductive age. The reported level of current fertility for the year preceding the survey as measured by the TFR was 1.74. The estimated value of the TFR obtained from the 1995 Fertility Survey of Urban Addis Ababa is found to be very close to that reported by the 1994 Population and Housing Census, i.e., 1.80. The figures for the TFR obtained from previous censuses and surveys in the area present a clear picture of a decrease in fertility. The estimated values of

the TFR for the periods 1967, 1978, 1984, and 1990 and 1994 were 3.98, 3.81, 3.23, 2.61 and 1.80, respectively. This sustained decline in the current fertility level indicates that fewer and fewer children are borne by women in the reproductive ages during the successive time periods.

5.3.2 Cumulative Fertility

In the 1995 Fertility Survey of Urban Addis Ababa, information was collected on the total number of children ever born for every woman of childbearing age. Based on this, the mean number of children born per woman (average parity) in a given age is computed to measure the cumulative experience from the beginning of the reproductive time to age at the time of the survey.

Table 5.2 illustrates the percentage distribution of women by number of children ever born and current age. As expected, the mean number of children increases monotonically with age, ranging from 0.03 among women aged 15-19 years to 5.80 among those aged 45-49 years. The 1995 Fertility Survey revealed that among women aged 15-49 years, the proportion of childless women accounted for 55 per cent. Compared with the result obtained from the 1990 NFFS, this figure has increased by about 6 percentage points. Childlessness has increased substantially during the past five years particularly at peak fertility ages (20-34 years). It increased by 16.1, 17.6 and 11.0 percentage points at ages 20-24, 25-29 and 30-34, respectively. The percentage of childless women decreases with age attaining its minimum at age 45-49 years, i.e., 3.3 per cent.

Moreover, the survey result indicates that by the end of their reproductive period, about 52 per cent of women in Addis Ababa had at least six children while the remaining 48 per

cent bore 5 or less children. Among those aged 45-49, the proportion with ten or more children account for 13.4 per cent. By the end of her reproductive period, a woman in Addis Ababa had an average completed fertility of 5.8 children (see Table 5.2). This result is similar to the findings of the 1990 National Family and Fertility Survey. Change over time in fertility can be observed by comparing the completed fertility of women aged 45-49 at the time of the survey with the level of current fertility as measured by the total fertility rate. If fertility remained constant in the past and the reported data on both children ever born and births during the 12 months prior to the survey date are reasonably accurate, the completed fertility and the total fertility rate should be equal in magnitude. Comparison of the completed fertility and TFR revealed a difference of 4 children. Even though data quality problems may contribute to some of the discrepancy between the two fertility measures, a substantial part could be attributed to declines in the level of fertility in Addis Ababa.

5.3.3 Fertility Trends, 1967-1995

The population censuses and demographic surveys conducted in Addis Ababa at different points in time over the period 1967-1995 are the main sources of information in the analysis of trends in fertility. The measures used for this purpose are the total fertility rates, age specific fertility rates, and mean parities.

Table 5.3 shows the age specific fertility rates and the total fertility rates of Addis Ababa at different periods. The figures for the TFR present a clear picture of a sharp decrease in fertility showing a general pattern of fertility decline. The reported TFR was found to be 3.98 in 1967, 3.81 in 1978, 3.23 in 1984, 2.61 in 1990, 1.8 in 1994 and 1.74 in 1995. The total fertility rate has decreased by at least 2 children during the period 1967-1995.

Table 5.2 Percentage Distribution of Women by Number of Children Ever Born and Current Age, Urban Addis Ababa, 1995

Current Age	Number of Children Ever Born												No. of women	Mean parity
	0	1	2	3	4	5	6	7	8	9	10+	Total		
15-19	97.3	2.5	0.2	-	-	-	-	-	-	-	-	100.0	167161	0.03
20-24	79.8	14.5	4.0	1.3	0.5	-	-	-	-	-	-	100.0	122701	0.28
25-29	43.3	17.6	16.6	12.0	6.1	2.7	1.6	0.2	-	-	-	100.0	87365	1.38
30-34	19.8	14.5	12.2	14.5	13.2	10.1	9.1	3.6	1.4	1.5	1.2	100.0	69361	2.97
35-39	8.9	8.3	10.8	12.5	11.9	13.9	14.3	8.8	6.6	1.6	2.5	100.0	68852	4.26
40-44	4.7	9.2	8.6	12.5	7.2	13.5	11.6	12.0	9.8	6.3	4.8	100.0	39594	4.99
45-49	3.3	6.5	9.6	8.0	10.4	9.9	13.6	6.5	9.1	9.6	13.4	100.0	28467	5.80
Total	55.0	10.0	7.1	6.5	5.0	4.6	4.3	2.6	2.1	1.3	1.4	100.0	583501	1.75

Examination of trends in the age pattern of fertility over the time under review shows a substantial decrease in the level among the women at younger age groups (women under 30), particularly starting from 1978 onwards. Concerning the older age groups, except for the periods 1994 and 1995 which also present a fall in the age specific fertility rates of the women at these age groups, a fluctuating pattern is observed. Variations in the age specific fertility rates usually indicate factors that are responsible for their change. Decreases in the age specific fertility rates of the women in the younger age groups indicate alterations in marital patterns such as postponement of marriage while that of the older groups indicate an increased use of contraception due to the achievement of desired number of children. The observed decline in the age specific fertility rates among the younger age groups may be attributed to the rising trend in the age at first marriage. As illustrated in the previous chapter, the singulate mean age at marriage (SMAM) has increased from 19.0 years in 1967 to 26.5 years in 1995.

Trends in life time fertility are also examined by comparing the mean parities estimated over the different periods under consideration (see Table 5.4). A declining trend is revealed in the mean parities among women aged 15-19, 20-24 and 25-29. For those in the age groups 40 and above, the estimated mean parity is much lower for the periods 1967, 1978 and 1984 than those obtained from the recent operations. This may indicate an improvement in the reporting of children ever born during the recent periods.

Under certain assumptions, the comparison of mean number of children ever born to a cohort of women in a given age group (P) with the cumulated annual age specific fertility rate of the specified age group (F) can also give an indication of fertility changes over time (Brass, 1980). Table

5.5 compares the ratio of parity to cumulative current fertility by current age of women. If fertility remained constant in the past, the ratio of these two measures should be close to unity. The P/F ratios are greater than unity at all ages showing an increasing trend with age except for a slight decrease in the age group 35-39. A sequence of P/F ratios that increase with age is a clear evidence of a recent decline in fertility (see Table 5.5).

Table 5.3 Reported Age-Specific Fertility Rates per 1000 Women by Current Age, Addis Ababa, 1967-1995.

Age Group	1967	1978	1984	1990	1994	1995
15-19	60	44	18	12	11	9
20-24	193	176	95	113	52	43
25-29	213	195	158	168	94	110
30-34	171	148	156	85	97	95
35-39	110	105	124	73	65	91
40-44	34	48	60	61	28	-
45-49	15	46	35	10	12	-
Total	796	762	646	522	359	348
TFR	3.98	3.81	3.23	2.61	1.80	1.74

Table 5.4 Reported Mean Parity per 1000 Women by Current Age, Addis Ababa, 1967-1995.

Age Group	1967	1978	1984	1990	1994	1995
15-19	302	161	90	40	-	29
20-24	1334	1140	770	610	400	282
25-29	2441	2646	2130	2010	1300	1379
30-34	3310	3841	3350	3730	2800	2971
35-39	3900	4703	4460	4310	4300	4262
40-44	3615	4644	4780	5150	5000	4993
45-49	3567	4377	4820	5790	5600	5802

Table 5.5 Ratio of Parity to Cumulative Current Fertility (P/F) by Current Age of Women, Urban Addis Ababa, 1995.

Age Group	Parity (P)	Cumulative ASFR (F)	Ratio (P/F)
15-19	0.0294	0.0180	1.63
20-24	0.2818	0.1328	2.12
25-29	1.3791	0.5849	2.36
30-34	2.9707	1.0916	2.72
35-39	4.2618	1.6065	2.65
40-44	4.9934	1.7398	2.87
45-49	5.8022	1.7397	3.34

5.4 Estimated Fertility Levels

In the previous sections, the current as well as cumulative fertility measures were examined using the reported fertility. However, from the experience of most developing countries, one can observe that data are not of sufficient quality to rely on these direct measures. Due to this, researchers have developed various techniques to estimate the fertility measures indirectly.

The current level of fertility has been derived from information on births in the last 12 months prior to the survey date. Data of this type may be distorted due to the misunderstanding of the length of the reference period resulting in reporting of births that occurred either shorter or longer than a year. Brass has developed a P/F ratio technique to adjust the level of current fertility rates to the reported life time fertility of women younger than 30 or 35 years, assuming the reporting of the number of children ever born by younger women to be fairly reliable. To apply this technique, the PFRATIO method of the Population Analysis

Spreadsheet (PAS) software is used. For adjusting the fertility pattern, different combinations of the P/F ratios for the age groups 20 to 24, 25 to 29, and 30 to 34 years are used (See Table 5.6).

The Brass Arriaga technique is also another method of adjusting the age pattern of fertility by the fertility rates derived from information on children ever born. The principal advantage of the Arriaga technique over the standard P/F ratio technique is that it can be extended to conditions of changing fertility. If children ever born and age specific fertility rates are available for two periods of enumeration, age specific fertility rates can be estimated for the one-year period following the first enumeration and the one-year period preceding the second enumeration. Data from the 1990 NFFS as well as the 1995 Fertility Survey were used in the present analysis. For the application of this technique, the ARFE-2 spreadsheet of the PAS software was used. Estimates of the age specific and total fertility rates are presented in Table 5.7.

The third technique applied to estimate the fertility level is the Brass Relational Gompertz Model. The model uses the information on the average number of children ever born by age of the woman, a specific standard fertility schedule and a set of coefficients for adjusting the observed fertility schedule. The estimation procedure was undertaken using the REL-GMPZ spreadsheet of the PAS software. The total fertility rates estimated from the average parity and age specific fertility rates of each age group using this method are presented in Table 5.8. However, the estimate for the age group 15-19 should not be included in the analysis due to very small number of births to a substantial proportion of women in this category.

Table 5.6 Age Specific and Total Fertility Rates Estimated by Brass P/F Ratio Method, Urban Addis Ababa, 1995.

Age of Women	Adjusted ASFR's			
	(P/F)1	(P/F)2	(P/F)3	(P/F)4
15-19	0.0185	0.0195	0.0209	0.0221
20-24	0.0921	0.0972	0.1042	0.1102
25-29	0.2332	0.2462	0.2638	0.2791
30-34	0.1980	0.2200	0.2539	0.2370
35-39	0.2020	0.2132	0.2285	0.2418
40-44	-	-	-	-
45-49	-	-	-	-
TFR	3.7	3.9	4.2	4.4

Notes: (P/F)1=P2/F2, (P/F)2=1/2(P2/F2+P3/F3), (P/F)3=1/3(P2/F2+P3/F3+P4/F4), (P/F)4=1/2(P3/F3+ P4/F4).

Table 5.7 Age Specific and Total Fertility Rates Estimated by Brass Arriaga Method, Urban Addis Ababa, 1990, 1995.

Age of women	ASFR's based on adjustment factor for the age group			
	20-29	25-29	25-34	30-34
15-19	0.0163	0.0166	0.0169	0.0172
20-24	0.0765	0.0776	0.0792	0.0807
25-29	0.1736	0.1761	0.1796	0.1831
30-34	0.1488	0.1510	0.1540	0.1570
35-39	0.1251	0.1269	0.1295	0.1320
40-44	0.0000	0.0000	0.0000	0.0000
45-49	0.0000	0.0000	0.0000	0.0000
TFR	2.702	2.741	2.796	2.850

Table 5.8. Total Fertility Rates Estimated by Brass Relational Gompertz Model, Urban Addis Ababa, 1995.

Age of Women	BRG(CEB)	BRG(ASFR)
15-19	7.2	7.0
20-24	3.9	3.3
25-29	5.5	4.6
30-34	6.0	5.3
35-39	5.7	5.3
40-44	5.4	5.2
45-49	5.8	5.8
Average	5.6	5.2

Notes: BRG(CEB)=Brass Relational Gompertz Model using children ever born.
BRG(ASFR)=Brass Relational Gompertz Model using age specific fertility rates.

The total fertility rates obtained from the above three techniques of indirect estimation are found to be higher than that obtained from the reported data.

The Brass P/F ratio method provided total fertility rates ranging from 3.7 for ratios at age group 20-24 (P2/F2) to 4.4 for ratios of age group 25-34 (1/2(P3/F3+P4/F4)). This method assumes that fertility has been constant for the past 10 to 15 years. However, findings from the present analysis as well as that of the 1990 NFFS (CSA, 1993) show that fertility has been declining in urban Addis Ababa during the specified period, suggesting violations of the assumptions underlying the method to rely on the estimates derived from this technique.

The values of TFR generated from the Brass Relational Gompertz technique show a good linear relation between the observed and the standard fertility schedule up to age 40, for

estimates derived from the ASFR's, and a fluctuating pattern thereafter. The steady rise in the estimated total fertility rates between age 20 and 40 years suggests the same declining trend of fertility while the fluctuations observed after 40 years of age indicate under reporting of births by women of older ages. This method can't be applied to adjust the fertility level of urban Addis Ababa due to its assumption of constant fertility.

In the context of declining fertility, the Arriaga technique overcomes the shortcoming of the Brass P/F ratio for adjusting the current fertility level. The arriaga technique for two dates is applied in cases where children ever born and the pattern of fertility is available from two sources. In this case results from the 1995 survey and the 1990 National Family and Fertility Survey for Addis Ababa were used. The appropriate level is selected from the age group into which the mean age at child bearing (30.18) is located. Thus the TFR based on adjustment factor for the age group 25-34 may be selected, i.e., 2.8.

Applying the above technique to the 1994 Population and Housing Census results, the reported TFR of 1.8 is adjusted to 2.14. In this case the results of the 1994 and 1984 censuses for Addis Ababa were used to provide adjusted estimates for 1994. Since the number of cases in the sample of the 1995 Fertility Survey of Urban Addis Ababa is small, hence no births were registered for women in the age groups 40-44 and 45-49. In view of this fact, the TFR obtained by adjusting the 1994 census result of Addis Ababa is considered to be more plausible because the reported fertility levels as well as patterns in the 1994 census and the 1995 survey are very similar and the time gap is very close. Thus, it can be concluded that the TFR for a woman in Addis Ababa is 2.14. This implies that a woman has had on the average 2.14 children during her entire child bearing years.

5.5 Fertility differentials

Addis Ababa, as most capital cities, is characterized by the lowest fertility level in the country. This may be due to the better situation of the city in the share of the modern infrastructures, i.e., availability of education opportunities, communication facilities and contraceptive information and supplies which are highly associated with lower fertility. Though this fact explains the general situation of the area, variations exist among the diverse subgroups of the population. Due to the considerable differences in the socio-economic conditions prevailing in the area, not all the population is advantageous with respect to the above privileges of the city. Thus previous studies have noted substantial fertility differentials among the diverse sub- populations of the city depending on the various socio-economic conditions (CSA, 1987).

This section of the analysis is essentially devoted to investigate the factors determining these differentials in the fertility level of urban Addis Ababa and identify the disadvantaged and vulnerable groups which may need more attention to the implementation of population policies. Thus fertility differentials will be studied using variables such as current marital status, age at first marriage, migration status, ethnicity, religion, education work status and place of birth of the respondents. For the analysis of the fertility differentials, the reported and standardized mean parities for the different modalities of each selected variable are used (See Table 5.11 and Table 5.12).

5.5.1 Marriage and Fertility

a. Current Marital status and Fertility

In a society where most fertility occurs in marriage, the analysis of fertility differentials with respect to the marital status of women in the reproductive ages holds considerable importance.

In the present case, marital status was classified into five different categories: never married, currently married, living with a man, divorced and widowed. The standardized mean parities presented in Table 5.9 indicate that currently married women have the highest mean parity (2.42 children) compared to 2.33 for the widowed, 1.54 for those living with a man, 1.47 for the divorced and 0.29 for the never married. Similar pattern is observed for women aged 30-39 and 40-49 while the patterns of the fertility level computed for women under 30 years of age is identical to the reported mean parity.

b. Age at First Marriage and Fertility

Age at first marriage is generally known to be inversely related to the ultimate fertility of women. Later age at marriage is associated with lower completed family size by limiting the effective child bearing years.

The results illustrated in Table 5.9 show that the mean parity decreases steadily with the rising of age at first marriage except for women who first married under 15 years of age. Women who married at the age of 15-17 have a mean parity of 4.24, while those who married after 30 years of age have an average of only 1.49 children. The same inverse relationship was also observed between age at first marriage and parity when the mean parities were standardized for the age structure

of the women. Thus while women who married at the age of 15-17 have a standardized mean parity of 2.66, those who married after 30 years of age bear only 0.41 children on the average. This pattern of relationship holds true for women in the age group 30-39.

Table 5.9 Reported and Standardized Mean Parity by Current Marital status and Age at First Marriage

Marital Conditions	Mean Parity by broad age group			Total Mean Parity	
	<30	30-39	40-49	Reported	Standardized*
Current Marital status					
Never Married	0.06	0.26	1.62	0.08	0.29
Currently Married	1.94	4.37	5.99	4.01	2.42
Living with a Man	1.23	3.92	3.86	2.71	1.54
Divorced	0.95	2.84	3.69	2.26	1.47
widowed	2.46	4.22	5.87	4.58	2.33
Age at First Marriage					
<15	1.65	4.55	5.58	4.13	2.31
15-17	2.10	5.01	6.21	4.24	2.66
18-19	1.54	3.89	5.96	3.32	2.16
20-21	1.61	3.31	4.10	2.66	1.75
22-24	1.14	2.41	4.27	2.06	1.34
25-29	1.15	1.61	2.60	1.61	0.86
30+	-	1.56	1.19	1.49	0.41

* The total 1994 Census female population of urban Addis Ababa is used as standard.

5.5.2 Migration Status and Fertility

Migration status of women is among the most widely studied variables that are known to be associated with fertility. For the purpose of the analysis of fertility differential with respect to migration status, respondents were classified into migrants and non-migrants.

The examination of the reported mean parity indicates that migrant women have higher fertility than the non-migrants. The mean parity for migrant women is 2.37 while the non-migrants bear only 0.89 child on the average. When mean parities were standardized, similar pattern was revealed. However, the mean parity of the migrants was reduced from 2.37 to 1.76 while that of the non-migrants increased from 0.89 to 1.58.

5.5.3 Place of Birth and Fertility

In addition to the current individual socio-economic characteristics, the social and physical environment of women's childhood has also been recognized to influence their reproductive performances (assuming women born in rural or urban areas have spent their entire childhood in these areas).

Women born in urban areas can be familiar with the urban ways of life, environment and media which facilitate the awareness and access to family planning services. On the other hand, the traditional way of life acquired during childhood ages may lead urban women of rural origin to favor larger families.

As shown in Table 5.10, the reported mean parity is highest among women born in rural areas (2.64 children) followed by those born in other urban areas (1.69 children). The natives have the lowest mean parity (only 0.89 children).

When mean parities are standardized to discriminate the impact due to the age structure from the reproductive process, the mean parities of women born in rural areas remained the highest, while the difference in the mean parity of women born in Addis Ababa and those born in other urban areas were eliminated. Thus the difference observed in the reported mean parities of women born in Addis Ababa and those born in the other urban areas may indicate differences in the age structures of these two categories.

5.5.4 Ethnicity and Fertility

In most developing countries, large differences in fertility have been observed among different ethnic groups. These differentials were generally attributed to diversities in socio-economic conditions such as education and participation in economic activities. But studies have shown that ethnicity can be a good proxy for considerable differences in terms of culture and tradition which are closely related to norms and values affecting the reproductive behavior of individuals.

In the present study, the four major ethnic groups which account for 96.7 per cent of the total population of women aged 15-49 in urban Addis Ababa are considered. These include the Amaras, the Oromos, the Gurages and the Tigraways. As illustrated in Table 5.10, the Gurages have the highest mean parity followed by the Oromos, the Tigraways and the Amaras, respectively. When the mean parities are standardized, similar pattern is revealed in the fertility level of the different ethnic groups. This might be due to cultural assimilation and adoption to the urban ways of life by women of different ethnic groups.

5.5.5 Religion and Fertility

In many societies, variations in fertility levels have been observed among different religious groups. Though some of the discrepancies may arise from their different economic and social conditions, they may also reflect differences in religious beliefs and practices which can affect their reproductive performances.

For the purpose of studying fertility differentials with respect to religion, respondents were classified into six distinct categories. These include Muslims, Orthodox Christians, Protestants, Catholics, all Christians together and followers of other religion. Examination of fertility based on the reported mean parity shows that Muslims have the highest mean parity (2.11 children), followed by Orthodox Christians (1.77 children), all Christians (1.73 children), Catholics (1.33 children), Protestants (1.18 children) and followers of other religion (0.88 children) (see Table 5.10). When the mean parities were standardized, similar pattern was revealed in the rank order of the different categories. Mean parities of the different Christian groups became almost equal while that of Muslims remaining at its highest level.

5.5.6 Education and Fertility

Educational level is generally known to be inversely related to fertility. It directly affects fertility by changing the attitude of women from their traditional role of bearing and rearing children to a greater degree of participation in gainful employment. It can also influence fertility by delaying the age at marriage through the number of years spent in schools.

In the present analysis, respondents are classified into six distinct categories according to the highest level of

school attended. These are illiterates, non-formal, primary, junior secondary, senior secondary and university/higher levels. The reported and standardized mean parities for the above categories are illustrated in Table 5.10. Data on reported as well as standardized mean parities by women's education show that fertility is inversely related to level of education, except for the illiterate women. The standardized mean parities vary from 2.04 children for women in the primary and non-formal schools to 0.93 child for those who attained university or higher educational levels. From the result, one can easily see that illiterate women have lower mean parity than women with non-formal and primary education. This might be due to differential reporting of births resulting from greater memory lapse among illiterate women.

5.5.7 Work Status and Fertility

Women's work outside the home is believed to be a factor associated with lower fertility. For the purpose of the analysis of fertility differential with respect to work status, respondents were classified into working and non-working categories.

The examination of the reported mean parity indicates that working women have higher fertility than their non-working counterparts. The mean parity for the working women is 1.88 while the non-working women have only 1.64 children on the average. However, after standardizing for the differences in the age distribution, the rank order of the two groups appeared to be reversed. Thus the standardized mean parity of the working women was reduced from 1.88 to 1.47 while that of the non-working category increased from 1.64 to 1.94.

Table 5.10 Reported and Standardized Mean Parity of Women aged 15-49 by Background Variables, Urban Addis Ababa, 1995.

Background Variables	Total Mean Parity	
	Reported	Standardized*
Migration Status		
Non-migrants	0.89	1.58
Migrants	2.37	1.76
Ethnicity		
Amara	1.58	1.53
Oromo	1.94	1.77
Gurage	2.02	2.14
Tigraway	1.81	1.64
Others	1.90	1.65
Religion		
All Christian	1.73	1.65
Orthodox	1.77	1.66
Protestant	1.18	1.57
Catholic	1.33	1.63
Muslim	2.11	2.10
"Other Religion"	0.88	0.84
Education		
Illiterate	3.38	1.96
Non-formal	3.85	2.04
Primary	2.27	2.04
Junior Secondary	0.90	1.53
Senior Secondary	0.72	1.25
University/Higher	1.17	0.93
Work Status		
Not Working	1.64	1.94
Working	1.88	1.47
Place of Birth		
Rural	2.64	1.83
Other Urban	1.69	1.58
Addis Ababa	0.89	1.58

* The total 1994 Census female population of urban Addis Ababa is used as standard.

CHAPTER VI

BREASTFEEDING PRACTICES

6.1 Introduction

The need for studying breastfeeding drives from the relationship it has with mortality and fertility. Population policies and planning that target sustainable development, particularly in developing countries like Ethiopia; can make a better use of an improved understanding of fertility inhibiting factors of the society. One among such factors is breastfeeding. In societies where induced abortion is not legal and contraceptive prevalence is very low; lactation (breastfeeding) stands to be the most important factor in keeping fertility below its physiological maximum. This is because of the well established fact that depending on patterns and frequency of Breastfeeding, lactation suppresses ovulation for an indefinite and substantial number of months, thereby producing a negative effect on fertility by delaying conception.

Breastfeeding has also an important impact on the health and survival of infants. Because of the fact that breast milk contains certain nutritional properties which make it superior to other alternatives, it is strongly advised that mothers feed breast milk for their young offsprings. This exceptional nutritional value of breast milk provides immunological protection against many common childhood diseases like infection and diarrhea. Breast milk is not only easily digestible but in conditions of poor hygiene and sanitation it is the only uninfected food available. The need for this study also arises, because among several strategies of the National Population Policy, is the promotion of breastfeeding as a means of dealing with problem of childhood malnutrition and increasing the time span between births through Information Education and Communication (IEC); (NOP,1993). Hence, the knowledge of its prevalence and duration is of paramount importance.

In the Addis Ababa Family and Fertility Survey of October 1995, data on breastfeeding and post-partum amenorrhoea was collected on sample basis. During the interview information was obtained from ever married women who were in the childbearing age (15-49) on the two most recent births (penultimate and ultimate). This chapter briefly examines the extent and duration of breastfeeding and length of amenorrhoea.

6.2 Extent of Breastfeeding

To asses the extent of breastfeeding, ever married women age 15-49 were asked whether they breastfed their last child and whether this last child is still breastfeeding at the time of the survey. The data obtained from these questions are presented in Table 6.1. The table shows the percentage of women who breastfed their ultimate child controlled for the current age of mothers by selected background variables i.e. education, ethnic group, religion and work status of mothers.

As can be seen from the table, 95 percent of the ever married women of Addis Ababa practiced breastfeeding their ultimate child. From the 1990 Family and Fertility Survey report, (CSA, 1993), this figure was 97 percent for the whole country, 94.1 percent for Addis Ababa and 95.8 percent for other urban centers. Consistent with the previous survey findings, the result clearly indicates that breastfeeding is a universal practice not only in Ethiopia as whole but even in the capital, where modernization could affect the practice.

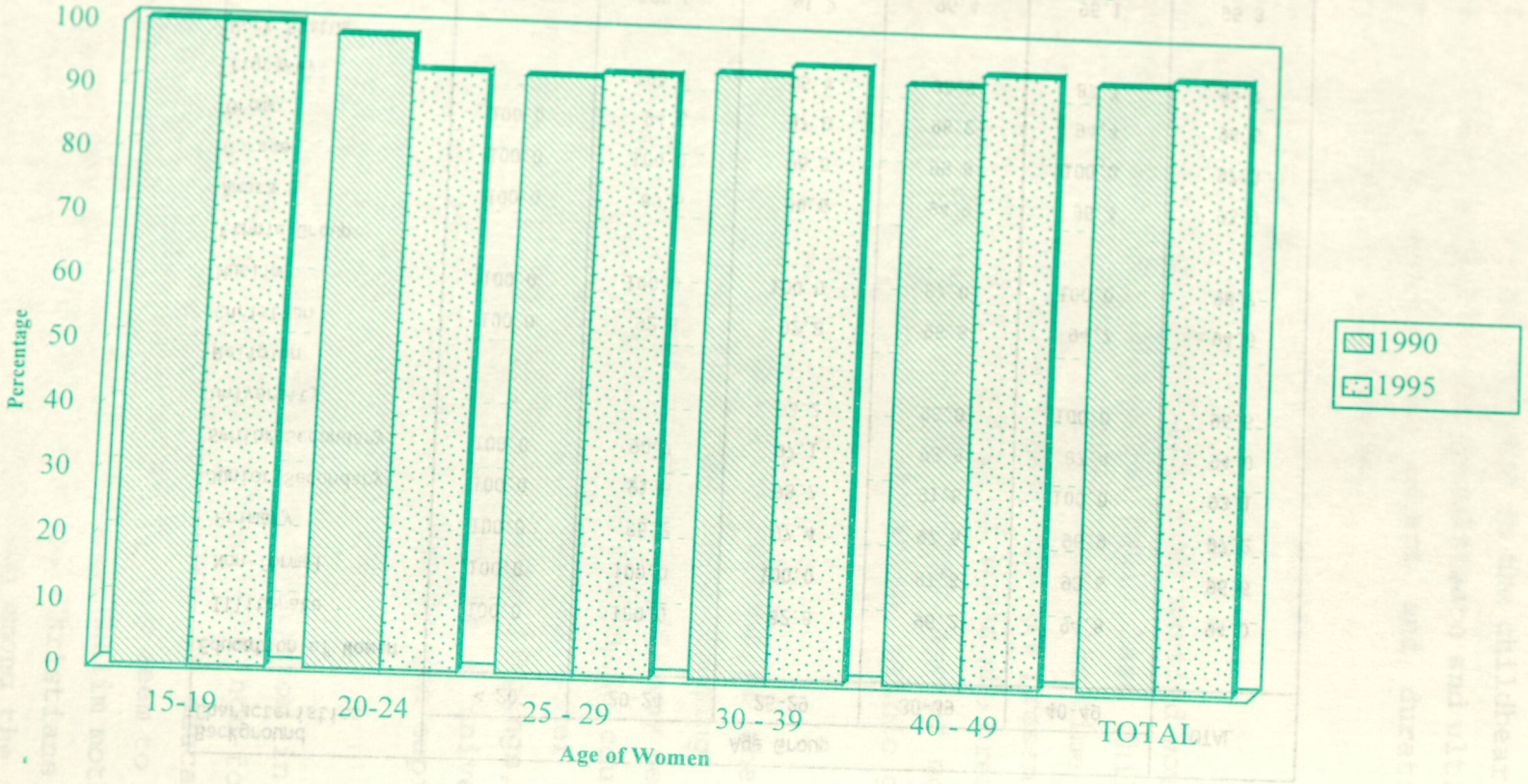
Education of mothers didn't show much variation in the practice of breastfeeding. However, mothers with non-formal (96.6 percent) and primary (97.2 percent) level of education showed high proportions . Religion and breastfeeding seem to have some relationship as breastfeeding practice among Muslim mothers showed higher proportion (99 percent) than the Christians (95 percent). Similarly ethnicity revealed variation among the four ethnic groups: breastfeeding practice among the Gurages (97.3 percent) and the Oromos (96.6 percent) is higher than among women in the other ethnic groups.

TABLE 6.1 PERCENTAGE OF EVER MARRIED WOMEN AGED 15-49 WHO BREASTFED THEIR LAST CHILD, BY BACKGROUND CHARACTERISTICS, ADDIS ABABA, 1995

Background Characteristics	Age Group					TOTAL
	< 20	20-24	25-29	30-39	40-49	
Education of Women						
Illiterate	100.0	100.0	82.8	96.2	94.8	94.0
Non-formal	100.0	100.0	100.0	97.5	93.6	96.6
Primary	100.0	95.2	97.4	97.6	96.9	97.2
Junior Secondary	100.0	91.5	93.7	91.5	100.0	93.1
Senior Secondary	100.0	90.7	97.1	93.8	87.4	94.0
University	-		93.2	95.0	100.0	95.6
Religion	-					
Christian	100.0	92.8	92.8	95.5	94.7	94.6
Muslim	100.0	100.0	100.0	97.0	100.0	98.7
Ethnic Group						
Amara	100.0	89.5	90.6	94.9	95.4	93.9
Gurage	100.0	100.0	96.8	95.8	100.0	97.3
Oromo	100.0	94.6	97.0	98.2	94.4	96.6
Tigraway	-	100.0	95.4	93.9	87.7	92.7
Work Status						
Working	100.0	100.0	91.2	96.4	95.1	95.3
Not Working	100.0	90.2	95.8	94.6	96.0	94.8
TOTAL Percent Number	100.0 2847	93.1 17623	93.5 44699	95.6 114854	95.1 64051	95.0 244,074

NB. Numbers are weighted

Fig-6.1 PERCENTAGE OF EVER-MARRIED WOMEN WHO HAD BREASTFED THEIR LAST CHILD BY CURRENT AGE, ADDIS ABABA , 1990 AND 1995



It seems that the working status of mothers causes no or negligible difference and the result was consistent with the previous survey. However, it should be noted here that, the result could be otherwise if intensity and/or frequency or duration of breastfeeding is of interest; as these variables are affected much by the time the mother spends breastfeeding the child.

From the data, breastfeeding showed some variation across age groups. All younger mothers (15-19 years) reported that they breastfed their last child and those mothers of early adult age (20-29 years) showed a relatively lower proportion than the older age groups (30-49 years). Both the level and the pattern of breastfeeding is consistent with the previous survey. Figure 6.1 presents the patterns and levels for the 1990 and 1995 Survey results. As can be observed from the figure, breastfeeding practice is universal at ages 15-19, declining in the following age groups (20-24, 25-29) and showing slight rise in the last two age groups.

Those women who reported that they did not breastfed their last child were asked why they never breastfed and reasons cited by these women are given in Table 6.2. As can be observed from the table, three in ten women reported that they had insufficient milk for their baby, while 26.7 percent and 20.0 percent reported 'child died' and 'child refused', respectively. A sizeable minority (10.6 percent) cited that it was inconvenient for them to breastfeed the child. Figure 6.2 provides a better understanding of the non-breasfeedrs by reason. Among the main reasons the proportion of women not breastfeeding as 'child refused' should be treated cautiously.

TABLE 6.2 PERCENTAGE OF EVER MARRIED WOMEN AGED 15-49 WHO NEVER BREASTFED THEIR LAST CHILD, BY MAIN REASON FOR NOT HAVING BREASTFED ADDIS ABABA, 1995

Reason	Survey Date		
	1995		1990*
	Number	Percent	Percent
Inconvenient	1298	10.6	11.4
Had to Work	226	1.8	2.5
Insufficient Milk	3734	30.4	26.8
Child Refused	2462	20.0	6.4
Child Died	3275	26.7	33.9
Child Sick	223	1.8	-
Others	1064	8.7	18.9
TOTAL	12281	100.0	100.0

* Reprinted from the 1990 National Family and Fertility Survey report page 152.

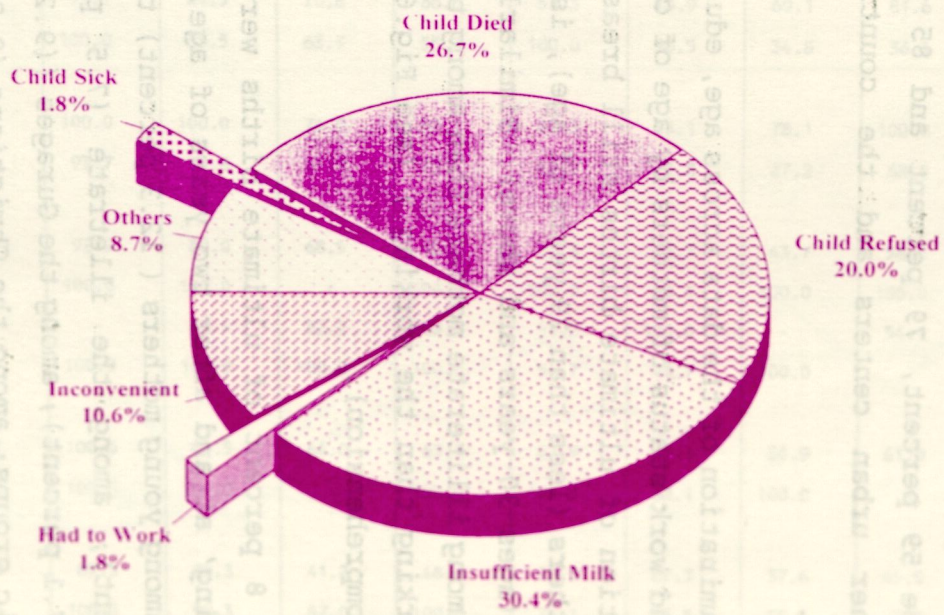
NB. Numbers are weighted

6.3. Duration of Breastfeeding

Findings from the survey further confirmed that breastfeeding is not only universal but also a prolonged process among women in Addis Ababa; similar to mothers in the other parts of the country. This was borne out by the data in Table 6.3; which displays the proportion of women still breastfeeding their most recent child by age of the child in months, at the time of the survey.

An examination of the proportion of children still breastfeeding by duration, indicates that the proportion of ultimate births who were still breastfeeding is very high up to the first six months and tapers off gradually thereafter. Figure 6.3.a, compares the pattern of still breastfeeding by age of children; for Addis Ababa at two different dates and that of the country on the basis of the results of the 1990 National Family and Fertility Survey.

Fig-6.2 PERCENTAGE DISTRIBUTION OF EVER MARRIED WOMEN AGED 15 -49 WHO NEVER BREASTFED THEIR LAST CHILD BY MAIN REASON FOR HAVING NEVER BREASTFED , ADDIS ABABA, 1995



As can be observed from the figure, it is apparent that the level of breastfeeding is lower for Addis Ababa in both the surveys compared to the level for the country . The proportion still breastfeeding declines drastically after 18 months for the current survey and it decreases after 20 months for Addis Ababa and the country in the 1990 National Family and Fertility Survey. It can also be seen in Table 6.3 that about 67 percent of ultimate births were reported by their mothers to had been breastfed for over a year and a half. According to the 1990 National Family and Fertility Survey result the proportion was found to be 59 percent, 79 percent and 85 percent for Addis Ababa, other urban centers and the country, respectively, (CSA,1993).

An examination of the data across age, education, ethnicity, religion and work status of mothers by age of child reveals that, the proportion of ultimate births still breastfeeding, born to younger mothers (less than 29 years of age), is higher than among the older (ages 30 years and above). Similarly, the proportion is higher among illiterate mothers than among the literate; among the not-working than the working ; (see Fig.6.3.b, c and d for a better comprehension).

About 8 percent of ultimate births were reported 'still breastfeeding' at and after two years of age. This proportion is higher among young mothers (12.3 percent) than the older ones (8.6 percent); among the illetrate (7.5 percent) than the literate (7.1 percent); among the Gurages ((9.2 percent) than the other ethnic groups; among the Christians (8.2 percent) than the Muslims (7.5 percent); and among the not-working (9.8 percent) than the working (6.3 percent).

Prolonged breastfeeding (i.e for 24 months or more) is also examined based on the data on penultimate children. Data on women who reported that they had breastfed their child next to the last, by duration of breastfeeding is presented in Table 6.4.

TABLE 6.3 PROPORTION OF ULTIMATE BIRTHS TO EVER MARRIED WOMEN AGED 15-49 WHO WERE STILL BREASTFEEDING BY AGE OF CHILD IN MONTHS AND SELECTED BACKGROUND CHARACTERISTICS OF WOMEN, ADDIS ABABA, 1995

Background Characteristics	Age Of Child In Months													TOTAL
	< 2	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22-23	24+	
Age Group														
< 29	86.4	88.7	93.1	84.5	70.8	86.8	53.3	73.9	60.1	81.6	53.4	47.7	12.3	40.9
30-49	100.0	100.0	100.0	88.5	63.5	55.3	100.0	56.5	34.8	36.4	39.8	30.6	8.6	22.2
Education of Women														
Illiterate	65.4	100.0	100.0	100.0	76.8	52.1	89.3	45.1	78.1	100.0	76.2	46.9	7.5	21.4
Literate	100.0	100.0	93.7	73.6	81.9	73.4	60.9	71.8	27.2	68.9	42.0	27.2	7.1	67.3
Ethnic Group														
Amara	100.0	100.0	92.9	80.0	68.5	48.5	73.3	58.7	43.7	58.1	26.2	100.0	8.5	23.2
Gurage	100.0	100.0	100.0	100.0	-	100.0	100.0	50.1	100.0	100.0	100.0	25.3	9.2	35.1
Oromo	100.0	-	-	68.4	62.2	100.0	51.2	100.0	-	54.1	76.6	25.4	6.5	17.9
Tigraway	-	100.0	100.0	100.0	100.0	100.0	54.7	48.7	100.0	-	-	-	6.1	22.5
Religion														
Christian	92.5	94.1	100.0	82.5	64.0	63.1	67.9	64.1	36.9	61.0	51.7	37.5	8.2	22.8
Muslim	100.0	100.0	100.0	100.0	-	100.0	100.0	68.1	100.0	-	-	-	7.5	40.5
Work Status														
Working	100.0	100.0	89.5	80.3	41.2	48.6	70.5	67.3	37.6	45.0	29.8	48.9	6.3	17.2
Not Working	91.0	92.6	100.0	90.3	87.0	100.0	76.1	63.5	55.5	73.0	72.5	15.7	9.8	30.7
All Women	93.7	94.5	95.7	86.6	67.8	73.7	73.4	64.8	47.4	66.7	49.7	34.2	7.9	23.8

Fig-6.3a PROPORTION OF LAST BIRTHS WHO ARE STILL BREASTFEEDING BY AGE OF CHILD ADDIS ABABA 1995 AND 1990 ETHIOPIA

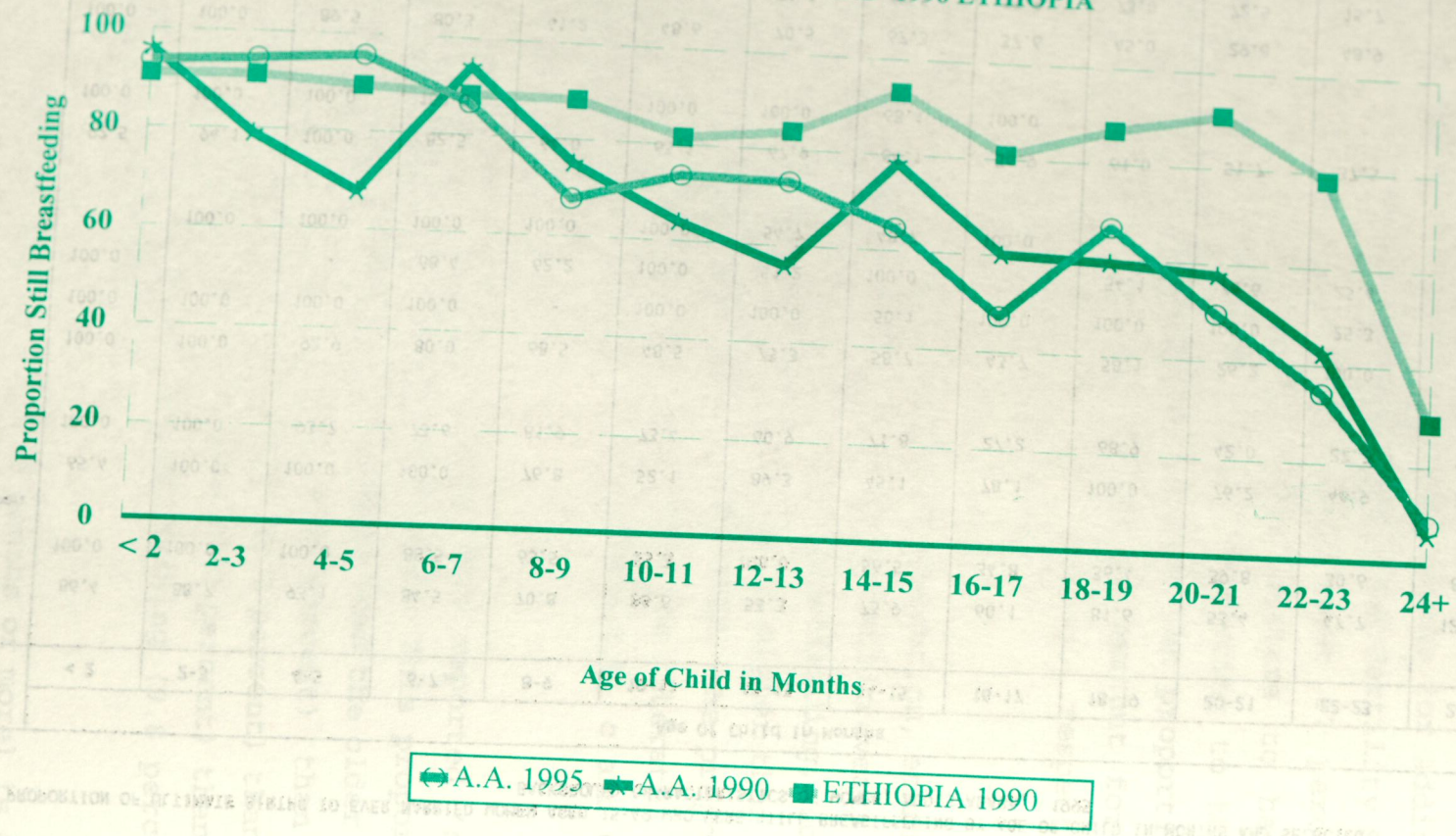


Fig-6.3b PROPORTION OF ULTIMATE BIRTHS STILL BREASTFEEDING BY AGE OF CHILD AND AGE-GROUP OF WOMEN, ADDIS ABABA, 1995

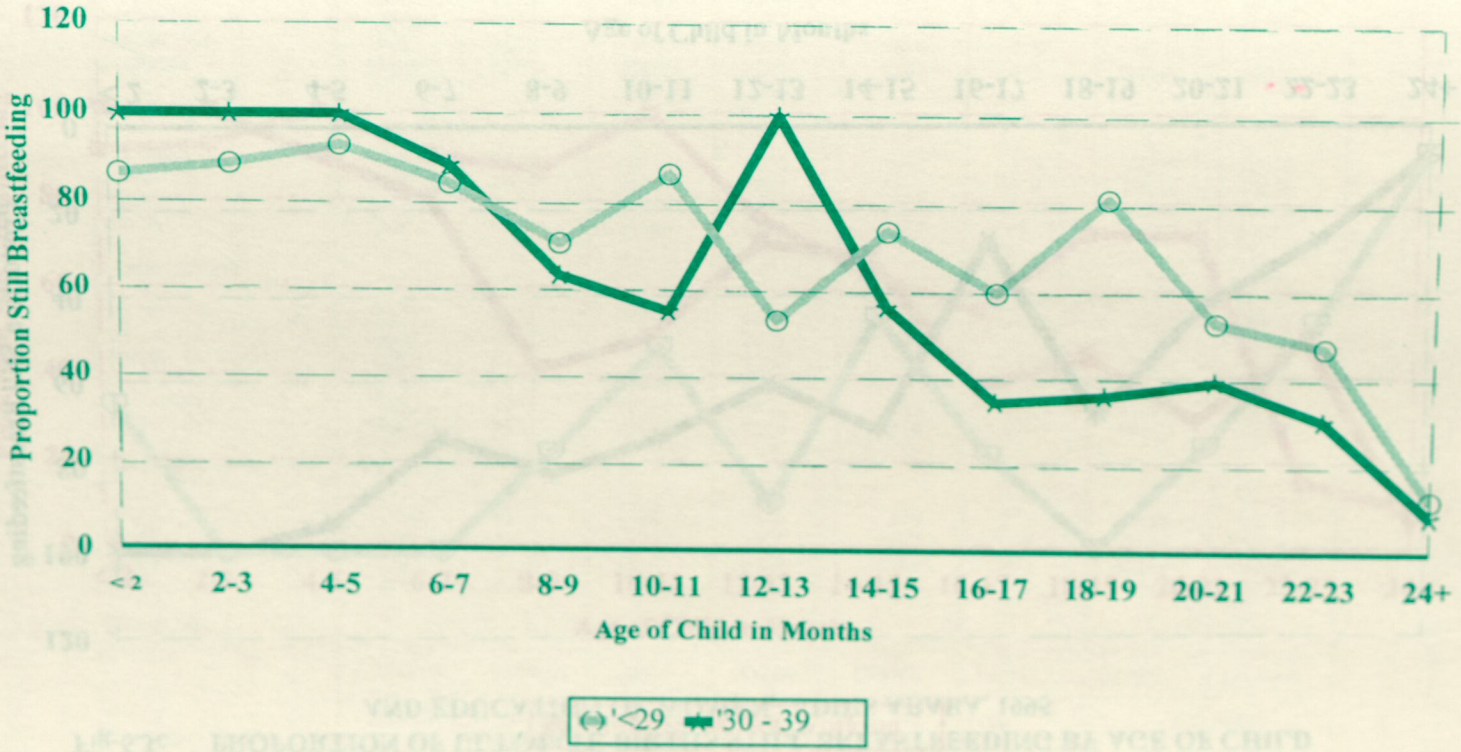


Fig-6.3c PROPORTION OF ULTIMATE BIRTHS STILL BREASTFEEDING BY AGE OF CHILD AND EDUCATION OF WOMEN, ADDIS ABABA, 1995

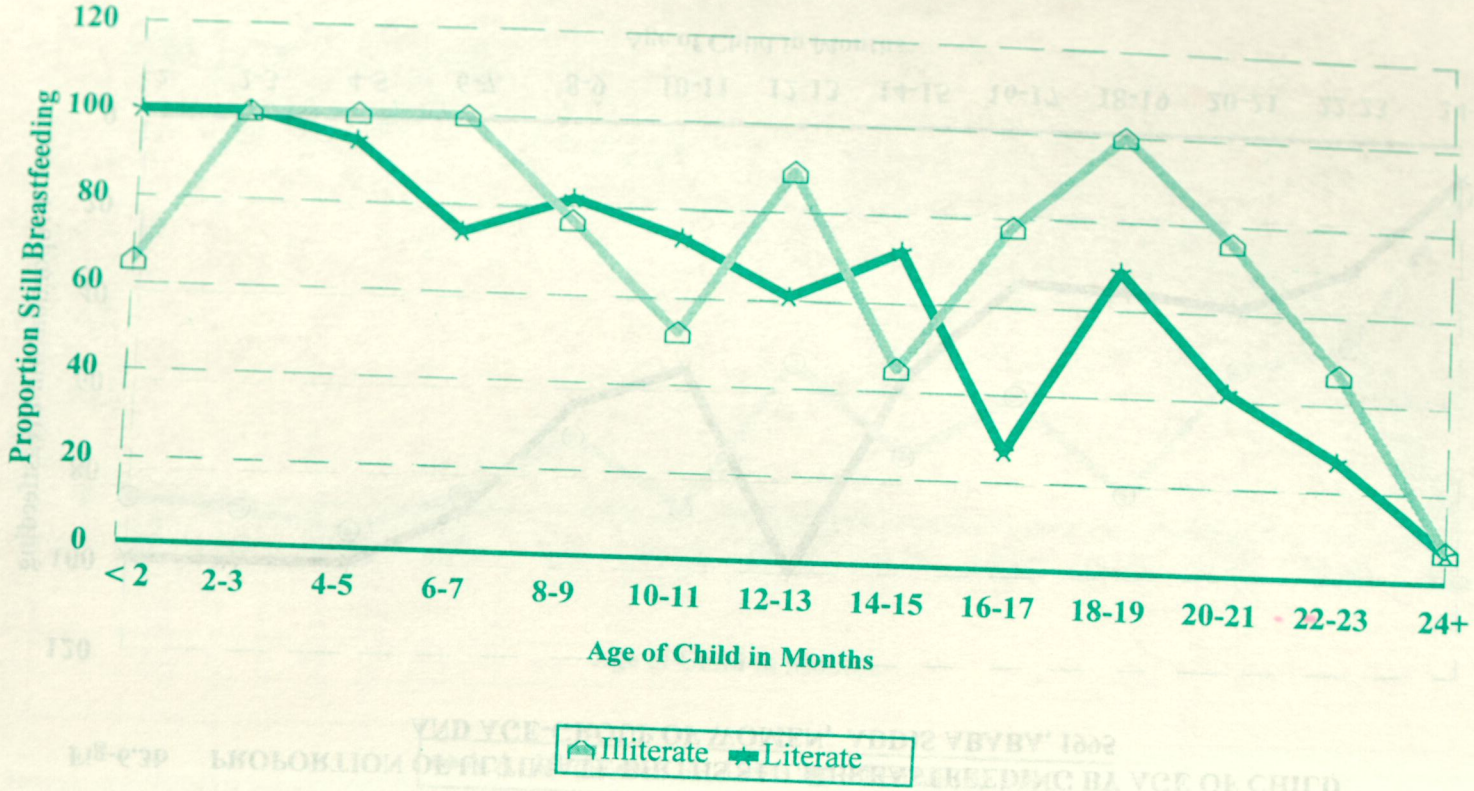


Fig-6.3d PROPORTION OF ULTIMATE BIRTHS STILL BREASTFEEDING BY AGE OF CHILD AND WORKING STATUS OF WOMEN, ADDIS ABABA, 1995

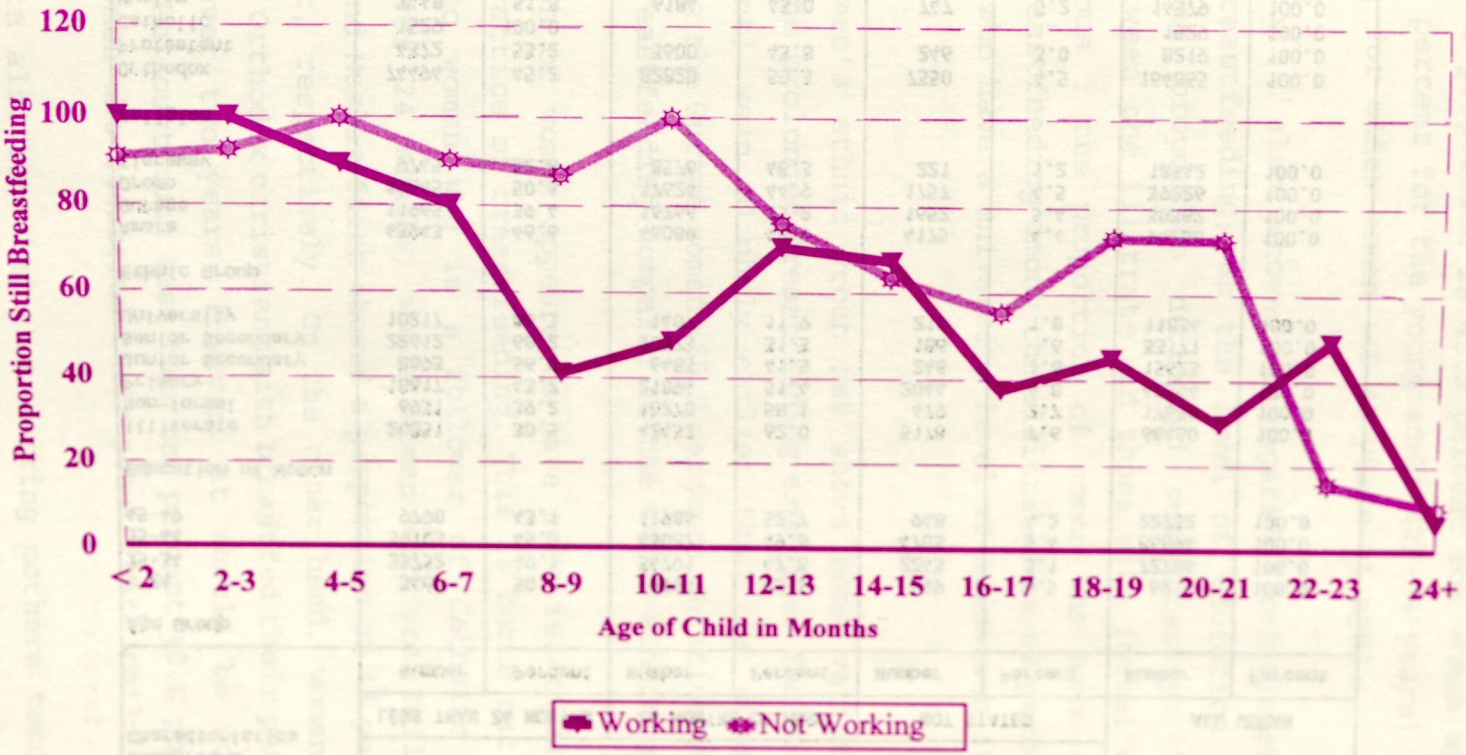


TABLE 6.4 DISTRIBUTION OF WOMEN AGED 15-49 WHO BREASTFED THEIR PENULTIMATE CHILD IN THE LAST CLOSED BIRTH INTERVAL BY LENGTH OF BREASTFEEDING AND BACKGROUND CHARACTERISTICS, ADDIS ABABA , 1995

Background Characteristics	BREASTFEEDING IN MONTHS						ALL WOMAN	
	LESS THAN 24 MONTHS		24 MONTHS OR MORE		NOT STATED			
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Age Group								
< 24	3467	50.2	2993	43.3	449	6.5	6910	100.0
25-34	35752	49.1	34791	47.8	2243	3.1	72786	100.0
35-44	39103	45.0	43087	49.6	4703	5.4	86894	100.0
45-49	9798	43.1	11986	52.7	948	4.2	22732	100.0
Education of Women								
Illiterate	20851	30.5	42432	62.0	5178	7.6	68460	100.0
Non-formal	6931	39.2	10270	58.1	479	2.7	17680	100.0
Primary	18617	43.7	21894	51.4	2044	4.8	42554	100.0
Junior Secondary	8893	56.9	6483	41.5	246	1.6	15623	100.0
Senior Secondary	22612	68.2	10373	31.3	186	.6	33171	100.0
University	10217	86.3	1407	11.9	210	1.8	11834	100.0
Ethnic Group								
Amara	43943	46.6	46089	48.9	4175	4.4	94206	100.0
Gurage	11965	39.4	16766	55.2	1652	5.4	30382	100.0
Oromo	19845	50.6	17624	44.9	1757	4.5	39226	100.0
Tigraway	9745	52.6	8576	46.3	221	1.2	18542	100.0
Religion								
Orthodox	74494	45.2	82820	50.3	7350	4.5	164665	100.0
Protestant	4372	53.2	3600	43.8	246	3.0	8219	100.0
Catholic	1529	100.0					1529	100.0
Muslim	7448	51.8	6184	43.0	747	5.2	14379	100.0
Work Status								
Working	50393	52.8	40855	42.8	4245	4.4	95493	100.0
Not Working	37728	40.2	52002	55.4	4099	4.4	93828	100.0
TOTAL	88121	46.5	92857	49.0	8344	4.4	189322	100

NB. Numbers are weighted.

The data show that about half of the women (49 percent) exercised prolonged breastfeeding. Furthermore, the data indicate that there exists some variation among sub-groups. The proportion of prolonged breastfeeding increases as the age of mothers increases. The proportion is 43.3 percent for women aged under 25, it is 48 percent for the young adult (25-34 years) and it is 52.7 percent for older women (45-49 years of age).

Education also showed a negative relationship with prolonged breastfeeding; as the level of education of women increased the proportion decreased consistently. Thus the contrast between the illitrate and those with formal education is conspicuous : the proportion of women who have exercised prolonged breastfeeding among the illitrates is 62 percent while among those who have a university level of education it is only 11.9 percent.

The women's ethnic group has shown some variation with respect to the prolonged breastfeeding exercise. The Oromo women (44.9 percent) wean slightly earlier than the other ethnic groups, while the Gurage women (55.2 percent) relatively practice prolonged breastfeeding compared to the other ethnic groups.

Religion of women appears to have some relationship with prolonged practice of breastfeeding. This is borne out from the data that no woman who is a follower of Catholic religion breastfed over 24 months, while women who are followers of Protestant and Muslim faith showed a proportion of 43 percent and 50.3 percent, respectively. On the other hand, women who are followers of Orthodox christian faith breastfed their penultimate child for over two years. However, it should be noted that Catholic women constitute less than one percent (0.8 percent) of the total women who breastfed their penultimate child.

The data also revealed that working mothers tend to wean earlier than the not working mothers as their proportion is 42.8 percent and 54.4 percent, respectively.

6.4. Mean Duration of Breastfeeding and Amenorrhoea

In this section mean durations of breastfeeding and amenorrhoea, derived from data obtained from mothers who have at least two children and who cited that they had breastfed their penultimate child are discussed. Table 6.5 shows the mean durations(in months) of breastfeeding and amenorrhoea by selected background variables: age, education, religion, ethnic group and work status of mothers.

The overall average duration of breastfeeding is found to be 20.5 months. According to the 1990 National Family and Fertility Survey the average duration was 25.2 months for the country and 16.4 months for Addis Ababa. It should however be noted that the methods employed by the two surveys in deriving the durations are different. In the 1990 National Family and Fertility Survey results the mean duration was calculated using the prevalence/incidence method; where prevalence is the number of children still breastfeeding at the time of the survey and incidence is the average number of births. For the October 1995 Addis Ababa survey, due to the non availability of birth history data, the mean durations are simple means i.e the number of months elapsed by breastfeeding and being amenorroeic divided by the number of women who breastfed their penultimate children.

The mean duration of breastfeeding observed among mothers showed no difference due to age varation; while it appears to be decreasing with the level of education of women. It is higher among illitrate women (24.6 months) and lower among women with university level of education. Christian women showed longer duration (20.8 months) of breastfeeding than their Muslim counterparts. (17.4 months).

Mean duration of breastfeeding did not show much variation among ethnic groups. However, the Oromo women have a relatively shorter (19.3 months) duration of breastfeeding than their counterparts. In conformit to expectation, working mothers have shorter durations than not working mothers.

TABLE 6.5 ESTIMATES OF MEAN DURATION (IN MONTHS) OF BREASTFEEDING AND AMENORRHOEA BASED ON PENULTIMATE CHILD BY SELECTED BACKGROUND CHARACTERISTICS OF WOMEN, ADDIS ABABA, 1996

Background Characteristics	Amenorrhoea		Breastfeeding	
	Number of Women	Mean	Number of Women	Mean
Age Group				
< 20			355	8.0
20-24	6641	10.2	5628	20.3
25-29	30856	10.7	27193	20.5
30-39	91722	11.0	84862	20.0
40-49	52516	11.7	42211	21.6
Womens'Education				
Illiterate	63797	13.8	53153	24.6
Non-formal	17611	10.1	14164	23.7
Primary	38437	11.5	36598	20.8
Junior Secondary	15607	10.8	13748	19.1
Senior Secondary	34440	8.3	30751	15.2
University	11843	4.5	11834	9.2
Religion				
Christian	165856	11.5	147488	20.8
Muslim	15348	7.8	12231	17.4
Ethnic Group				
Amara	90594	11.3	79168	20.7
Gurage	29454	10.6	26500	20.8
Oromo	38002	10.0	33889	19.3
Tigraway	16902	13.6	15485	20.6
Work Status				
Working	93893	10.2	81877	19.0
Not Working	87842	12.1	77845	22.0
TOTAL	181735	11.1	160250	20.5

NB. Numbers are weighted.

The data in the table further reveal that the overall average post-partum amenorrhoea among women who breastfed their penultimate children is 11.1 months. From the 1990 National Family and Fertility Survey estimated mean duration of amenorrhoea was 9.6 months for Addis Ababa; 12.3 months for other urban centers and 19.2 months for the country.

The mean duration of amenorrhoea varies by age group of women; that is older women have longer duration. Consistent with the previous survey findings, in general, a woman's educational level indicated a negative association with the mean duration of amenorrhoea. It decreases as the educational level of women increases .

As regards to religion and ethnicity, the Christians with average duration of 11.5 months and the Tigrians with 13.6 months have longer durations than their counterparts. Working mothers showed a relatively shorter duration of amenorrhoea (10.2 months) than the not-working (12.1 months).

CHAPTER VII

FERTILITY REGULATION

7.1 Introduction

The first ever population policy for the country was promulgated in 1993. The major goal of the policy is to harmonize the rate of population growth with that of the economic and social development. Among the specific objectives is bringing down the high fertility, (an average of 7.7 children per woman) to an average of 4.0 children per woman by the year 2015. The primary proximate determinant that could fuel this decline in fertility can be the rapid increase in contraceptive use. The other objective of the policy is increasing the prevalence of contraceptive use from 4.0 percent to 44 percent by the year 2015. The first and foremost of the strategies to achieve this goal is upgrading the overall contraceptive knowledge of the community through extensive IEC programs and expanding clinical and community based contraceptive distribution service (NOP, 1993). The work for the implementation of these strategies should start from the identification of the target population by demographic, economic and social characteristics.

This chapter describes data on contraceptive knowledge, ever and current use, future intention of using, and knowledge of source of contraceptives among Addis Ababa women aged 15-49. Knowledge of contraception is a necessary precondition for its use, so the first analysis examines patterns in knowledge of contraceptive methods. The next section analyzes patterns of ever use of contraception. This is followed by a detailed descriptive analysis of current use and future intention to use contraceptive methods. In all the sections an attempt is made to throw light on how demographic, social and economic characteristics cause defferntials among women of the study in their knowledge and use of contraceptives.

The analysis is based on the data collected in a sample survey that covered women aged 15-49 who were residents of urban Addis Ababa. These women were asked a series of questions on contraceptive knowledge and use and responses were recorded. The survey included 583,501 women among which 183,907 were currently married (all women in a stable sexual union, regardless of the legal status of that union). The following background characteristics of respondents are used in the analysis: age, education, number of living children, religion, ethnicity, work status and husbands' education.

Contraceptive methods used in this analysis are classified as modern or traditional. The modern methods include: Pill, IUD (intrauterine devices), injection, vaginal methods (diaphragm, foam and jelly), condom, female sterilization (tubectomy) male sterilization (vasectomy) and norplant. Traditional methods are: periodic abstinence, sexual abstinence withdrawal, douche, traditional herbs and others.

In all sections, where ever possible, an attempt is made to compare the results obtained with three Asians cities: Delhi, Dhaka and Manila and two African cities Dar Es Salaam and Nairobi. This was made to asses the status of contraceptive knowledge, ever use and current use among the Addis Ababa women. It should be noted that comparisons of rates from different surveys are subject to limitation. Both sampling (population covered) and measurement errors affect the values obtained from each survey, and at least part of the differences observed may be due to these factors. For example, the DHS of Bangladesh included married women aged 10-49; Philippines aged 15-44, India aged 13-49 whereas in Addis Ababa women aged 15-49 were considered. Nevertheless, such comparisons usually provide a general indication of the status of contraceptive knowledge and practice in a population.

7.2. Knowledge of Overall Contraception

The data on knowledge of contraceptives was collected by first asking whether respondents had ever heard about ways or methods of family planning that a couple can use to delay or avoid pregnancy. If the answer is yes they would be further asked to name the method. If they could name at least one method of contraceptives promptly, they are said to have a spontaneous knowledge. However, if a woman answered "yes" to the question "Have you ever heard about family planning methods?" but is unable to name it, the interviewer reads for her all methods listed and the methods she recognized after hearing the description were marked as known the method with probing. Those women who could not recognize a method even after probing were considered to have no knowledge of any method of family planing. Knowledge of a contraceptive method is defind simply as having heard of a method to avoid or delay pregnancy but does not imply that a woman knows how to use it.

A distinction can be made between spontaneous and probed knowledge of contraceptive methods for all and currently married women (aged 15-49) . Table 7.1 shows both the spontaneous and the overall knowledge of contraception of all women and currently married women. The spontaneous knowledge of at least one method of contraception reported by all women exceeds 83 percent while over 91 percent of currently married women reported, spontaneously, knowing at least one contraceptive method. As can be observed, describing the methods to women increased reported knowledge in all cases. For example, among all women only 83.3 percent named a contraceptive method spontaneously, but 97.5 percent reported that they recognized at least one method after it was described to them. The gap is narrower when currently married women are considered: 91.5 percent for spontaneous knowledge and 98.6 percent for overall. Probing was particularly effective among the very young (aged 15-19) and the old (aged 45-49); the illiterate; Muslim and childless women surveyed; where the difference between probed and spontaneous knowledge is pronounced.

TABLE 7.1 PERCENTAGE OF WOMEN AGED 15-49 WHO HAVE A KNOWLEDGE OF ANY CONTRACEPTIVE METHOD BY SELECTED BACKGROUND CHARACTERISTICS, ADDIS ABABA, 1995

BACKGROUND CHARACTERISTICS	CURRENTLY MARRIED WOMEN			WOMEN AGED 15-49		
	SPONTANEOUS	ALL	NUMBER	SPONTANEOUS	ALL	NUMBER
Age Group						
15 - 19	87.2	100.0	4035	72.8	95.4	167161
20 - 24	93.1	100.0	18147	86.3	98.9	122701
25 - 29	96.5	100.0	34368	88.6	98.9	87365
30 - 34	95.7	100.0	42305	92.7	99.0	69361
35 - 39	90.2	96.7	43630	90.8	97.6	68852
40 - 44	86.0	95.9	23890	83.0	96.4	39594
45 - 49	81.4	98.6	17531	75.9	96.6	28467
Women's Education						
Illiterate	80.3	95.7	55679	65.8	91.2	123878
Non-Formal	86.6	100.0	13552	86.0	100.0	26143
Primary	97.3	99.2	35829	81.9	98.3	101675
Junior Secondary	93.9	100.0	18995	83.8	99.2	82019
Senior Secondary	98.9	100.0	43188	91.1	99.4	207109
University	98.5	100.0	16377	97.1	99.4	42392
Husbands' Education						
Illiterate	72.6	98.6	16066	72.6	98.6	16066
Non-Formal	85.4	98.3	13598	85.4	98.3	13598
Primary	92.4	97.8	41535	92.4	97.8	41535
Junior Secondary	89.0	100.0	27263	89.0	100.0	27263
Senior Secondary	95.0	98.1	51636	95.0	98.1	51636
University	99.3	100.0	33513	99.3	100.0	33513
Number of Living Children						
0	79.6	96.1	17533	78.3	96.6	326612
1 - 2	93.9	98.7	57335	88.7	98.0	108406
3 - 4	95.1	98.9	47613	91.5	98.9	70078
5 +	89.9	98.9	61426	89.6	99.1	78405
Religion						
Orthodox	91.4	98.4	156875	83.7	97.6	496488
Protestant	95.0	100.0	8897	86.2	98.7	35764
Catholic	100.0	100.0	2051	94.5	100.0	5004
Muslim	89.3	98.7	15530	75.1	94.6	43283
Ethnic Group						
Amara	93.9	98.9	89568	86.5	97.7	307805
Gurage	88.4	97.8	31155	77.4	97.1	94980
Oromo	88.6	99.4	35531	78.7	96.9	108665
Tigraway	88.6	96.2	19996	84.1	96.6	52748
Work Status						
Working	92.1	98.8	79159	82.6	97.5	260896
Not Working	91.3	98.7	104454	84.1	97.6	321832
All Women	91.5	98.6	183907	83.3	97.5	583501

N.B. Numbers are weighted

The overall knowledge of contraception (97.5 percent among all women) was 62.2 percent for the country, 93.6 for urban areas and 98.1 percent for Addis Ababa women from the results of the 1990 National Family and Fertilty Survey (CSA, 1993). Based on the two surveys one may conclude that the overall knowledge of contraception among Addis Ababa women is virtually universal and reached its maximum.

Knowledge of any contraceptive method among currently married women in Addis Ababa (98.6 percent) resembles that of women in Delhi (99.0 percent) and showed a relatively better proportion to women in Dar Es Salaam (91.7 percent) and Nairobi (96.9 percent); but less than that of women in Dhaka (100 percent) and in Manila (99.9 percent). This holds true, also for the knowledge of any modern method (98.5 percent) (Table 7.2).

TABLE 7.2 PERCENTAGE OF CURRENTLY MARRIED WOMEN AGED 15-49 WHO KNOW AT LEAST ONE CONTRACEPTIVE METHOD IN DIFFERENT CITIES AND DATE OF SURVEY.

CITY (COUNTRY)	SURVEY DATE	KNOW ANY METHOD	KNOW MODERN METHOD	NUMBER OF WOMEN
Addis Ababa (Ethiopia)	1995	98.6	98.5	183907*
Dar Es Salaam (Tanzania)	1991-1992	91.7	91.1	349
Delhi (India)	1992-1993	99.0	98.9	-
Dhaka (Bangladesh)	1993-1994	100.0	100.0	2756
Manila (Philippines)	1993	99.9	99.9	1272
Nairobi (Kenya)	1993	96.9	96.4	271

* Numbers are weighted

- Source of the data for each city is country report of DHS.

Differntials in Knowledge of Overall Contraception

Table 7.1 also displays the percentage of all women and currently married women who know at least one method of contraception by demographic and socio-economic characterstics. As the level of knowledge of contraception is virtually universal, it does not show pronounced variation among sub groups. However, the age of respondents and knowledge of contraception revealed relatively smaller percentages among women in the age groups of 15-19 and 40-49 ; and a peak at age group 30-34 among all women.

This pattern was also observed in the previous fertility survey (CSA, 1993) and among six countries of Africa : Egypt, Kenya, Liberia, Morocco, Tanzania and Zimbabwe (ECA, 1995). However, the picture for the currently married women looks some what different as the knowledge for contraception is universal up to age groups 30-34, declining in the following two age groups and slightly peaking again in the last age group.

A woman's knowledge of contraception may be a function of the stage at which her reproductive career is; as it is indicated by her age and numbers of living children. Younger women who are just beginning to form their families may not be interested in delaying or preventing future births and, therefore, may not seek out information on family planning except few, single, who want to avoid unwanted pregnancy. In contrast, older women and those who already have large family may be motivated to find out fertility regulating method but may be they are more traditional and some even may think that they are not at risk to conceive.

The relationship between knowledge of contraception and level of education conforms to expectation. The percentage of all and currently married women who know at least one method of contraception increases steadily with increasing level of education. Among those with no education the percentage is 91.2 and 95.7 for all and currently married women respectively; while it is universal for those with senior secondary and higher education.

Number of living children appears to have little effect on knowledge of contraceptive methods; except for women with no living children; who showed a relatively lesser percentage. Though no strong difference is observed, the percentage increases slightly along with parity of women i.e. the higher the parity the higher the percentage of women having knowledge of a contraceptive method.

When religion is taken into account the Catholic and the Protestant Christians seem to be more knowledgeable on contraceptive methods than their Orthodox and Muslim counterparts. This is true both among all women and currently married. Among the four major ethnic groups, no profound difference is observed in the contraceptive knowledge among all women. However, the Oromo (99.4 percent) and the Amara (98.9 percent) married women showed a relatively higher percentage than the Gurage and Tigraway married women.

According to this survey no difference of contraceptive knowledge is observed among working and not-working women of Addis Ababa. This finding stands contrary to the idea that working women may be more educated, may communicate and discuss with colleagues and read news papers, therefore, are enlightened about contraception than the not-working women. However, this depends largely on the definition of 'work'.

Knowledge of Specific Contraceptive Method

Data collected on knowledge of any contraceptive method is further summarized into specific methods known to women covered in the survey. Tables 7.3 and 7.4 display these data where spontaneous and probed knowledge are considered for women at reproductive age and for those who are currently married by age group, number of living children and education .

A markedly higher proportion of women aged 15-49 (97.3 percent) reported that they are aware of a modern method. On the other hand about 78.1 percent of these women repoted that they are aware of traditional methods. This gap narrows when

TABLE 7.3 PERCENTAGE OF WOMEN AGED 15-49 WHO HAVE KNOWLEDGE OF SPECIFIC CONTRACEPTIVE METHOD BY CURRENT AGE AND NUMBER OF LIVING CHILDREN, ADDIS ABABA, 1995

METHOD	CURRENT AGE OF WOMEN			NUMBER OF LIVING CHILDREN				TOTAL
	15 - 24	25 - 34	35 - 49	0	1 - 2	3 - 4	5 +	
WOMEN AGED 15 - 49								
Any Method	96.9	98.9	97.0	96.6	98.0	98.9	99.1	97.5
Any Modern Method	96.9	98.5	97.0	96.5	97.8	98.9	98.9	97.3
Pill	85.4	96.0	94.8	85.7	95.1	97.5	97.4	90.4
IUD	37.4	76.7	75.9	40.3	72.9	83.7	80.5	57.0
Injections	51.0	81.8	76.9	50.9	81.9	88.0	82.7	65.4
Diaphragm/Foam/Jelly	12.9	32.6	36.1	13.4	33.3	42.1	36.5	23.7
Condom	93.8	95.9	93.3	93.1	95.1	96.6	95.4	94.2
Female Sterilization	53.9	77.8	80.2	55.4	75.4	84.2	84.4	66.5
Male Sterilization	11.8	24.1	20.6	12.7	21.9	26.4	20.7	17.1
Norplant	27.2	52.4	40.2	26.2	52.5	55.5	44.2	37.0
Any Traditional	71.2	87.7	81.8	71.9	85.0	86.4	87.1	78.1
Periodic Abstinence	59.0	73.3	59.7	59.7	70.8	69.4	60.2	63.0
Sexual Abstinence	41.3	55.2	56.1	41.8	55.4	60.7	56.2	48.5
Withdrawal	31.0	54.6	42.2	32.4	52.2	53.2	42.6	39.9
Douche	13.2	33.8	26.3	14.2	32.6	30.7	30.7	21.8
Traditional Medicine	15.0	37.7	39.7	15.8	35.0	43.3	47.1	26.9
Number of women	289862	156726	136913	326612	108406	70078	78405	583501
CURRENTLY MARRIED WOMEN								
Any Method	100.0	100.0	96.9	96.1	98.7	98.9	98.9	98.6
Any Modern Method	100.0	99.7	96.9	96.1	98.7	98.9	98.9	98.6
Pill	95.4	99.5	94.8	88.2	97.4	98.5	97.5	96.9
IUD	64.6	89.6	77.6	55.4	82.4	87.8	81.8	81.0
Injections	81.8	93.3	79.7	68.0	88.4	91.5	83.5	85.6
Diaphragm/Foam/Jelly	24.6	44.1	36.7	19.7	43.7	44.4	33.8	38.3
Condom	98.9	98.6	93.6	92.0	97.0	97.5	96.0	96.3
Female Sterilization	69.5	88.2	81.1	66.1	82.9	86.1	84.5	82.7
Male Sterilization	18.9	32.3	20.9	13.6	29.2	30.2	21.5	25.4
Norplant	62.2	65.3	42.7	48.2	60.9	59.4	46.5	54.5
Any Traditional	87.2	92.9	83.3	78.4	90.0	89.8	86.8	87.8
Periodic Abstinence	73.5	78.7	62.6	66.4	77.4	75.6	61.7	70.7
Sexual Abstinence	52.1	58.0	56.2	36.3	59.4	62.0	55.1	56.4
Withdrawal	52.5	63.6	42.3	41.4	62.2	56.5	43.1	52.4
Douche	23.5	42.3	25.3	22.3	37.2	33.8	29.1	32.2
Traditional Medicine	31.1	46.0	43.3	23.5	40.1	45.7	49.0	42.9
Number of women	22182	76673	85052	17533	57335	47613	61426	183907

N.B. Numbers are weighted

TABLE 7.4 PERCENTAGE OF WOMEN AGED 15-49 WHO HAVE KNOWLEDGE OF SPECIFIC CONTRACEPTIVE METHOD BY EDUCATION OF WOMEN, ADDIS ABABA, 1995

METHOD	WOMEN'S EDUCATION					
	ILLITERATE	NON FORMAL	PRIMARY	JUNIOR SECONDARY	SENIOR SECONDARY	UNIVERSITY
WOMEN AGED 15 - 49						
Any Method	91.2	100.0	98.3	99.2	99.4	99.4
Any Modern Method	90.8	100.0	98.3	99.2	99.3	99.4
Pill	83.0	97.2	91.5	89.4	92.7	96.6
IUD	43.7	72.8	54.4	46.9	62.0	87.0
Injections	54.6	82.9	67.2	63.7	67.3	75.4
Diaphragm/Foam/Jelly	17.5	32.2	21.0	17.5	25.6	44.8
Condom	81.5	97.4	96.6	96.0	98.5	99.4
Female Sterilization	56.4	83.5	64.9	61.6	69.5	83.8
Male Sterilization	6.6	18.2	10.7	14.3	22.5	42.1
Norplant	23.1	41.8	33.3	32.5	43.5	61.0
Any Traditional	60.5	84.9	73.2	75.7	87.0	98.3
Periodic Abstinence	35.1	59.4	51.9	63.5	78.5	96.5
Sexual Abstinence	39.1	54.1	45.0	44.1	51.6	74.6
Withdrawal	20.7	45.0	34.1	36.3	48.7	71.8
Douche	14.8	24.5	20.7	22.8	22.2	39.6
Traditional Medicines	27.0	33.3	26.1	23.4	26.2	34.1
Number of women	123878	26143	101675	82019	207109	42392
CURRENTLY MARRIED WOMEN						
Any Method	95.7	100.0	99.2	100.0	100.0	100.0
Any Modern Method	95.7	100.0	99.2	100.0	99.5	100.0
Pill	92.1	100.0	99.2	97.7	98.5	100.0
IUD	62.5	89.1	82.7	80.2	95.1	97.2
Injections	71.6	89.2	88.6	90.3	95.6	91.5
Diaphragm/Foam/Jelly	26.1	33.4	31.2	31.8	55.2	61.3
Condom	90.1	100.0	98.6	98.7	99.0	100.0
Female Sterilization	71.3	90.7	85.9	78.7	90.0	92.2
Male Sterilization	10.0	18.5	18.6	21.1	45.2	51.5
Norplant	32.9	43.7	53.1	58.4	76.6	78.0
Any Traditional	73.1	85.7	90.7	91.6	98.6	100.0
Periodic Abstinence	45.0	61.4	65.3	81.2	95.1	100.0
Sexual Abstinence	47.6	51.2	57.8	56.1	61.7	75.3
Withdrawal	27.4	39.6	48.4	56.2	75.2	93.0
Douche	19.6	18.6	0.0	33.6	46.0	58.3
Traditional Medicines	33.6	38.3	44.4	47.4	53.7	40.8
Number of women	55679	13552	35829	18995	43188	16377

N.B. Numbers are weighted

currently married women are considered. That is about 98.6 percent of the currently married women reported that they are aware of a modern method while 87.8 percent of them reported they know of a traditional method. Among all women surveyed over 90 percent recognized the condom and the pill; the condom ranking first (94.2 percent). Also these women knew about female sterilization (66.5 percent), injections (65.4 percent) and fewer women (17.1 percent) knew of male sterilization. Of the traditional contraceptive methods periodic abstinence is most recognized (63.0 percent) while the douche is the least (21.8 percent) known. Similar findings are observed for currently married women. However, in the case of these women no apparent difference is observed between the pill and the condom (96.9 and 96.3 percent respectively).

The high recognition of the pill among the women covered in the survey is not surprising, as it is consistent with the findings of the 1990 National Family and Fertility Survey , where the pill ranked first with 97.2 percent, and 88.1 percent for Addis Ababa and 'other urban centers', respectively. Moreover, according to different DHS reports of nine African countries (ECA, 1995); Indonesia, Brazil, Colombia, Paraguay (Cutis et al, 1996), Bangladesh, India, Philippines ..etc. (DHS country reports), over 90 percent of currently married women cited to have recognized the pill.

Differntials in Knowledge of Specific Methods

In the case of all contraceptive methods, differential in knowledge of specific contraceptive methods is also apparent due to age, parity and educational level. Women in age groups 25-34, those having 3-4 living children and women with college and higher educational attainment showed higher percentage in knowledge of specific contraceptive methods both modern and traditional than their counterparts in the other groups. In general in each subgroup of women the pill, the condom and injections among the modern; and periodic abstinence, sexual abstinence and withdrawal among the traditional methods are known by a large percentage of women while male sterilization and douche are the least known methods.

Trends in Knowledge of Family Planning

The data on knowledge of family planning for Addis Ababa is available for 1990 and 1995 and these data may not allow for assessing the trend in the knowledge of family planning. However, the comparison of the data in Table 7.5 may give some idea regarding the trend of knowledge of contraceptive methods over the five years. According to the data, in general, except for the condom, male sterilization and norplant, the proportion of women who knew specific methods decreased since 1990. An interesting feature of the October 1995 survey is that the knowledge of condom has markedly increased since 1990. Knowledge of condom among women aged 15-49 in 1990 was 72.6 percent as compared to 94.2 percent in 1995. This could be in part due to the condom advertisements through radio, TV and in news papers, to prevent the pandemic AIDS. Knowledge about norplant has come into picture from nothing in 1990 to 37.0 percent in this survey. Norplant is a contraceptive method which was recently introduced and experts have given some explanation about it through the radio programs. Knowledge about male sterilization among women aged 15-49 has increased from 15.7 percent to 17.1 percent.

7.3 Ever Use of Overall Contraception

All women 15-49 interviewed in the survey, who said that they had heard of a specific method were further asked whether they had ever used any method. 'Yes' responses to this question are summarized in Table 7.6 by selected background characteristics. Ever use of family planning methods refer to use of a method at any time without making any distinction on current or past use. The analysis of these data therefore, is meant to throw light on what proportion of women in Addis Ababa have had an exposure to contraceptive methods at least once.

According to the results disscused earlier, almost all women aged 15-49 knew about a contraceptive method, but among these women only 38 percent and among currently married women 69 percent reported ever having used any method.

TABLE 7.5 PERCENTAGE OF WOMEN AGED 15-49 WHO KNOW SPECIFIC CONTRACEPTIVE METHOD BY TWO DATES AND METHODS, ADDIS ABABA

METHOD	SURVEY DATE	
	1990	1995
Any method	98.1	97.5
Any Modern	-	97.3
Pill	97.2	90.4
IUD	72.6	57.0
Injection	66.8	65.4
Diaphragm/foam/Jelly	30.1	23.7
Condom	72.7	94.2
Female Sterilization	79.7	66.5
Male Sterilization	15.7	17.1
Norplant	-	37.0
Any Traditional	-	78.1
Periodic Abstinence	71.8	63.0
Sexual Abstinence	66.7	48.5
Withdrawal	45.5	39.9
Douche	27.7	21.8
Traditional Medicine	21.0	26.9
Number of women	360665	583501

N.B. Numbers are weighted

TABLE 7.6 PERCENTAGE OF WOMEN AGED 15-49 WHO HAVE EVER USED ANY CONTRACEPTIVE METHOD BY SELECTED BACKGROUND CHARACTERISTICS, ADDIS ABABA, 1995

BACKGROUND CHARACTERISTICS	CURRENTLY MARRIED WOMEN		WOMEN AGED 15 - 49	
	PERCENT	NUMBER	PERCENT	NUMBER
Age Group				
15 - 19	47.2	4035	8.1	167161
20 - 24	73.8	18147	31.8	122701
25 - 29	78.0	34368	53.9	87365
30 - 34	79.2	42305	70.1	69361
35 - 39	68.4	43630	61.5	68852
40 - 44	61.7	23890	55.7	39594
45 - 49	39.8	17531	36.4	28467
Women's Education				
Illiterate	49.8	55679	31.7	123878
Non-Formal	63.1	13552	53.7	26143
Primary	69.1	35829	40.0	101675
Junior Secondary	69.6	18995	30.6	82019
Senior Secondary	88.2	43188	38.2	207109
University	90.7	16377	58.7	42392
Husbands' Education				
Illiterate	45.6	16066	45.6	16066
Non-Formal	52.0	13598	52.0	13598
Primary	63.1	41535	63.1	41535
Junior Secondary	65.7	27263	65.7	27263
Senior Secondary	75.8	51636	75.8	51636
University	88.1	33513	88.1	33513
Number of Living Children				
0	37.1	17533	16.8	326612
1 - 2	75.6	57335	64.1	108406
3 - 4	72.8	47613	67.6	70078
5 +	69.4	61426	65.5	78405
Religion				
Orthodox	69.2	156875	39.6	496488
Protestant	72.6	8897	28.4	35764
Catholic	60.0	2051	36.0	5004
Muslim	66.4	15530	29.9	43283
Ethnic Group				
Amara	72.3	89568	40.3	307805
Gurage	62.0	31155	29.5	94980
Oromo	69.6	35531	39.6	108665
Tigraway	62.4	19996	38.0	52748
Work Status				
Working	74.3	79159	44.3	260896
Not Working	65.4	104454	33.4	321832
All Women	69.1	183907	38.2	583501

N.B. Numbers are weighted

On the basis of the results of the 1990 Family and Fertility Survey, the proportion of women who ever used a contraceptive method among women aged 15-49 was 30 percent for Addis Ababa, 24 percent for 'other urban centers' and 7.5 percent for the country. Based on these figures one can observe that the level of ever use of contraceptive method has increased over the past five years.

Differentials in Ever Use of Contraception

As can be observed from Table 7.6, the Addis Ababa FFS results reveal that ever use rates among women aged 15-49 form a curvelinear relationship with age of respondents in which it is low (8 percent) among the very young, increases steadily up to age group 30-34 where it reaches maximum (70 percent) and declines thereafter. This is expected as younger women more likely desire to have children and older women may have had less exposure to contraceptives and women in the middle ages want to delay or space their children therefore to have had used contraceptive methods.

Although the level is higher, the pattern is similar for the currently married women as well. One interesting feature of the findings is that nearly half of the currently married women aged 15-19 have used a contraceptive method at least once. These might indicate that women in Addis Ababa have a positive attitude and knowledge to use early in their reproductive lives.

The survey data show that, ever use of any method of contraception is highly correlated with level of education of women or with that of their husbands. As can be observed the ever use rate increases along with the level of education of women. For example, 9 in 10 currently married women with university education reported to have ever used while only about 5 in 10 currently married non-educated reported to have ever used contraceptives. This is also true even among women aged 15-49 where the proportion of women with university education, who ever used any method is almost twice as much as those who never had formal education. This difference is also apparent between women whose husbands are educated and those women whose spouses have no formal education.

The number of living children and the proportion of women who have ever used any contraceptive method are closely related. The percentage peaks among women aged 15-49 with 3-4 children while for currently married women it peaks up at 1-2 children. However, even among currently married women with no living children over 37 percent have tried a contraceptive method.

There is some significant difference observed among religious groups. For example, among currently married Catholic women the proportion is relatively low (60 percent) compared to 73 percent among the currently married Protestant women. The difference existed also among women aged 15-49. This could possibly be due to the different doctrine each religion promotes among its members concerning fertility regulation.

Ethnic composition and ever use of contraceptives also showed some variation. The Amara (72.3 percent and 40.3 percent) and the Oromo (69.6 percent and 39.6 percent) women have a higher rate than the Gurage and the Tigraway ; for both currently married and women aged 15-49, respectively.

According to the survey, working women of both groups revealed a relative difference of ever use of contraception . This could in part be due to the fact that working women may have a better exposure to discuss fertility regulating methods with their colleagues and may have a better education thereby better understanding on the use and source. Moreover, they may also have a better capacity to buy these contraceptive methods than the not-working women.

Ever Use of Specific Methods of Contraception

Among women aged 15-49, 30 percent ever used a modern method and more than 1 in 5 women (23.5 percent) used traditional methods, while among the currently married women the rate is higher: 58.4 percent for modern and 39 percent for traditional methods (Table 7.7) .

Ever use of the pill is the leading (26 percent) among all women followed by periodic abstinence (16.4 percent) condom (7.7 percent), withdrawal (7 percent) , IUD (5.2 percent) and sexual abstinence (4.3 percent). The permanent method, female sterilization is reported by only 1.4 percent, while male sterilization is not reported at all. Norplant (0.2 percent) among modern and douche (2.7 percent) among the traditional methods are the least ever used among women aged 15-49.

One outstanding feature of the data on ever use is the large proportion of currently married women (51 percent) who have ever used the pill. Experience with this method far exceeds that with any other method. For example, the proportion of the second ranking method; periodic abstinence (25.3 percent) is half of that of the pill. Moreover, the proportion of women who ever used the pill is about four times that of the IUD (13.7 percent). Again among the modern methods norplant is the least ever used and of the permanent modern methods only 3.6 percent currently married women have ever used female sterilization while male sterilization is not reported at all.

Differntials in Ever Use of Specific Contraceptive Methods

Differentials due to age and parity of women in ever use of contraception is shown in Table 7.7. Among women aged 15-49 the pill ranked first in all age groups and the level is even higher among women aged 25-34 (44.6 percent). The condom stands the second ever used among women aged 15-34, while in the older age groups the IUD (13.0 percent) takes the second place. According to the survey young women never tried female sterilization while some in the older ages did. Among the traditional methods, periodic abstinence and withdrawal have been ever used by relatively higher proportion of women in age groups 25-34.

TABLE 7.7 PERCENTAGE OF WOMEN AGED 15-49 WHO HAVE EVER USED SPECIFIC CONTRACEPTIVE METHOD BY AGE GROUP AND NUMBER OF LIVING CHILDREN, ADDIS ABABA, 1995.

METHOD	CURRENT AGE OF WOMEN			NUMBER OF LIVING CHILDREN				
	15 - 24	25 - 34	35 - 49	0	1 - 2	3 - 4	5 +	TOTAL
WOMEN AGED 15 - 49								
Any Method	18.1	61.1	54.6	16.8	64.1	67.6	65.5	38.2
Any Modern	12.5	50.2	45.1	11.2	52.3	56.3	56.3	30.3
Pill	9.9	44.6	38.8	8.3	48.1	51.1	46.8	26.0
IUD	0.1	7.8	13.0	0.1	6.7	14.1	16.4	5.2
Injections	0.6	5.8	7.7	0.3	4.6	10.2	10.2	3.6
Diaphragm/Foam/Jelly	0.1	0.5	0.8	0.2	0.3	0.7	0.9	0.4
Condom	5.7	12.1	6.6	6.0	13.8	7.2	6.5	7.7
Female Sterilisation	0.0	1.4	4.5	0.0	1.6	2.1	6.5	1.4
Norplant	0.1	0.3	0.2	0.1	0.2	0.0	0.6	0.2
Any Traditional	13.2	37.9	28.8	13.0	41.2	35.3	32.1	23.5
Periodic Abstinence	11.1	27.0	15.6	11.7	31.2	17.8	14.5	16.4
Sexual Abstinence	1.9	5.6	8.0	1.2	7.0	9.1	9.7	4.3
Withdrawal	3.3	11.1	10.0	3.6	11.4	13.1	9.0	6.9
Douche	1.6	5.0	2.5	1.8	5.5	2.2	3.1	2.7
Traditional Medicines	0.5	7.3	7.5	0.0	5.6	10.0	12.8	4.0
Number of women	289862	156726	136913	326612	108406	70078	78405	583501
CURRENTLY MARRIED WOMEN								
Any Method	69.0	78.6	60.6	37.1	75.6	72.8	69.4	69.1
Any Modern	55.8	67.2	51.1	25.3	63.0	63.4	59.5	58.4
Pill	52.5	60.6	42.0	25.3	56.7	56.3	49.0	51.0
IUD	1.1	13.1	17.6	0.0	9.5	18.2	18.1	13.7
Injections	1.2	10.6	9.8	0.0	6.5	13.5	10.7	9.1
Diaphragm/Foam/Jelly	1.3	0.5	1.0	1.7	0.6	1.0	0.7	0.9
Condom	14.0	11.1	7.3	6.7	14.0	9.0	7.2	9.7
Female Sterilization	0.0	2.2	5.8	0.0	2.2	1.6	7.5	3.6
Norplant	0.0	0.6	0.3	0.0	0.4	0.0	0.8	0.4
Any Traditional	45.7	45.8	31.3	29.3	48.4	35.9	35.6	39.1
Periodic Abstinence	36.2	30.6	17.7	26.3	38.0	21.4	16.3	25.3
Sexual Abstinence	11.6	6.5	9.2	2.7	7.5	8.4	10.8	8.4
Withdrawal	11.3	12.2	12.3	8.6	14.0	14.4	9.6	12.1
Douche	6.2	4.9	2.9	39.0	6.8	1.8	3.6	4.1
Traditional Medicines	3.3	12.5	8.6	0.0	6.6	10.4	14.4	9.6
Number of Women	22182	76673	85052	17533	57335	47613	61426	183907

N.B. Numbers are weighted

Similarly, among the currently married women the pill is the most ever used in all age groups followed by the IUD; except for the young (age 15-24), where the condom stands second. Not only the permanent methods but also norplant is not reported among currently married women aged 15-24 years, and even fewer women (0.6 and 0.3 percent) of older ages reported to have ever used this method of contraception. The proportion of currently married women who ever used periodic abstinence and withdrawal and douche declines as the age of women increases.

As expected, women with zero parity have lower rates of ever use of contraceptives for all specific methods than those with higher parity. For instance, among women aged 15-49 the proportion for having ever used the pill increases from eight percent for the zero parity group to 51 percent for those who reported parity of 3 to 4. A sizable proportion (14 percent) of women with 1-2 children reported to have ever tried the condom. No woman of zero parity ever used the permanent methods. This could be in part due to the desire to have children in the future. In general, ever use of contraception increases with parity except, for the pill, condoms, periodic abstinence, withdrawal and douche. For these methods the proportion declines for parity of 5 and more, among all women.

Among currently married women ever use of modern contraceptive methods and parity revealed a strong association. For example, ever use of the pill among women with zero parity reported is 25.3 percent while among those with parity of 3-4 children it is 56.3 percent. On the other hand, IUD was not reported by any woman of zero parity, while 18 percent of mothers with three or more parity reported as having ever used this method.

Ever use of contraceptives and education of women aged 15-49 did not show consistent relationship. However, there is a direct relationship of education of women aged 15-49 and currently married women with the ever use of condom. On the other hand ever use of periodic abstinence and withdrawal showed an increase with the rise in the level of education of currently married women

TABLE 7.8 PERCENTAGE OF WOMEN AGED 15-49 WHO HAVE EVER USED SPECIFIC CONTRACEPTIVE METHOD BY EDUCATION, ADDIS ABABA, 1995

METHOD	WOMEN'S EDUCATION					
	ILLITERATE	NON FORMAL	PRIMARY	JUNIOR SECONDARY	SENIOR SECONDARY	UNIVERSITY
WOMEN AGED 15 - 49						
Any Method	31.7	53.7	40.0	30.6	38.2	58.7
Any Modern	25.0	46.9	35.3	24.4	28.7	43.1
Pill	21.0	45.1	32.1	20.9	23.4	36.6
IUD	2.9	4.6	6.0	2.2	6.0	11.8
Injections	4.0	5.4	3.9	3.9	3.2	2.5
Diaphragm/Foam/Jelly	0.0	0.0	0.7	0.0	0.6	0.6
Condom	2.0	5.2	5.8	6.9	10.5	18.0
Female Sterilisation	2.7	0.8	1.6	0.9	0.4	3.7
Norplant	0.4	0.0	0.0	0.0	0.2	0.0
Any Traditional	14.3	24.6	17.5	21.7	27.9	46.0
Periodic Abstinence	4.9	13.2	8.1	16.1	22.5	42.7
Sexual Abstinence	3.7	7.9	5.7	3.8	3.1	7.7
Withdrawal	3.1	8.0	7.0	5.3	8.5	13.0
Douche	1.4	3.6	3.1	3.4	2.5	5.1
Traditional Medicines	5.0	6.8	4.0	3.5	3.3	3.1
Number of Women	123878	26143	101675	82019	207109	42392
CURRENTLY MARRIED WOMEN						
Any Method	49.8	63.1	69.1	69.6	88.2	90.7
Any Modern	41.7	53.6	61.2	58.0	75.7	68.1
Pill	34.4	51.8	56.0	50.5	65.7	58.9
IUD	6.4	3.7	13.9	7.1	23.6	28.1
Injections	6.3	7.1	8.5	13.0	13.1	6.4
Diaphragm/Foam/Jelly	0.0	0.0	1.2	0.0	2.0	1.5
Condom	2.2	1.8	5.3	11.7	18.2	27.2
Female Sterilisation	5.2	0.0	2.9	3.8	1.4	8.2
Norplant	0.9	0.0	0.0	0.0	0.6	0.0
Any Traditional	20.9	28.7	28.3	49.2	59.5	67.9
Periodic Abstinence	6.9	15.9	12.5	36.2	44.1	61.9
Sexual Abstinence	5.2	9.7	9.9	11.5	7.7	13.0
Withdrawal	5.0	8.4	10.1	16.3	17.9	23.9
Douche	1.4	3.5	3.5	6.9	5.0	10.2
Traditional Medicines	7.5	9.6	9.2	10.7	12.6	8.1
Number of Women	55679	13552	35829	18995	43188	16377

N.B. Numbers are weighted

(Table 7.8). It can be observed that vaginal methods (diaphragm, foam and jelly) and the norplant did not show much relationship with educational level of women aged 15-49. However, when the extreme cases (illiterate and University level of education) are considered the difference becomes interesting and more clear; the illiterates showing a lower proportion of ever use. For instance, 21 percent against 37 percent for the pill, 3 percent against 12 percent for IUD, 2 percent against 18 percent for condom, 7 percent against 61 percent for periodic abstinence ..etc. among women aged 15-49.

This difference is also conspicuous among the married women. Among the illiterate married women 34.4 percent ever used the pill as against 59 percent of those with university level of education; 6 percent against 28 percent for IUD, 2 percent against 27 percent for condom, 7 percent against 62 percent for periodic abstinence ...etc. There is also a remarkable difference in ever use of specific methods among women of any level of education against the university level of education. However, women with university level of education are only nine percent of the total currently married women.

In general these findings indicate that greater proportions of women aged 25-34 years compared to the other age groups; educated women compared to the illiterate; women with higher parities compared to women with zero parity ever used contraceptive methods and more modern methods were ever tried than the traditional: the pill and the condom among the modern, periodic abstinence and withdrawal among the traditional.

Discontinuation of Contraceptive Use

Women who tried once and discontinued using contraceptive are surely concerns of family planning programs. Answers to questions like why do women who started using contraception discontinue? may help to solve some problems of women who want to space or stop future pregnancies. In this survey 'What was the method you last used' and 'Why did you stop using the method?' were among the series of questions asked to currently married women who cited to have known and tried but not currently using a contraceptive method.

Type of method used and reasons given for discontinuation are summarized in Table 7.9 for each specific method. Out of the 40,197 (weighted) currently married women who discontinued using a contraceptive method, over half (51.5 percent) were pill users; 12.4 percent were IUD users and 15 percent were users of periodic abstinence. A sizable proportion, 4.4 percent used injections. Among these women who discontinued using a contraceptive method, 37 percent cited health concern, 28.3 percent wanted to become pregnant, while 1 in 5 gave others as a reason of discontinuation (Fig.7.1).

When specific methods are considered, half of the married women who have had tried and stopped using the pill, almost 3 in 5 (58 percent and 59 percent) who stopped using the IUD and injections cited health concern as a reason. More than 2 in 3 women who discontinued using condom, withdrawal and douche have other reasons.

7.4 Current Use of Overall Contraception

Contraceptive prevalence or current use of contraception is mostly defined as the proportion of currently married women of reproductive ages (15-49 years) who reported that they were using a family planning method at the time of interview. It is the most widely used measure of family planning in a given population and it serves as a useful indicator in family planning policy.

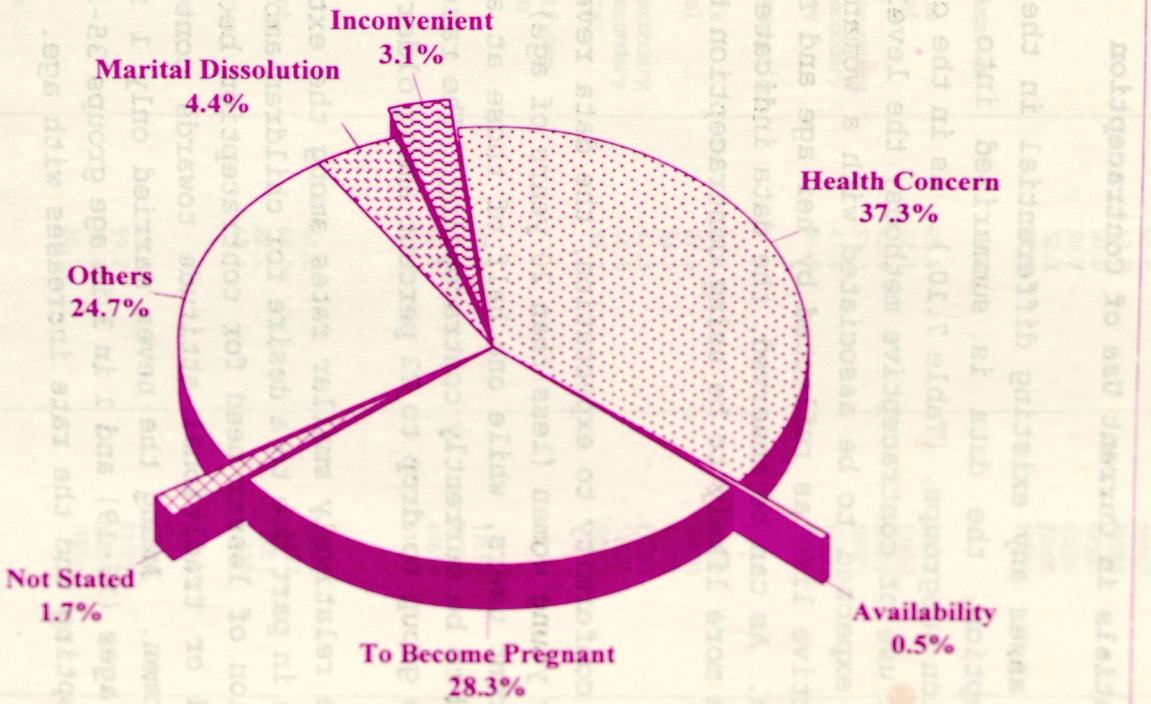
In this survey women who are currently married (includes those living with a man in a stable sexual union regardless of the legal status), who are in their reproductive age, and who reported to have known any fertility regulating or terminating method at the time of the survey, were asked whether they are currently using any contraceptive method. The survey result showed that, of the total 183,907 currently married women 76,552 answered a 'yes' to the above question. This made the current prevalence rate or level to be 41.6 percent, for any contraceptive method (Table 7.10).

TABLE 7.9 PERCENTAGE OF CURRENTLY MARRIED WOMEN AGED 15-49 WHO HAVE EVER USED BUT NOT CURRENTLY USING ANY CONTRACEPTIVE METHOD BY METHOD EVER USED AND REASON FOR DISCONTINUATION, ADDIS ABABA , 1995

METHOD	Number and Percent By Method Ever Used		Reasons for Discontinuation of Using a Method							
	Percent	Number	To Become Pregnant	Health Concerns	Availab-ility	Inconvin-ient	Marital Dissolut.	Others	Not Stated	Total
			Percent	Percent	Percent	Percent	Percent	Percent	Percent	
Pill	51.5	20712	21.6	49.8	1.1	4.9	5.3	17.3		100.0
IUD	12.7	5093	15.2	57.8			8.8	18.2		100.0
Injections	4.4	1778	26.9	59.3				13.7		100.0
Condom	2.4	963	18.8					81.2		100.0
Periodic Abstinence	14.5	5826	59.5					37.1	3.4	100.0
Sexual Abstinence	4.2	1676		13.0			12.1	62.5	12.3	100.0
Withdrawal	1.9	767	30.7					69.3		100.0
Douche	.6	261						100.0		100.0
Traditional Methods	4.5	1792	61.5	11.5				11.3	15.8	100.0
Others	1.5	607	69.3					30.7		100.0
Not Stated	1.8	723	35.6	33.5		30.9				100.0
TOTAL	100.0	40197	28.3	37.3	0.5	3.1	4.4	24.7	1.7	100.0

NB. Numbers are weighted.

Fig-7.1 REASONS FOR DISCONTINUING TO USE ANY CONTRACEPTION AMONG CURRENTLY MARRIED WOMEN AGED 15-49 ADDIS ABABA , 1995



The level of contraceptive use in Addis Ababa has increased from 32.8 percent to 41.6 percent i.e by 9 percentage points within half of a decade. It is also interesting to find out that among the never married women 1 in 10 is contracepting perhaps to avoid unwanted pregnancy, thereby preventing illegitimate births, (Anex 7.1).

Differentials in Current Use of Contraception

To asses any existing differential in the current use of contraception, the data is summarized into seven different population subgroups, (Table 7.10). As in the case of knowledge and ever use of contraceptive methods, the level of current use is also expected to be associated with a woman's stage in her reproductive life as reflected by her age and number of living children. As can be observed, the data indicate that some women are much more likely to be using contraception than others(Fig. 7.2).

In conformity to expectation, the data revealed that among the very young women (less than 20 years of age) only 24 percent are current users, while one half of those at age groups 30-34 reported to be currently contracepting. The rate declines after this age group to drop to 22 percent among older women (age 45-49).

The relatively smaller rates among the extreme age groups could be in part due to a desire for children among the young and perception of lesser need for contraception because of feeling infecund or traditional attitude towards contraception among older women. Among the never married only 1 in 25 women of younger ages (15-19) and 1 in 3 in age groups 35-39 are currently contracepting and the rate increases with age.

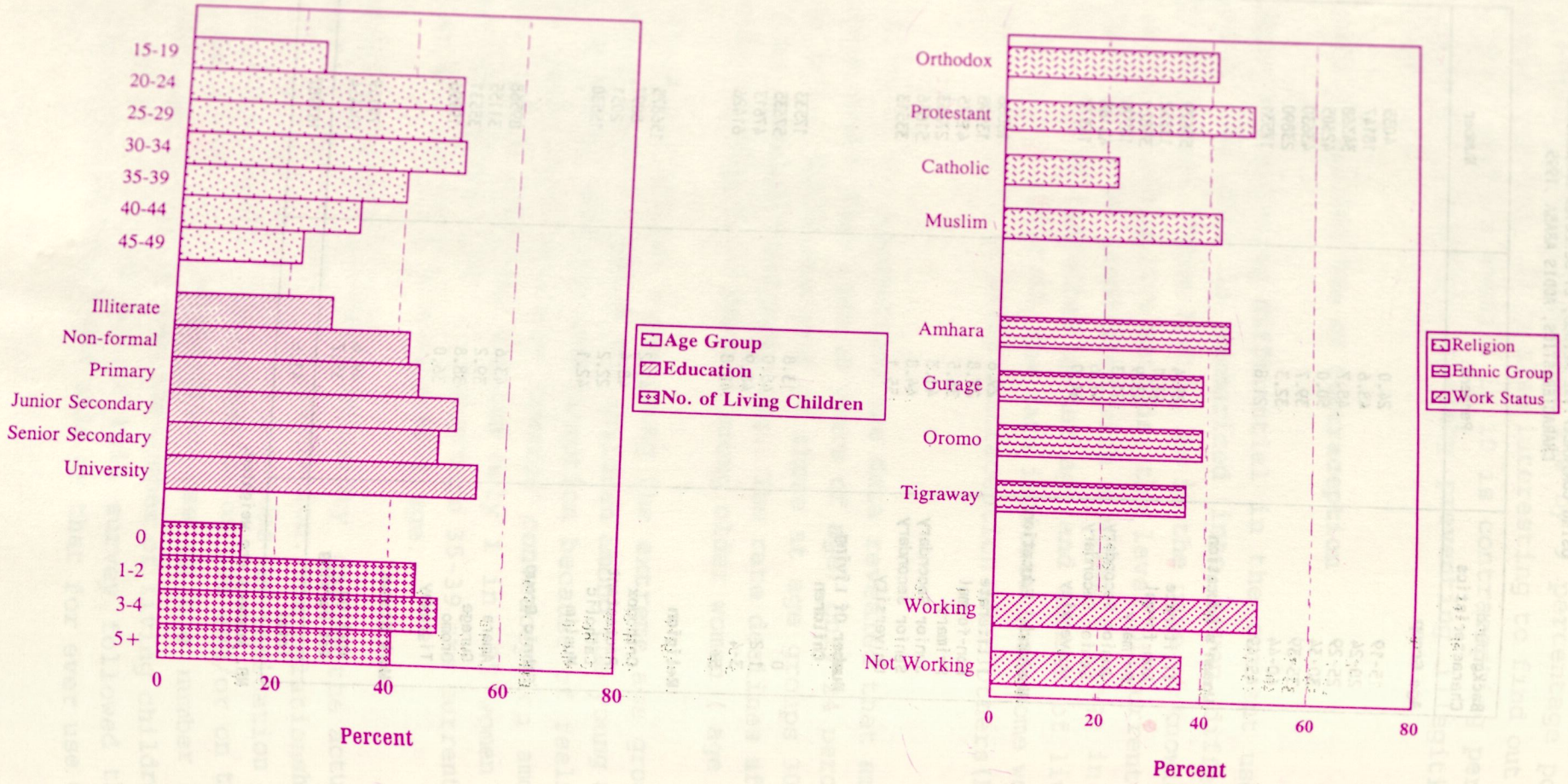
The number of living children, or parity gauges the actual reproductive behavior of women in a population. The relationship between parity and contraceptive use provides an indication of the effect of actual reproductive behavior on use and/or on the other hand the effect of contraceptive use on the number of children. The relationship between the number of living children and current use of contraception in this survey followed the expected patterns and virtually the same as that for ever use of contraception.

TABLE 7.10 PERCENTAGE OF CURRENTLY MARRIED WOMEN AGED 15-49 WHO ARE CURRENTLY USING CONTRACEPTIVE METHOD, BY SELECTED BACKGROUND CHARACTERISTICS, ADDIS ABABA ,1995

Background Characteristics	Percent	Number
Age Group		
15-19	24.0	4035
20-24	48.6	18147
25-29	48.7	34368
30-34	50.0	42305
35-39	39.7	43630
40-44	32.3	23890
45-49	21.8	17531
Women's Education		
Illiterate	28.4	55679
Non-formal	42.1	13552
Primary	43.9	35829
Junior Secondary	51.3	18995
Senior Secondary	47.6	43188
University	54.9	16377
Husbands' Education		
Illiterate	29.6	16066
Non-formal	27.8	13598
Primary	36.5	41535
Junior Secondary	41.3	27263
Senior Secondary	44.8	51636
University	55.1	33513
Number Of Living Children		
0	13.8	17533
1-2	45.0	57335
3-4	48.9	47613
5+	40.8	61426
Religion		
Orthodox	41.2	156875
Protestant	48.4	8897
Catholic	22.2	2051
Muslim	42.1	15530
Ethnic Group		
Amara	43.6	89568
Gurage	39.2	31155
Oromo	38.8	35531
Tigraway	36.0	19996
Work Status		
Working	49.6	79159
Not Working	35.7	104454
Total	41.6	183907

NB. Numbers are weighted.

Fig-7.2 CURRENT USE OF CONTRACEPTION AMONG CURRENTLY MARRIED WOMEN AGED 15-49 BY SELECTED BACKGROUND CHARACTERISTICS, ADDIS ABABA, 1995



As shown in Table 7.10 current use demonstrates a curvilinear relationship with the number of living children. The prevalence rate rises from 14 percent for currently married women with no children to 45 percent for those with 1-2 children and to 49 percent for those with 3-4 children and declines to 41 percent for those with five or more children.

Religion and contraceptive prevalence displayed similar relationship as that for ever use of contraception. More currently married Protestant women (48.4 percent) compared to Catholic women (22.2 percent) are currently using contraception. Although relatively lower proportion compared to the Protestant women, at least four in ten currently married Orthodox (41.2 percent) and Muslim (42.1 percent) women are current users of contraception.

According to the survey currently married women by ethnic group displayed relatively little difference. Here again, like in the case of the ever use, currently married Amhara women (44 percent) showed a higher proportion, followed by the Gurage (39.2 percent) (in the case of ever use of contraception it was the Oromos who showed second higher proportion). The Tigraways (36 percent) stepped down to fourth place leaving the third rank for the Oromos (38.8 percent).

Among currently married women covered by the survey, working women showed a higher contraceptive prevalence rate. Half (49.6 percent) of the working women are current users of contraception; while the contraceptive prevalence among the not working is only 38 percent. Working women may have an exposure to a better information about use and source of contraception and of course, may have a relatively better economic status to purchase.

The rate (41.6 percent) obtained for current use of any contraceptive method for currently married women in Addis Ababa mirrored much lower level than New Delhi (60.7 percent), almost identical to Manila (41.9 percent), about equal to Dhaka (44.3 percent) and Nairobi (45.4 percent); and by far better than Dar es Salaam women which was only 15.7 percent (Table 7.13).

Current Use of Specific Contraceptive Methods

The findings of this survey show that in Addis Ababa more women are using modern methods (27.0 percent) than traditional (14 percent); while 0.7 percent did not state type of method. Modern methods accounted for 70 percent of the overall use. Among the currently used contraceptive methods the most popular is the Pill, which is used by 13.5 percent of married women. This method accounts for 33 percent of all contraception use in Addis Ababa. Other commonly used methods are periodic abstinence (7.7 percent), the IUD (4 percent), injections (3.8 percent); while 3.6 percent of married women are currently using female sterilization as a means of contraception (Table 7.11 and Fig. 7.3).

The proportion of married women who use sexual abstinence or withdrawal is 2 percent, and those using condom is only 1.6 percent. It is surprising in view of the AIDS pandemic, its being advertised in all possible medias and a fast 'diffusion' rate in its being known among currently married women, that use of condoms among married women is extremely low. It is even more surprising to find out that this method is used by only 1.3 percent of the never married women (Annex 7.2). While vaginal methods (diaphragm, foam and jelly), norplant and douche are hardly used (0.4 percent or less). According to the survey no woman reported tubectomy (male sterilization).

Differntials in Current Use of Specific Contraceptive Methods

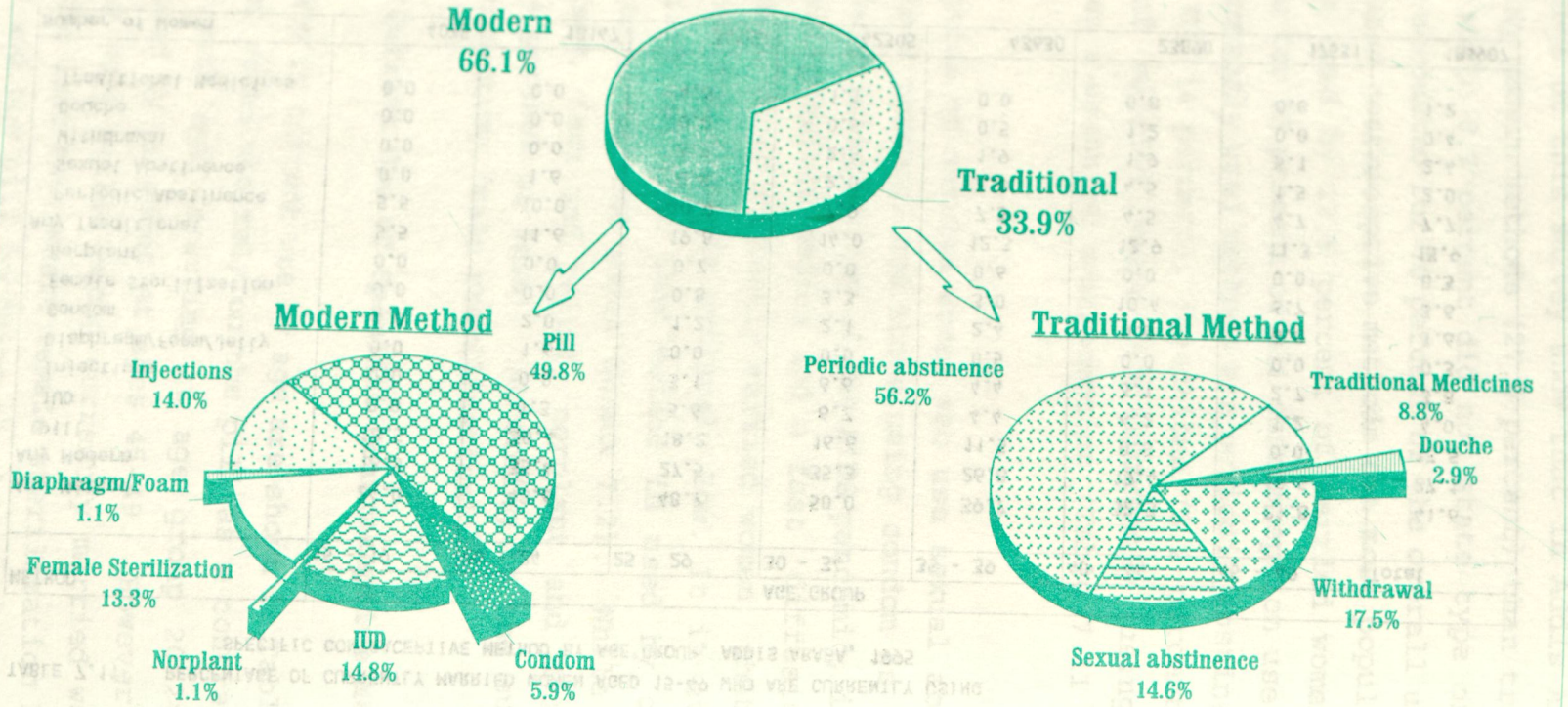
Differentials in current use by age are shown in Table 7.11. The proportion of women who rely on the pill as a contraceptive method declines with age, starting at age group 20-24 (30.4 percent) to be used by no women at ages 45-49. However, it is the most commonly used method among currently married women in all ages except the last two, where female sterilization becomes the most popular and the pill becoming the least popular.

TABLE 7.11 PERCENTAGE OF CURRENTLY MARRIED WOMEN AGED 15-49 WHO ARE CURRENTLY USING SPECIFIC CONTRACEPTIVE METHOD BY AGE GROUP, ADDIS ABABA, 1995

METHOD	AGE GROUP							
	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	Total
Any Method	24.0	48.6	48.7	50.0	39.7	32.3	21.8	41.6
Any Modern	18.5	35.4	27.5	35.3	26.8	19.4	10.5	27.1
Pill	18.5	30.4	18.2	16.6	11.5	0.8	0.0	13.5
IUD	0.0	1.3	3.6	6.7	4.4	4.2	1.2	4.0
Injections	0.0	0.0	3.1	6.6	4.4	3.1	2.7	3.8
Diaphragm/Foam/Jelly	0.0	1.6	0.0	0.0	0.5	0.0	0.0	0.3
Condom	0.0	2.0	1.2	2.1	2.4	0.9	0.0	1.6
Female Sterilization	0.0	0.0	0.8	3.3	3.0	10.4	6.7	3.6
Norplant	0.0	0.0	0.7	0.0	0.6	0.0	0.0	0.3
Any Traditional	5.5	11.6	19.8	14.0	12.3	12.9	11.3	13.9
Periodic Abstinence	5.5	10.0	10.9	7.9	7.3	4.5	4.7	7.7
Sexual Abstinence	0.0	1.6	0.8	2.0	2.0	4.5	1.5	2.0
Withdrawal	0.0	0.0	3.5	2.6	1.9	1.9	5.1	2.4
Douche	0.0	0.0	0.0	0.5	0.5	1.2	0.0	0.4
Traditional Medicines	0.0	0.0	4.6	1.1	0.0	0.8	0.0	1.2
Number of Women	4035	18147	34368	42305	43630	23890	17531	183907

N.B. Numbers are weighted

Fig-7.3 CURRENT USE OF CONTRACEPTION AMONG CURRENTLY MARRIED WOMEN AGED 15-49 BY TYPE OF METHOD, ADDIS ABABA, 1995



In all age groups except the last , periodic abstinence is the second most used method. IUD makes a curvilinear relationship with age reaching maximum at age 30-34 (6.7 percent). Injection starts at the high fertility group (25-29) and is pervasive in the remaining age groups. It is notable that nearly one in five married women (18.5 percent) at ages 15-19 are deliberately using spacing method (pill). Periodic abstinence is consciously being used by a sizable proportion of high reproductive age groups (20-39) than the other age groups.

Some differntials in current use of contraception is also mirrored among women with different educational levels. Except for those women with university education, the pill is the most commonly used method (Table 7.12). It is interesting to find that most women (23.5 percent) with university education are using periodic abstinence as a contraceptive method. The second popular method for women with no education and university level education is female sterilization. Among those with primary schooling IUD or injections; and among those with junior and secondary level education periodic abstinence are the second most popular methods.

Similarly data on parity of women showed some variation in current use of contraception. As expected the pill is the most popular method in all parity groups except among those with no child: 18.2 percent for those with parity 1-2 children; 17.3 percent for those with parity 3-4 children and 8.6 percent for those with five or more children. It should be noted that the proportion decreases as parity increases. In the no child group most women used periodic abstinence for contraception (7.5 percent) while pill is the second most (4.6 percent). In the other groups the second most used contraception varied; periodic abstinence (10 percent) for those women with 1-2 children, injections (7.9 percent) among women with 3-4 children and female sterilization among those with five or more children.

TABLE 7.12 PERCENTAGE OF CURRENTLY MARRIED WOMEN AGED 15-49 WHO ARE CURRENTLY USING SPECIFIC CONTRACEPTIVE METHOD BY EDUCATION AND NUMBER OF LIVING CHILDREN, ADDIS ABABA, 1995

METHOD	WOMEN'S EDUCATION						NUMBER OF LIVING CHILDREN				
	ILLITERATE	NON-FORMAL	PRIMARY	JUNIOR SECONDARY	SENIOR SECONDARY	UNIVERSITY	0	1 - 2	3 - 4	5+	TOTAL
Any Method	28.4	42.1	43.9	51.3	47.6	54.9	13.8	45.0	48.9	40.8	41.6
Any Modern	16.5	30.6	31.9	35.1	31.2	29.6	6.3	29.8	34.1	25.0	27.1
Pill	5.7	23.5	17.5	21.8	16.0	6.4	4.6	18.2	17.3	8.6	13.5
IUD	1.4	1.7	4.9	2.2	7.6	5.9	0.0	3.7	6.5	3.6	4.0
Injections	3.3	5.3	4.9	4.9	2.3	5.0	0.0	2.5	7.9	3.0	3.8
Diaphragm/Foam/Jelly	0.0	0.0	0.0	0.0	1.2	0.0	1.7	0.0	0.0	0.4	0.3
Condom	0.5	0.0	1.6	2.5	2.0	4.2	0.0	2.7	0.9	1.5	1.6
Female Sterilization	5.2	0.0	2.9	3.8	1.4	8.2	0.0	2.2	1.6	7.5	3.6
Norplant	0.4	0.0	0.0	0.0	0.6	0.0	0.0	0.4	0.0	0.4	0.3
Any Traditional	11.1	11.4	11.3	16.2	15.1	25.2	7.5	14.2	13.7	15.4	13.9
Periodic Abstinence	2.7	4.3	4.2	9.4	11.4	23.5	7.5	10.1	7.1	6.0	7.7
Sexual Abstinence	3.8	2.6	2.6	0.0	0.4	0.0	0.0	1.0	1.6	3.8	2.0
Withdrawal	2.0	3.0	3.9	5.4	1.2	0.0	0.0	1.7	3.5	3.0	2.4
Douche	0.5	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.1	0.4
Traditional medicines	1.6	1.5	0.5	1.3	1.1	1.7	0.0	1.5	1.6	1.1	1.2
Others	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1
Not Stated	0.9	0.0	0.7	0.0	1.3	0.0	0.0	1.0	1.0	0.4	0.7
Number of Women	55679	13552	35829	18995	43188	16377	17533	57335	47613	61426	183907

For any modern methods, in Addis Ababa currently married women showed surprisingly identical (27.1 percent) prevalence rates to currently married women in Manila (27.3 percent); but lower level than women in New Delhi (55 percent), Nairobi (37.8 percent), and Dhaka (36.3 percent). When traditional method is considered prevalence rate among women in Addis Ababa, is again identical to those women in Manila and superior to those women in other cities (Table 7.13).

The prevalence rates of the popular contraceptive methods among currently married women in Addis Ababa compared to their counterparts in other selected capital cities, demonstrates that there is similarity in the prevalence of some methods and large difference for others. For example, the prevalance of the pill (13.5 percent) among currently married women in Addis Ababa is much lower than among women in Nairobi (20.4 percent) and Dhaka (18.2 percent). The prevalence of injection (3.8 percent) resembles to that of Dhaka (4.4 percent); condom (1.6 percent) to that of Dar-es-Salaam (1.9 percent); female sterilization (3.6 percent) to that of Nairobi (4.4 percent) but by far lower than New Delhi (20.2 percent) and Manila (14.8 percent). The prevalence rate of withdrawal among currently married women in Addis Ababa is quite similar to those women of New Delhi (2.5 percent) and Dhaka (2.4 percent).

Trends in Current Use of Contraception

Although it needs a couple of survey data, at different points in time, to asses trends, comparing the data at hand for the two surveys (1990 and 1995 FFS) may throw some light on the direction of future prevalence rates of contraception. This being the case, Table 14 and Fig. 7.4 , display prevalence rates for the two surveys. As can be observed the level of contraception use in Addis Ababa, for any method, has increased by 9 percentage points since 1990; from 32.8 percent to 41.6 percent. Use of modern methods has grown even faster compared to the traditional; the difference for the two dates being 6.3 and 1.9 percentage points, respectively.

TABLE 7.13 PERCENTAGE OF CURRENTLY MARRIED WOMEN AGED 15-49 BY CURRENT USE OF SPECIFIC CONTRACEPTIVE METHOD IN DIFFERENT CITIES.

METHOD	CAPITAL CITY					
	ADDIS ABABA (ETHIOPIA)	DAR-ES-SALAAM (TANZANIA)	NEW DELHI (INDIA)	DHAKA (BANGLADESH)	MANILA (PHILIPPINES)	NAIROBI (KENYA)
Any method	41.6	15.7	60.7	44.3	41.9	45.4
Any Modern	27.1	10.9	54.9	36.3	27.3	37.8
Pill	13.5	5.7	3.0	18.2	9.4	20.4
IUD	4.0	0.5	8.1	1.9	1.6	9.7
Injections	3.8	0.6	0.1	4.4	0.1	4.6
Diaphragm/foam Jelly	0.3	0.0	-	-	0	0.0
Condom	1.6	1.9	20.3	3.0	1.1	1.0
Female Sterilization	3.6	2.2	20.2	8.2	14.8	2.0
Male Sterilization	-	0.0	3.1	0.7	0.2	-
Norplant	0.3	-	-	-	-	-
Any Traditional	13.9	4.8	5.8	8.0	14.6	7.7
Periodic Abstinence	7.7	0.6	3.2	4.6	-	6.6
Sexual Abstinence	2.0	-	-	-	-	-
Withdrawal	2.4	3.5	2.5	2.4	7.5	0.5
Douche	0.4	-	-	-	-	-
Traditional Medicine	1.2	-	-	-	-	-
Number of women	183907*	349	-	2756	1272	271

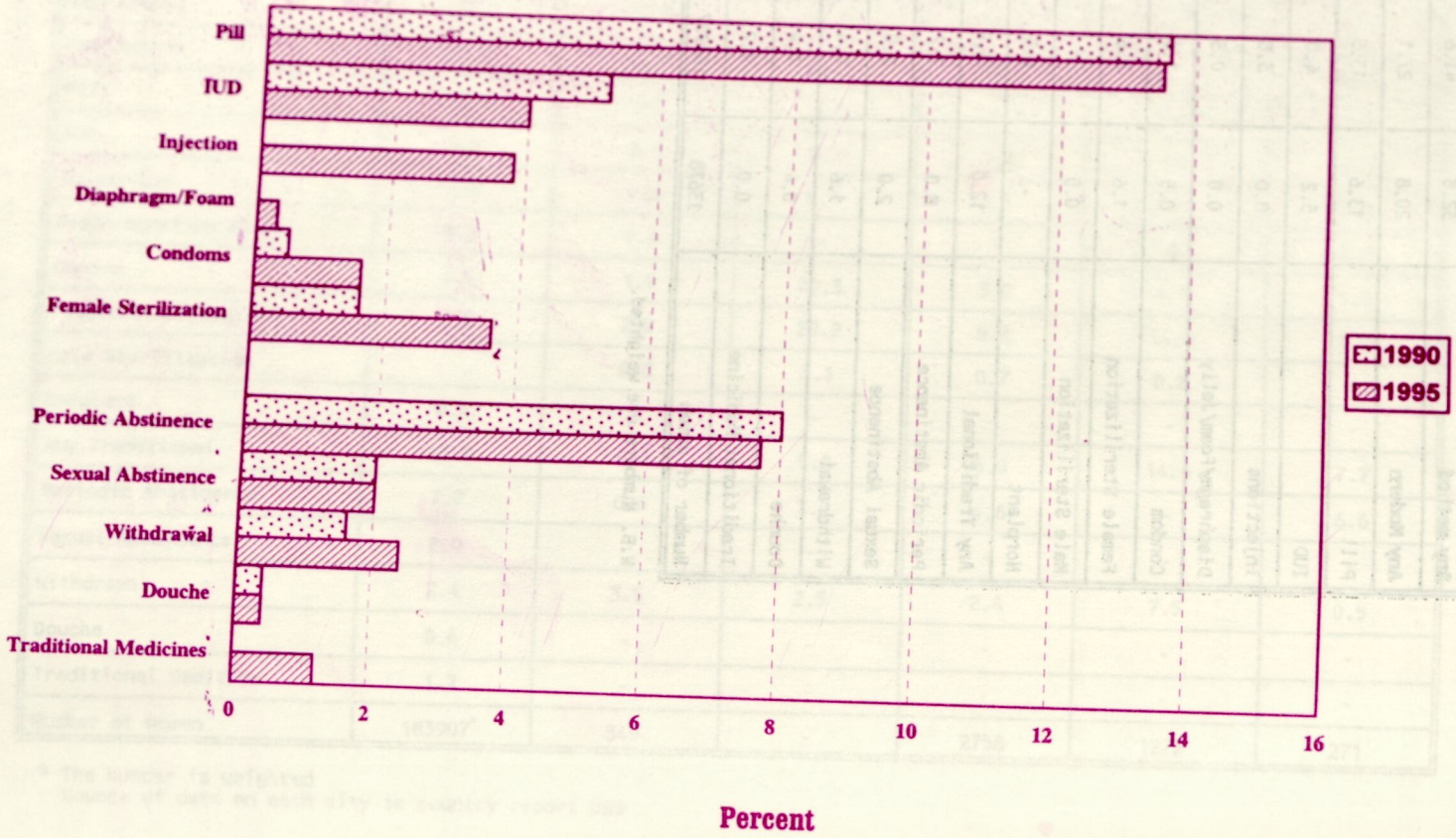
* The Number is weighted
- Source of data on each city is country report DHS

TABLE 7.14 PERCENTAGE OF CURRENTLY MARRIED WOMEN AGED 15-49 WHO ARE CURRENTLY USING SPECIFIC CONTRACEPTIVE METHODS BY TWO DATES, ADDIS ABABA.

METHOD	DATE OF SURVEY	
	1990	1995
Any method	32.8	41.6
Any Modern	20.8	27.1
Pill	13.6	13.5
IUD	5.2	4.0
Injections	0.0	3.8
Diaphragm/Foam/Jelly	0.0	0.3
Condom	0.5	1.6
Female Sterilization	1.6	3.6
Male Sterilization	0.0	-
Norplant	-	0.3
Any Traditional	12.0	13.9
Periodic Abstinence	8.0	7.7
Sexual Abstinence	2.0	2.0
Withdrawal	1.6	2.4
Douche	0.4	0.4
Traditional Medicine	0.0	1.2
Number of women	13678	183907

N.B. Numbers are weighted.

Fig-7.4 TRENDS IN CONTRACEPTIVE USE AMONG CURRENTLY MARRIED WOMEN AGED 15-49 FFS, 1990 AND 1995, ADDIS ABABA



In terms of specific contraceptive methods the dominant change is the large increase in the number of couples using injections; from 0.0 percent to 3.8 percent. The proportion of married women relying on the condom tripled in the last five years; from 0.5 percent to 1.6 percent. Those women who depend on female sterilization more than doubled; from 1.6 percent to 3.6 percent. Vaginal methods and norplant have got some users than the situation five years ago; where no significant proportions were reported. Use of the pill, periodic and sexual abstinence, remained the same among currently married women for the past five years.

7.5 Nonusers of Family Planning

Some of the currently married women who are not currently using any contraception may want to use in the future. Data on these women may furnish essential information on possible changes in family planning behavior, and may indicate the potential demand for family planning services. To obtain such an information about future intention to use contraceptives currently married women, who knew about contraceptive methods, but who never used any, were asked if they intend to use a method at any time in the future. Table 7.15 shows the percentage distribution of the currently married women by their intention to use contraceptives in the future according to age, number of living children and education.

Less than one third (31.7 percent) of the nonusers intend to use any family planing method in the future. Two in three married women (67.3 percent) of the nonusers said that they did not intend to practice family planning in the future, while only one percent were unsure.

Future intention for contraceptive use vary by demographic characteristics. This is apparent among currently married women in different age groups. Nearly half (48.5 percent) of the women in the young ages (15-20) intend to practice family planning in the future. The highest proportions for intentions to use family planning in the future are observed among the high fertility groups, age 20-24 (63.3 percent) and age 25-29 (70.5 percent).

TABLE 7.15 CURRENTLY MARRIED WOMEN AGED 15-49 WHO KNEW A CONTRACEPTIVE METHOD BUT NEVER USED ANY BY FUTURE INTENTION AND SELECTED BACKGROUND CHARACTERISTICS ADDIS ABABA, 1995

Background Characteristics	Intend to Use		Do Not Intend to Use		Not Stated		All Women	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Age Group								
15-19	1032	48.5	803	37.7	294	13.8	2129	100.0
20-24	3008	63.3	1746	36.7			4755	100.0
25-29	5339	70.5	2230	29.5			7569	100.0
30-34	3336	39.0	4971	58.1	244	2.8	8550	100.0
35-39	2810	23.1	9376	76.9			12185	100.0
40-44	1181	14.8	6783	85.2			7964	100.0
45-49	247	2.4	10061	97.6			10308	100.0
Number of Living Children								
0	3608	35.6	6522	64.4			10129	100.0
1-2	4474	34.3	8278	63.5	294	2.3	13046	100.0
3-4	3342	26.9	8826	71.1	244	2.0	12411	100.0
5+	5529	30.9	12345	69.1			17874	100.0
Women's Education								
Illiterate	5316	21.0	19816	78.1	244	1.0	25376	100.0
Non-formal	711	14.2	4285	85.8			4996	100.0
Primary	4837	45.5	5502	51.7	294	2.8	10633	100.0
Junior Secondary	2115	36.6	3666	63.4			5781	100.0
Senior Secondary	2727	56.1	2133	43.9			4861	100.0
University	1247	81.5	282	18.5			1529	100.0
TOTAL	16953	31.7	35970	67.3	538	1.0	53461	100.0

NB. Numbers are weighted.

Although, intention may not be translated into actual use, a good size of potential future users observed among the very young and young adult (15-29 years) has a promising side to expand family planning services. This is because the women at these ages are the high potential fertility group which can bring about an effective demographic impact if they are made to adopt family planning while still young. The proportions decline after age groups 30-34 and reach only 2.4 percent among married women of age 45-49. The low proportion of women after age 30 could be in part: these women might have attained the number of children they desired or among the older women they may feel they are infecund and do not need to practice any contraception.

Contrary to ones thinking the proportion of married women with no child (35.6 percent) and those with 1-2 children (34.3 percent) revealed no significant difference in future intention of using any contraception. Moreover, married women of parity 3-4 children showed a lower proportion than the no child group.

Education of women and intention showed an increasing positive relationship; except for women with nonformal and junior secondary education. The contrast is so large when married women with no education are compared to those with university level education. The proportion of the latter is almost four times that of the former (21 percent and 81.5 percent). The proportions for intermediate educational levels are 45.5 percent for the primary 36.6 percent for the junior secondary and 56 percent for the senior secondary.

Preferred Methods

Currently married women who are currently contraceptive nonusers and who said they intend to use family planning in the future were asked which method they preferred to use, Table 7.16 displays data on preferred methods by age group. Future intenders who knew a method but never practiced it, intend to use more the modern methods than the traditional ones. This is observable from the finding that only 23 percent of married women favored the traditional methods as against 77 percent for the modern methods.

TABLE 7.16 PERCENTAGE OF CURRENTLY MARRIED WOMEN AGED 15-49 WHO KNEW A CONTRACEPTIVE METHOD BUT NEVER USED ANY AND WHO INTEND TO USE IN THE FUTURE BY METHOD PREFERRED AND AGE GROUP, ADDIS ABABA, 1995

Preferred Method	Age Group			Total
	15-24	25-34	35-49	
Pill	44.9	28.2	27.5	32.0
IUD	-	3.2	-	1.6
Injections	31.9	25.9	30.3	28.5
Condom	-	3.2	-	1.6
Female Sterilization	-	2.1	5.2	2.4
Norplant	12.1	15.3	-	10.7
Periodic Abstinence	11.0	11.2	8.3	10.4
Sexual Abstinence	-	-	5.8	1.5
Others	-	10.8	22.9	11.3
TOTAL Percent	100.0	100.0	100.0	100.0
Number	4040	8675	4238	16953

NB. Numbers are weighted.

The pill was the most popular method with nearly one third (32 percent) of nonusers who intended to use in the future stating that they would choose that method. The next most preferred method is injection accounting for 28.5 percent of intended users, followed by norplant (10.7 percent). A sizable proportion (11.3 percent) of married women were uncertain as to which method they would prefer to use in the future.

Some variation is observed among different age groups. The pill and injection are preferred in a similar fashion to the overall rank; the pill is preferred first and injection second among 15-24 and 25-34 age groups. The women in age group 35-49 favored injection most for future use. And norplant is the third favored method for future use among age groups 15-24 and 25-34.

Knowledge of Source

Currently married women in Addis Ababa who knew a method, but never practiced and who intend to use in the future, who mentioned their specific preference were further asked whether they knew the source for the specific method they mentioned. Answers to this question were a 'yes' or a 'no' i.e women were not asked to mention the exact source. According to the data in Table 7.17 at least nine in ten married women who know a method and who intend to use one in the future, eventhough they never used any, reported knowing the source of the method they preferred to use in the future. Knowledge of a source and age of women showed an interesting V-shape relationship. Among the first and the last two age groups knowledge of the source of a preferred method, which married women intended to use in the future is universal. All the women with a secondary or university level of education knew the source of the method they preferred to use in the future.

TABLE 7.17 CURRENTLY MARRIED WOMEN AGED 15-49 WHO KNEW A CONTRACEPTIVE METHOD BUT NEVER USED ANY AND WHO INTEND TO USE IN THE FUTURE BY KNOWLEDGE OF SOURCE, AGE GROUP AND EDUCATION, ADDIS ABABA, 1995

Background characteristics	Know Source		Do Not Know		All Women	
	Number	Percent	Number	Percent	Number	Percent
Age Group						
15-19	1032	100.0			1032	100.0
20-24	3008	100.0			3008	100.0
25-29	4823	90.3	516	9.7	5339	100.0
30-34	2760	82.7	576	17.3	3336	100.0
35-39	2586	92.1	223	7.9	2810	100.0
40-44	1181	100.0			1181	100.0
45-49	247	100.0			247	100.0
Women's Education						
Illiterate	4570	86.0	746	14.0	5316	100.0
Non-formal	711	100.0			711	100.0
Primary	4543	93.9	294	6.1	4837	100.0
Junior Secondary	1840	87.0	275	13.0	2115	100.0
Senior Secondary	2727	100.0			2727	100.0
University	1247	100.0			1247	100.0
TOTAL	15637	92.2	1316	7.8	16953	100.0

NB. Numbers are weighted.

Reasons for No Intention to Use Family Planning.

Currently married women who were not using any family planning method at the time of the survey and who said that they did not intend to use in the future were asked why they were not using any method and why they did not intend to. Main reasons for not using or having no intention to use, cited by respondents, are summarized in Table 7.18 and displayed in Fig. 7.5.

Forty six percent of the women said that they did not intend to use because of fatalistic attitude. These group of women may be women who think that to have or not to have or to limit ones children is Gods will; not using family planning methods. Menopause (infecundity) appears to be the next most common reason for nonuse (18.3 percent). Over ten percent of married women cited other 'reasons'. A sizable proportion (6.7 percent) gave side effect as a main reason followed by lack of knowledge (5 percent) and opposed to family planning (4.4 percent).

Percentages of religious probhition of use of contraception (3.1 percent) and husbands disapproval (0.5 percent) obtained seem to be less than expected. From the traditional point of view married women may think it is immoral to mention their husband's disapproval as a reason for not using family planning and may simply state this as other reasons. As mentioned above other reasons is cited by more than 10 percent, and this might have concealed some important reasons for nonuse of contraception.

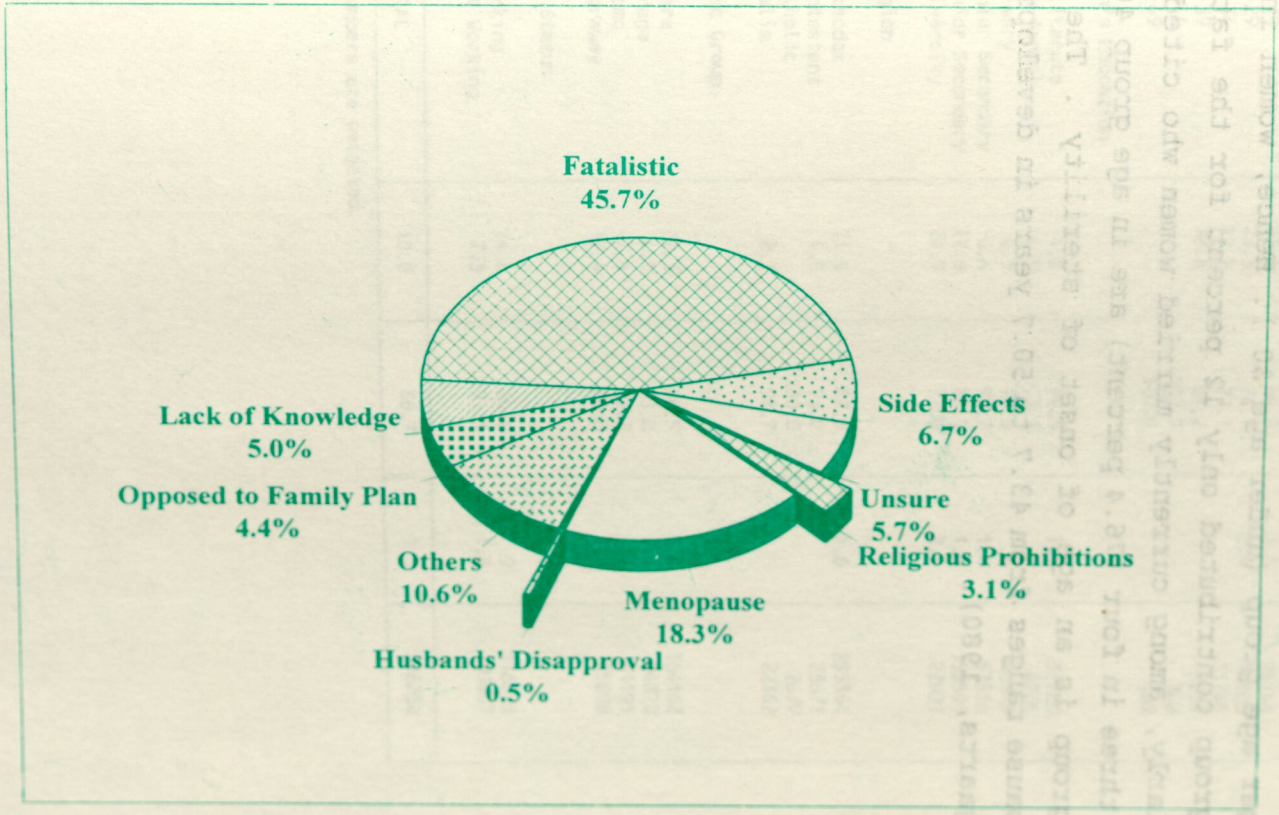
There are significant differences in reason for nonuse by age group. For currently married women, of all ages 15-49, the first reason is fatalism; while the second most reasons are menopausal for age group 40-49; side effect for age group 30-39 and 'Other reasons' for the young (aged 15-29). Only 4 percent of the young women cited husband's disapproval as a reason, which no woman reported so in the other age groups. This may be in part due to husbands of young women desire more children. Likewise, in conformity to expectation, no women of age 15-29 cited menopausal as a reason for non use of contraception.

Table 7.18 PERCENTAGE OF CURRENTLY MARRIED WOMEN AGED 15-49 WHO KNEW A CONTRACEPTIVE METHOD BUT WHO NEVER USED AND WHO DO NOT INTEND TO USE ANY CONTRACEPTIVE METHOD BY REASONS FOR NO INTENTION , ADDIS ABABA, 1995

Reasons	Age Group							
	15-29		30-39		40-49		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Religious Prohibitions	496	10.4	260	1.8	352	2.1	1108	3.1
Opposed to Family Planning			863	6.0	709	4.2	1573	4.4
Husbands, Disapproval	186	3.9					186	.5
Side Effects			1719	12.0	677	4.0	2396	6.7
Lack of Knowledge	464	9.7	650	4.5	676	4.0	1789	5.0
Fatalistic	2052	42.9	6671	46.5	7711	45.8	16434	45.7
Menopause/Sub fecund			1557	10.9	5042	29.9	6599	18.3
Others	904	18.9	1695	11.8	1230	7.3	3829	10.6
Unsure	676	14.2	931	6.5	448	2.7	2055	5.7
Total	4779	100.0	14346	100.0	16845	100.0	35970	100.0

NB. Numbers are weighted.

Fig-7.5 REASONS FOR NOT INTENDING TO USE ANY CONTRACEPTION IN THE FUTURE AMONG CURRENTLY MARRIED WOMEN AGED 15-49 ADDIS ABABA , 1995



Although, the proportion of currently married women who gave fatalism as a main reason is high among all ages, the level is lower for the women in the younger age group. Furthermore, nearly half (46.8 percent) of these women (who cited fatalism) are in age group 40-49, which implies that they are old enough to have traditional attitude towards contraception than those in the younger age group (under age 30). Hence, women in the younger age group contributed only 12 percent for the fatalist group. Similarly, among currently married women who cited menopausal, over three in four (76.4 percent) are in age group 40-49 and this age group is an age of onset of sterility . The mean age at menopause ranges from 43.7 to 50.7 years in developing countries (Bongaarts, 1980).

ANNEX 7.1 PERCENTAGE OF NEVER MARRIED WOMEN AGED 15-49 WHO ARE CURRENTLY USING CONTRACEPTIVE METHOD BY SELECTED BACKGROUND CHARACTERISTICS ,ADDIS ABABA ,1995

Background Characteristics	Currently Using	Currently Not Using	Not Stated	Number of Women
Age Group				
15-19	3.6	95.6	.8	157895
20-24	13.1	84.8	2.1	95146
25-29	23.3	74.7	2.0	36505
30-34	22.9	77.1		11745
35-39	32.8	67.2		3731
40-44		100.0		748
45-49		100.0		460
Women's Education				
Illiterate	4.2	94.3	1.5	31789
Non-formal	6.9	93.1		4265
Primary	3.5	96.0	.6	40149
Junior Secondary	6.4	92.2	1.4	53516
Senior Secondary	12.6	86.1	1.4	153591
University	20.9	77.0	2.1	22921
Religion				
Orthodox	11.4	87.0	1.6	255364
Protestant	4.0	96.0		23671
Catholic		100.0		2679
Muslim	2.3	97.7		22362
Ethnic Group				
Amara	12.1	86.5	1.4	164162
Gurage	4.9	93.0	2.1	54820
Oromo	7.1	92.2	.7	51191
Tigraway	12.4	86.6	1.0	25808
Work Status				
Working	14.4	84.8	.9	116623
Not Working	7.3	91.1	1.6	189607
TOTAL	10.0	88.7	1.3	306230

NB. Numbers are weighted.

Characteristics	Currently Voting	Currently Not Voting	Not Stated	Number of Cases
Age Group				
15-19	3.6	96.4	.0	1966
20-24	13.1	86.8	2.1	2754
25-29	23.3	76.7	2.9	2622
30-34	28.8	71.1		1778
35-39	32.8	67.2		1421
40-44	37.0	63.0		744
45-49	40.0	60.0		686
Women's Education				
Illiterate	6.2	93.3	1.5	1598
Non-formal	6.6	93.4	.0	1264
Primary	7.5	92.5	1.4	2778
Junior Secondary	6.6	92.2	1.2	1754
Senior Secondary	12.6	86.1	1.3	1704
University	20.9	77.0	2.1	1021
Religion				
Orthodox	11.4	87.0	1.6	10744
Protestant	6.0	93.0		2647
Catholic		100.0		1879
Muslim	2.3	97.7		22742
Ethnic Group				
Amara	12.1	86.3	1.6	16462
Oromo	6.9	93.0	2.1	15420
Tigrenay	7.	92.5	.7	11101
Work Status	12.4	86.6	1.0	27950
Working	14.4	84.8	.9	11423
Not Working	7.5	91.1	1.4	19987
TOTAL	10.0	88.7	1.3	30420

NB. Numbers are weighted.

CHAPTER VIII

FERTILITY PREFERENCE AND DEMAND FOR FAMILY PLANING SERVICES

8.1 Introduction

The interpretation of the data on fertility preference has been subject to controversy because of the very nature of the questions employed in collecting the data. Answers to questions like: 1. Do you want to have any more child? 2. How soon do you want to have this child? 3. Supposing you start anew, how many children in all would you like to have? are believed to be subject to short lived views which are held with intensity and little conviction. Moreover, as they are asked to women in most surveys; they do not take into account the attitude of other family members particularly the husband.

The effect of such drawbacks are likely to be more pronounced in countries like Ethiopia; with a highly traditional society, where husbands are very influential and who may exert a major influence on reproductive decisions. Although such drawbacks are apparent, almost all DHS's have included such questions in their questionnaires. This is mostly because the results obtained from these questions are important for assessing the extent of unwanted pregnancies and how effective preventions of such pregnancies are.

In this survey like in the 1990 National Family and Fertility Survey, information on the fertility preferences of married women has been collected. The question 'Do you want to have additional child?' was addressed to all married fecund women who had already some children irrespective of pregnancy status. For those who did not have any child the question was 'Do you want to have a child in the future?'.

A women is considered to be fecund if she and her husband are not sterilized and she answered a 'yes' to the question 'Do you believe that you are physically capable of having a child if you want to?'. As to the pregnant women the question on the desire for additional children is rephrased as 'Do you want to have another child after the one you are expecting now?'. If a woman who already have children answered a 'yes' then she would be asked 'How many additional children do you want to have?'. And for those who never practiced having a child the question is rephrased as 'How many children do you want to have in the future?'.

Answers to these questions constitute the first part of this chapter. Since the general objective of family planning study is to increase the potential demand and to reduce the level of unmet need for family planning; particularly among the high risk families, it is important to understand the extent of unmet need for spacing or limiting pregnancies. The second part of the chapter deals with met and unmet need of 'limiters' for family planning. This is based on married women who answered a 'No' to the question 'Do you want to have any (more) children?'.

To asses the status of fertility preference and potential demand for family planning among Addis Ababa married women, an attempt has been made to compare the results obtained with two African cities (Nairobi and Dar es Salaam) and two Asian cities (Dhaka and Manila).

8.2 Fertility Preference

Table 8.1 and Fig. 8.1 show the percentage distribution of married women by desire for additional children according to number of living children. The table indicates that 45.5 percent of all married women of Addis Ababa do not want any more children, 51.8 percent want more children and 2.5 percent were unable to decide about their fertility preference while a negligible proportion (0.2 percent) did not state about their desire at all.

An interesting feature observed is that the need to have more children is highest (89 percent) for those women with no children , and 85 percent for those who have a child. The proportion who want another child drops drastically thereafter to 60 percent for women who have two living children; to 51 percent for those who have three and falls further to 29 percent for mothers with four living children. In contrast the proportion of married fecund women who do not want any more children rises from a mere seven percent among the childless and 13 percent among women with one child to 37 percent for those with two children. Among women with six or more living children the proportion who desire no more children reaches a maximum of 73 percent. For details see Figure 8.2.

8.1 PERCENTAGE OF CURRENTLY MARRIED FECUND WOMEN AGED 15-49 BY DESIRE FOR ADDITIONAL CHILDREN (INCLUDING CURRENT PREGNANCY) AND NUMBER OF LIVING CHILDREN, ADDIS ABABA, 1995.

ADDITIONAL CHILDREN DESIRED	NUMBER OF LIVING CHILDREN							TOTAL
	0	1	2	3	4	5	6+	Percent
Want more children	88.5	85.2	60.1	51.4	29.3	27.9	24.8	51.8
Want no more	7.0	13.1	36.7	45.4	67.8	71.0	72.5	45.5
Undecided	4.5	1.6	3.2	3.2	1.5	1.1	2.7	2.5
Not stated	-	-	-	-	1.4	-	-	0.2
Total Percent Number*	100.0 14240	100.0 25611	100.0 25059	100.0 23514	100.0 17814	100.0 17718	100.0 28066	100.0 152021

* Numbers are weighted.

Fig. 8.1. FERTILITY PREFERENCE OF CURRENTLY MARRIED FECUND WOMEN AGED 15-49, ADDIS ABABA, 1995.

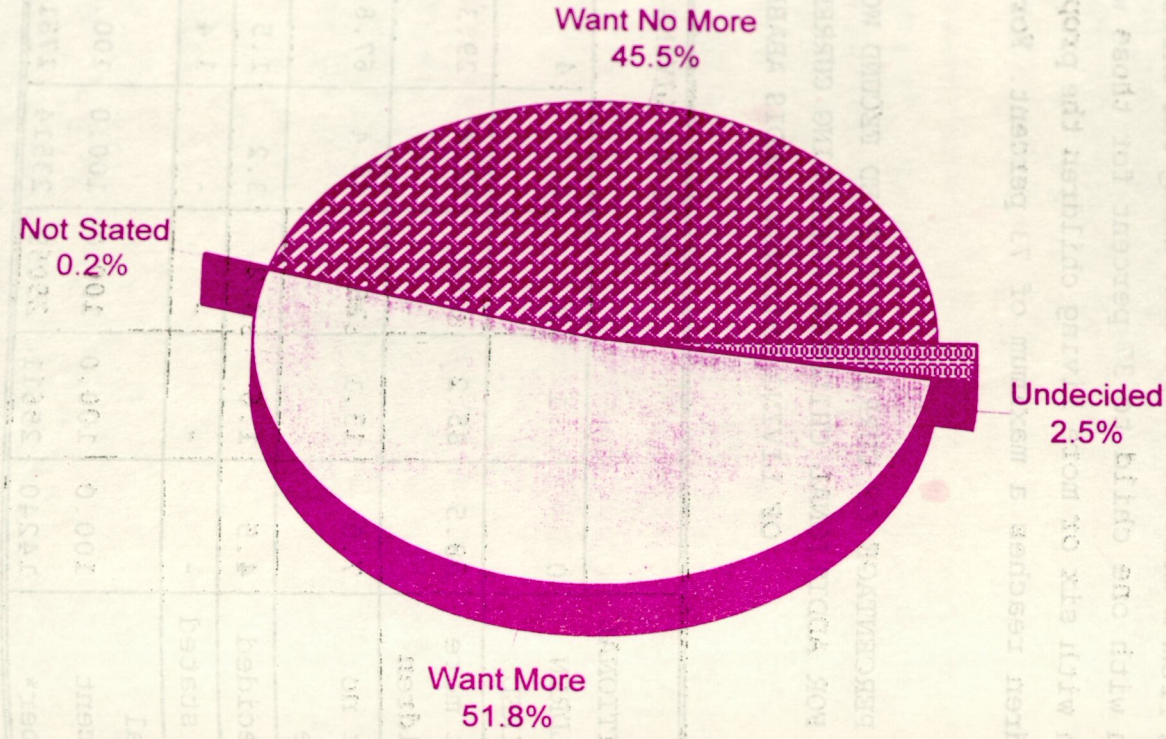
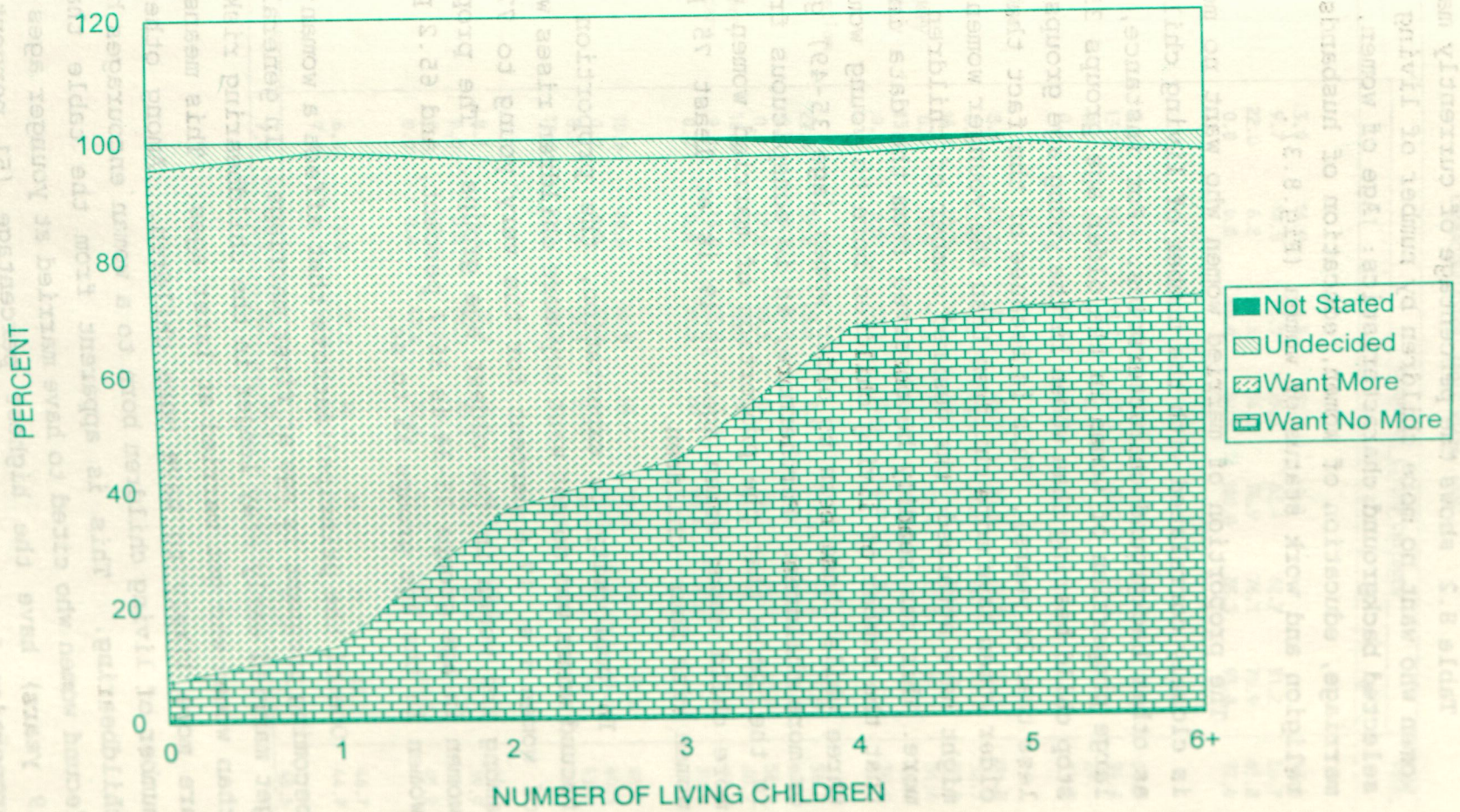


FIG. 8.2 FERTILITY PREFERENCE OF CURRENTLY MARRIED FECUND WOMEN AGED 15-49 BY NUMBER OF LIVING CHILDREN, ADDIS ABABA, 1995.



Differentials in Desire for Additional Children

Table 8.2 shows the percentage of currently married fecund women who want no more children by number of living children and selected background characteristics: Age of women, age at first marriage, education of women, education of husbands, ethnicity, religion and work status of women (Fig.8.3).

The proportion of married women who want no more children is closely correlated with the number of living children as well as other background characterstics. For instance, over all, a large proportion of women in the older age groups 35-49 want to stop child bearing than women in the young age groups (women aged less than 24 years). This is because of the fact that on average older women have more children than the younger women; hence they might have attained the desired number of children and want no more. This can readily be observed from the data in the table, that the number of living children born to young women stops at three while those born to older women (age 35-49) goes up to 6 or more children. Furthermore, it is conspicuous from the data in the table that the proportion of married women who want no more child among women aged 35-49 is at least 75 percent for women with four children.

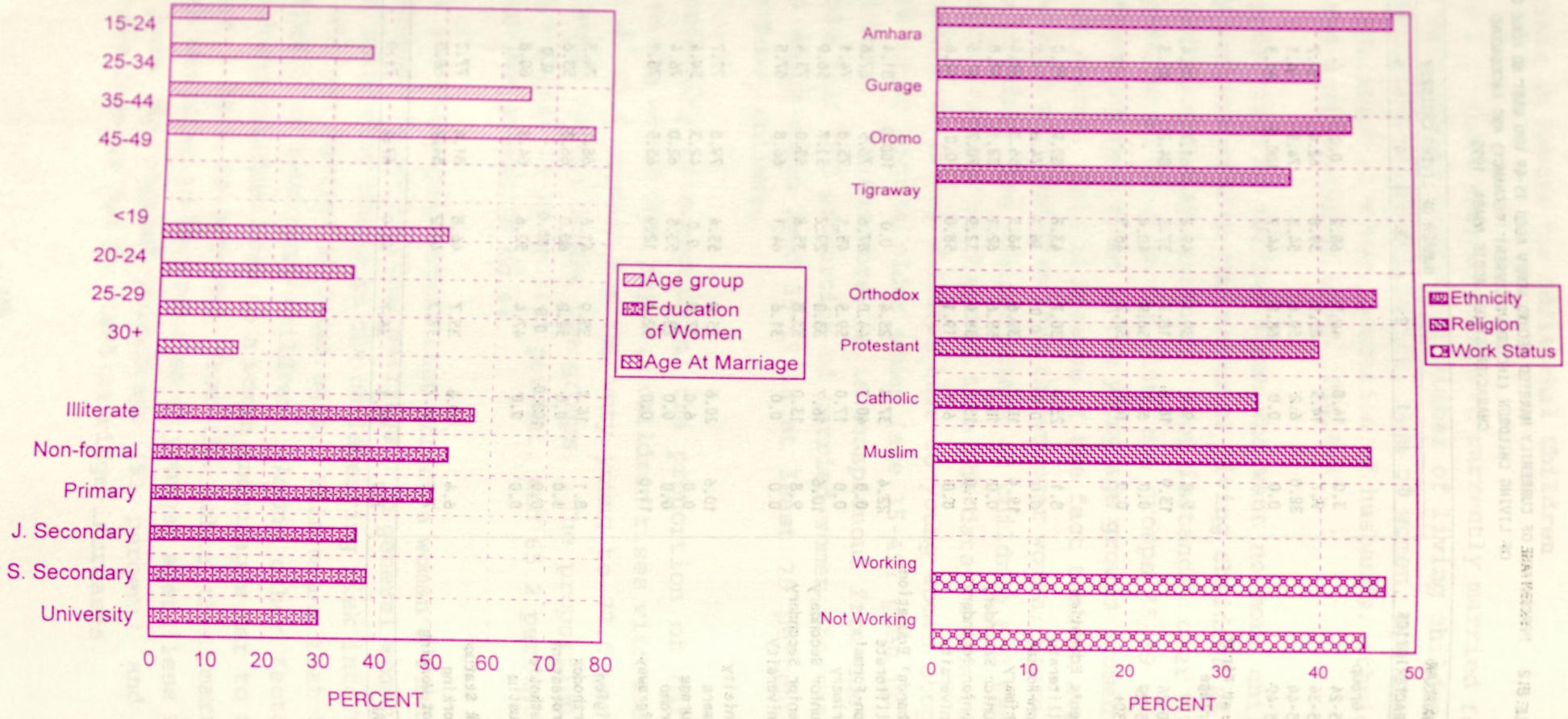
In conformity to expectation, the proportion of married fecund women who do not want any more children rises with the age of women i.e. 17.6 percent for the very young to 77.0 percent among the women in the oldest age groups. The proportion for women in age groups 25-34 is 36.7 percent, and 65.2 percent for women in the age groups 35 to 44.

One of the principal factors that affect a woman's risks of becoming pregnant is age at first marriage. In general women who get married early stay longer in the childbearing risk intervals than women who get married at later ages. This means that they are more likely to have more children. Among other factors, number of living children born to a woman encourages her to stop childbearing. This is apparent from the table that married fecund women who cited to have married at younger ages (less than 19 years) have the highest percentage (51 percent) and the proportion declines as age at first marriage increases.

TABLE 8.2 PERCENTAGE OF CURRENTLY MARRIED FECUND WOMEN AGED 15-49 WHO WANT NO MORE CHILDREN BY NUMBER OF LIVING CHILDREN (INCLUDING CURRENT PREGNANCY) AND BACKGROUND CHARACTERISTICS, ADDIS ABABA, 1995

BACKGROUND CHARACTERISTICS	NUMBER OF LIVING CHILDREN							TOTAL
	0	1	2	3	4	5	6+	
Age Group								
15-24	3.0	14.8	46.5	68.2	0.0	-	-	17.6
25-34	9.7	14.5	25.9	39.8	62.4	62.7	51.2	36.7
35-44	22.0	6.2	59.6	54.3	74.9	76.1	75.9	65.2
45-49	0.0	0.0	68.8	44.7	100.0	85.3	93.8	77.0
Age at First Marriage								
< 19	5.8	9.4	39.1	49.2	61.7	71.4	72.6	51.3
20-24	13.9	18.6	18.7	37.3	84.2	85.3	-	34.6
25-29	0.0	6.2	56.9	40.4	-	-	-	29.7
30+	0.0	0.0	30.7	46.5	-	-	-	14.3
Women's Education								
Illiterate	8.1	23.6	30.7	43.2	88.9	72.0	70.0	56.8
Non-Formal	0.0	0.0	0.0	36.1	74.6	76.1	59.4	52.5
Primary	15.4	10.3	39.6	46.5	56.3	82.4	75.1	50.0
Junior Secondary	0.0	16.5	55.6	62.1	32.1	63.8	89.0	36.6
Senior Secondary	15.0	13.2	38.4	32.9	70.7	61.3	82.5	38.5
University	0.0	6.5	19.1	58.0	0.0	62.6	-	30.0
Husbands' Education								
Illiterate	22.4	37.8	23.4	0.0	100.0	81.4	74.5	58.7
Non-Formal	0.0	40.7	44.0	87.6	76.5	67.6	82.0	67.3
Primary	0.0	17.0	59.5	45.1	75.6	74.1	65.8	56.5
Junior Secondary	10.6	16.7	33.8	29.7	51.7	56.9	68.9	38.9
Senior Secondary	9.8	13.0	33.8	35.8	65.0	75.4	69.3	37.0
University	0.0	0.0	31.6	64.1	66.8	67.5	-	39.0
Ethnicity								
Amara	10.6	20.6	35.0	55.4	79.8	72.7	74.0	48.1
Gurage	0.0	6.0	37.8	0.0	42.3	54.4	65.6	40.3
Oromo	0.0	0.0	28.5	53.5	62.0	76.4	76.3	43.6
Tigraway	11.0	0.0	52.8	12.9	65.5	78.1	73.8	37.2
Religion								
Orthodox	8.1	14.4	35.9	41.6	68.1	74.3	75.1	46.0
Protestant	0.0	0.0	52.0	68.0	66.5	53.6	58.3	39.9
Catholic	0.0	100.0	0.0	100.0	-	0.0	-	33.5
Muslim	0.0	0.0	47.4	52.6	64.3	60.8	60.8	45.2
Work Status								
Working	6.4	10.6	35.7	46.8	81.6	77.7	62.2	46.7
Not Working	7.2	14.7	37.7	44.2	54.9	66.5	76.9	44.7
TOTAL	7.0	13.1	36.7	45.4	67.8	71.0	72.5	45.5

Fig. 8.3 PERCENTAGE OF CURRENTLY MARRIED FECUND WOMEN AGED 15-49 WHO WANT NO MORE CHILDREN BY SELECTED BACKGROUND CHARACTERISTICS, ADDIS ABABA, 1995.



Education of women or that of their husbands appears to have correlation with the proportions of women who want no more children. The proportion who want no more children decreases as the level of education increase; except for women with senior secondary level of education. For example, 57 percent of illiterate married women, 50 percent of those who have a primary education and 30 percent of the married women who have a university level of education do not want any more children. This could be because, illiterate mothers may get married early and engage themselves in the risk of childbearing; hence have more children and be motivated to stop childbearing than the more educated who might have spent much of their reproductive life at school; came late into marital union and childbearing hence have less children.

Women's ethnicity showed some variation with regard to the need for no more children. According to the survey result, with regard to the desire to have no more children, the Amhara married women (48 percent) showed the highest proportion followed by the Oromo (43.6 percent), the Gurages (40 percent) and the Tigraways (37 percent). With respect to religion of married fecund women, 46 percent of the Orthodox Christians and 45 percent of the Muslim women want to stop childbearing while this was 40 percent among the Protestant and 34 percent among the Catholic.

The working status of women revealed little variation in the desire for more (any) children among currently married fecund women of Addis Ababa. The proportion is 47 percent among the working and 45 percent among the not working.

The proportion of married fecund women who did not desire for additional children is found to be 45.5 percent. According to the 1990 Family and Fertility Survey this value was 47.5 percent and is similar to those women of New Delhi (45.4 percent) and Nairobi (45.4 percent); higher than Dar es Salaam women (27.9 percent) and lower than the proportion observed among married women in Dhaka (56.4 percent) and Manila (59.9 percent).

Mean Additional Number of Children Desired

Among married women, who wanted additional children, about 64.2 percent wanted at most two, 9 percent three additional children while 17 percent could not state a specific number. They rather took the fatalistic view that their number is up to GOD (Table 8.3 and Figure 8.4). The desire for additional (any) children among married fecund women with no child or those who have a few children (one, two or three) may provide an idea of the total number of children these women will have in the future. This is because most mothers of fewer children are most likely young or late comers to the process of reproduction due to education, hence are the innovative group to decide on the number of children they desire to have.

From the data we may observe the concentration of women around certain desired numbers of children. For instance, one third of the women with no children want to have two children and one in five (21.8 percent) wanted four children. Similarly, among married fecund women who already have a child, 38 percent want one additional child and one in five (20.4 percent) women of this group desire 2 or 3 more children; among women with 2 living children 56 percent want another 2; and among women with three living children more than half (53.3 percent) want another child ... etc. For details refer to Fig.8.5

Considering the observed high percentages in each desired additional number of children group as shown in Table 8.3 and thinking optimistically and adding the desired number of children to the living ones evinces an interesting picture. For example, to have 2 children is favored by those who have no children (32 percent) and by those who have a child (38 percent); having 4 children is favored among women who already have 2 or 3 children, 56 percent and 53 percent, respectively; and among married fecund women of parity 4 or 5, 51 percent and 50 percent want to have six children, respectively.

TABLE 8.3 PERCENTAGE OF CURRENTLY MARRIED FECUND WOMEN AGED 15-49 WHO WANT MORE CHILDREN (INCLUDING CURRENT PREGNANCY) BY NUMBER OF ADDITIONAL CHILDREN DESIRED AND LIVING CHILDREN, ADDIS ABABA, 1995

Additional Children Desired	Number of Living Children							Total
	0	1	2	3	4	5	6+	
1	4.6	37.6	20.3	53.3	36.9	49.7	33.6	31.7
2	32.3	20.4	56.1	22.5	51.3	22.9	29.7	32.5
3	9.8	19.8	3.5	5.6		4.1	3.7	9.1
4	21.8	7.8	4.6	3.8				7.1
5+	4.2	4.4	1.5	1.5	3.9			2.7
Up to GOD	27.4	10.1	14.1	13.4	8.0	23.3	33.2	16.9
Total Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of Women	12609	21825	15071	12093	5224	4935	6945	78719
Mean additional number of children*	2.9	2.2	2.0	1.6	1.7	1.4	1.5	2.1

NB. Numbers are weighted
* The mean is calculated based on women who stated the desired number of children.

TABLE 8.4 MEAN ADDITIONAL NUMBER OF CHILDREN WANTED BY CURRENTLY MARRIED FECUND WOMEN AGED 15-49 BY NUMBER OF LIVING CHILDREN AND SELECTED BACKGROUND CHARACTERISTICS , ADDIS ABABA, 1995

Background Characteristics	Number of Living Children							TOTAL
	0	1	2	3	4	5	6+	
Age Group								
15-24	3.3	2.4	2.2	.	2.0	.	.	2.7
25-34	2.6	2.3	2.1	1.6	1.9	1.2	1.5	2.0
35-44	2.0	1.7	1.4	1.7	1.3	1.7	1.6	1.6
44-49	.	1.0	2.0	2.0	.	.	.	1.7
Age at First Marriage								
15-19	3.2	2.8	2.1	1.9	1.7	1.5	1.6	2.2
20-24	2.7	2.2	2.2	1.2	1.6	1.0	.	2.1
25-29	2.0	1.4	1.6	1.4	.	.	.	1.5
30+	2.0	2.1	1.5	1.0	.	.	.	1.8
Women's Education								
Illiterate	2.5	3.5	2.2	1.9	1.0	1.7	1.4	2.1
Non-formal	2.3	1.0	2.0	1.0	2.0	1.0	2.1	1.7
Primary	3.5	2.7	2.0	2.5	1.7	2.0	1.6	2.4
Junior Secondary	3.2	2.2	2.0	1.0	2.1	1.0	1.0	2.3
Senior Secondary	2.9	1.9	1.9	1.4	1.8	1.2	2.0	1.9
University	2.3	1.8	2.4	1.0	1.0	1.0	.	1.8
Husbands' Education								
Illiterate	3.0	2.5	2.0	2.4	.	1.7	2.0	2.2
Non-formal	.	1.3	1.5	3.0	2.0	1.5	1.5	1.6
Primary	2.5	2.2	1.9	1.9	1.8	1.6	1.5	1.9
Junior Secondary	2.1	2.1	2.0	1.3	1.7	1.2	1.3	1.7
Senior Secondary	3.6	2.8	2.7	1.2	1.8	1.4	1.8	2.5
University	2.7	1.7	1.6	2.2	1.5	1.0	.	1.8
Ethnicity								
Amara	2.9	2.0	2.0	1.2	1.7	1.3	1.6	2.0
Gurage	3.4	3.6	2.4	1.5	1.9	1.6	1.5	2.4
Oromo	2.7	1.8	2.1	2.8	1.6	1.3	2.0	2.1
Tigraway	3.0	1.9	1.7	1.7	1.5	1.0	1.0	1.9
Religion								
Orthodox	2.9	2.2	2.1	1.7	1.6	1.4	1.5	2.1
Protestant	3.6	2.1	1.5	1.0	1.0	1.0	2.0	2.0
Catholic	2.0	.	2.0	.	.	1.0	.	1.8
Muslim	3.0	2.6	1.7	1.5	5.0	1.9	1.5	2.2
Work Status								
Working	2.7	2.1	2.0	1.4	1.5	1.8	1.4	1.9
Not Working	3.0	2.3	2.2	1.8	1.8	1.2	1.7	2.2
TOTAL	2.9	2.2	2.0	1.6	1.7	1.4	1.5	2.1

Fig. 8.4 PERCENTAGE OF CURRENTLY MARRIED FECUND WOMEN AGED 15-49 WHO WANT ADDITIONAL CHILDREN BY NUMBER OF CHILDREN DESIRED, ADDIS ABABA, 1995.

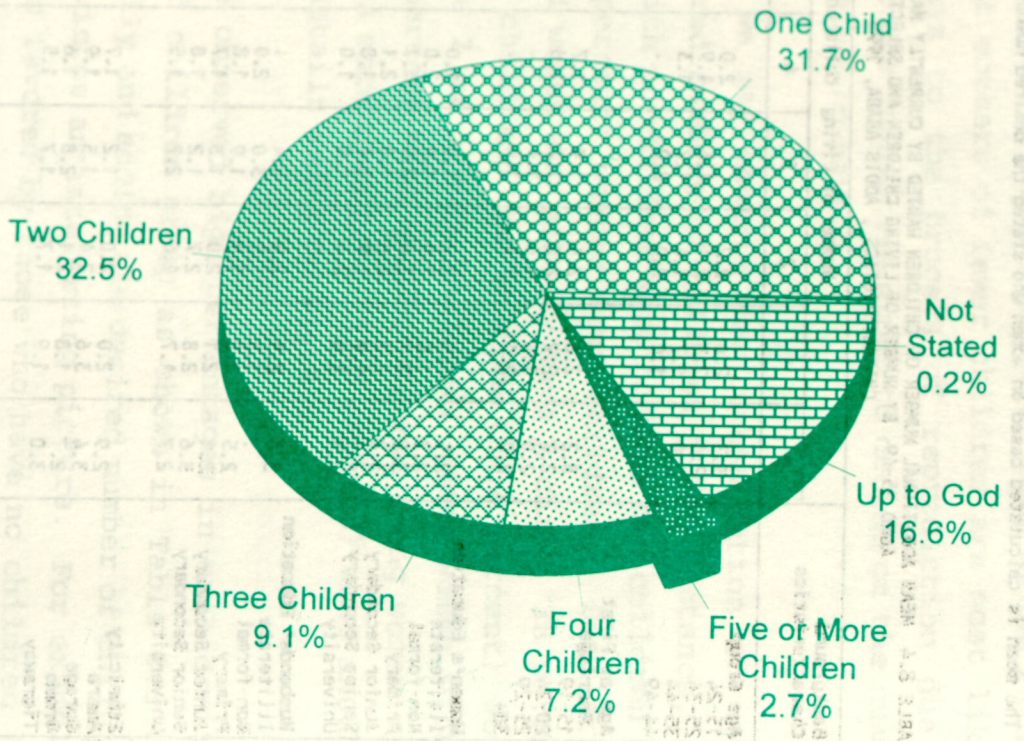
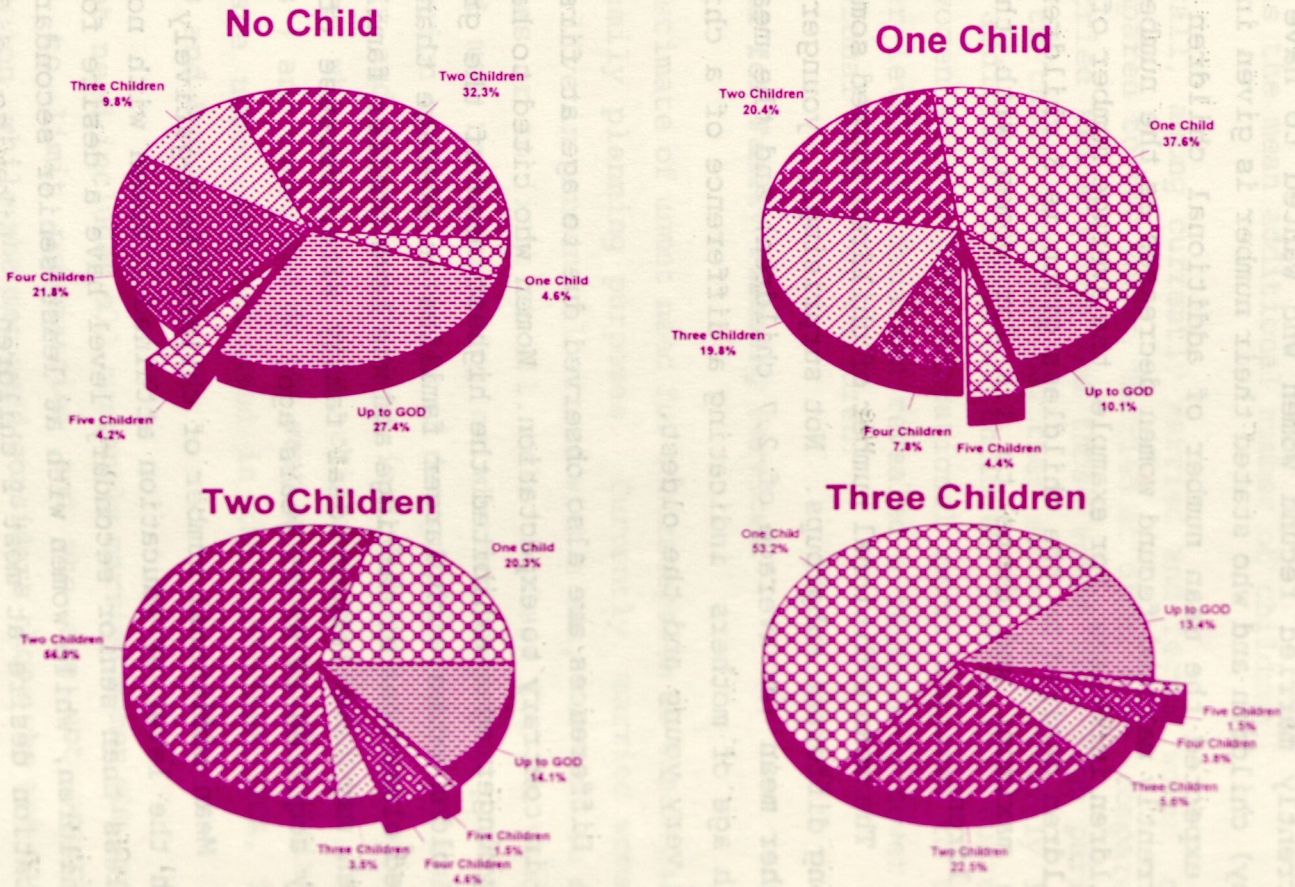


Fig. 8.5 PERCENTAGE OF CURRENTLY MARRIED FECUND WOMEN AGED 15-49 WHO WANT MORE CHILDREN AND WHO HAVE AT MOST THREE LIVING CHILDREN BY NUMBER OF ADDITIONAL CHILDREN DESIRED , ADDIS ABABA, 1995.



Though it is remote and optimistic or more hypothetical, the above findings may indicate that married women in Addis Ababa show an intention of having fewer children of which the ideal number is at most six children and more of four children.

The mean number of children derived from the data of currently married fecund women who wanted to have additional (any) children and who stated their number is given in Table 8.4. As expected the mean number of additional children wanted by currently married fecund women decreases as the number of living children increases. For example, the average number of additional children desired by the childless group is 3 children (which is the maximum) and drops to 1.6 for women with three living children.

The mean additional number of children showed some variation among different subgroups. Not surprisingly, younger women have higher mean (an average of 2.7 children) and the mean declines with age of mothers indicating a difference of a child between the very young and the oldest.

Differences are also observed due to age at first marriage but in contrary to expectation. Women who cited to have married at younger ages exhibited the highest mean of the group. These are older women with larger families on average than women who cited older ages at marriage and who have smaller families. These women may have larger ideal family size, because of attitudes they acquired 20 or 25 years ago.

Mean additional number of children is negatively correlated with the level of education attained. Women with no education or less than senior secondary level have a desire for at least 2 children, while women with at least senior secondary level of education desire at most 2 children. Likewise, differentials in mean additional number of children desired is also apparent between husband's educational attainment: women who are married to illiterate husbands showed highest mean additional children; except for those women who are married to husbands with senior secondary level of education which should be taken cautiously.

Among the ethnic groups the Gurages desired a higher number of children with mean 2.4 compared to the Tigraways with mean additional number of 1.9. On the other hand religion does not seem to cause any significant difference in the mean additional number of children desired; except, for the Catholics who showed a lower mean of additional children(1.8). The desire for more children was not affected much by the working status of women and neither is the mean additional number of children.

Overall, among currently married and fecund women, older women compared to the young; married at older ages compared to those married while young and those women with high parities compared to those with low parities showed a relatively lower mean for additional number of children. Similarly, currently married women with higher educational level compared to those with lower level of education revealed a relatively lower mean for additional number of children.

8.3 Demand for Family Planning Services

An estimate of unmet need for contraception is essential for future family planning purposes. Currently, married women or women who live in consensual unions with a man, who want to space pregnancies or to limit at all, make the base for the study of unmet and met need depending on whether they are practicing contraception or not. A number of demographic and health surveys and family and fertility surveys included both groups of women i.e those who want no more children in the near future ('spacers') and those who do not want any more child ('limiters') to estimate unmet and met need in their studies (ECA, 1995, Bongaarts and Bruce, 1995).

Unmet need includes all currently married women who want to space or to limit pregnancies and who are not practicing contraception, while the met need considers those who are current users. However, these includes all currently married women who are infecund, not sexually active and amenorrhoeic. Therefore, it is necessary to exclude these women for a better estimate of unmet and met need of contraception (Bongaarts and Bruce,1995; ECA,1995).

This section of the chapter focuses on unmet and met need of contraception of women who are currently married and do not want any more child. In the survey data was collected on women who are at risk of an unwanted pregnancy: currently married, non pregnant, non amenorrhoeic and fecund women who did not want any more child by status of contraceptive use. This provided the potential demand (current users plus nonusers) for contraception among currently married women. Table 8.5 summarizes the data obtained.

According to the table 40,781 (weighted) currently married, non-pregnant, non-amenorrheic, fecund women reported that they do not want any more child. This makes the potential demand 22.2 percent, the met need 15.9 percent and the unmet need 6.3 percent. On the other hand the proportion of demand satisfied is 71.7 percent i.e met need against potential demand. The unmet need for women in Addis Ababa was 6.4 percent and that of the urban areas of the country was 3.7 percent, (CSA, 1993).

Further examination of Table 8.5 and a glance at Fig 8.6 reveal that there exists variation among groups of married women due to demographic or socio-economic differences. As expected the potential demand for limiting the number of children is lower among younger women and so is the unmet need. This is because young women have fewer children and may need some more to satisfy their desired number of children. Potential demand and unmet need both reach maximum at ages 35-44 and conversely the proportion of demand satisfied is the lowest among these groups (see the last but one column of the Table).

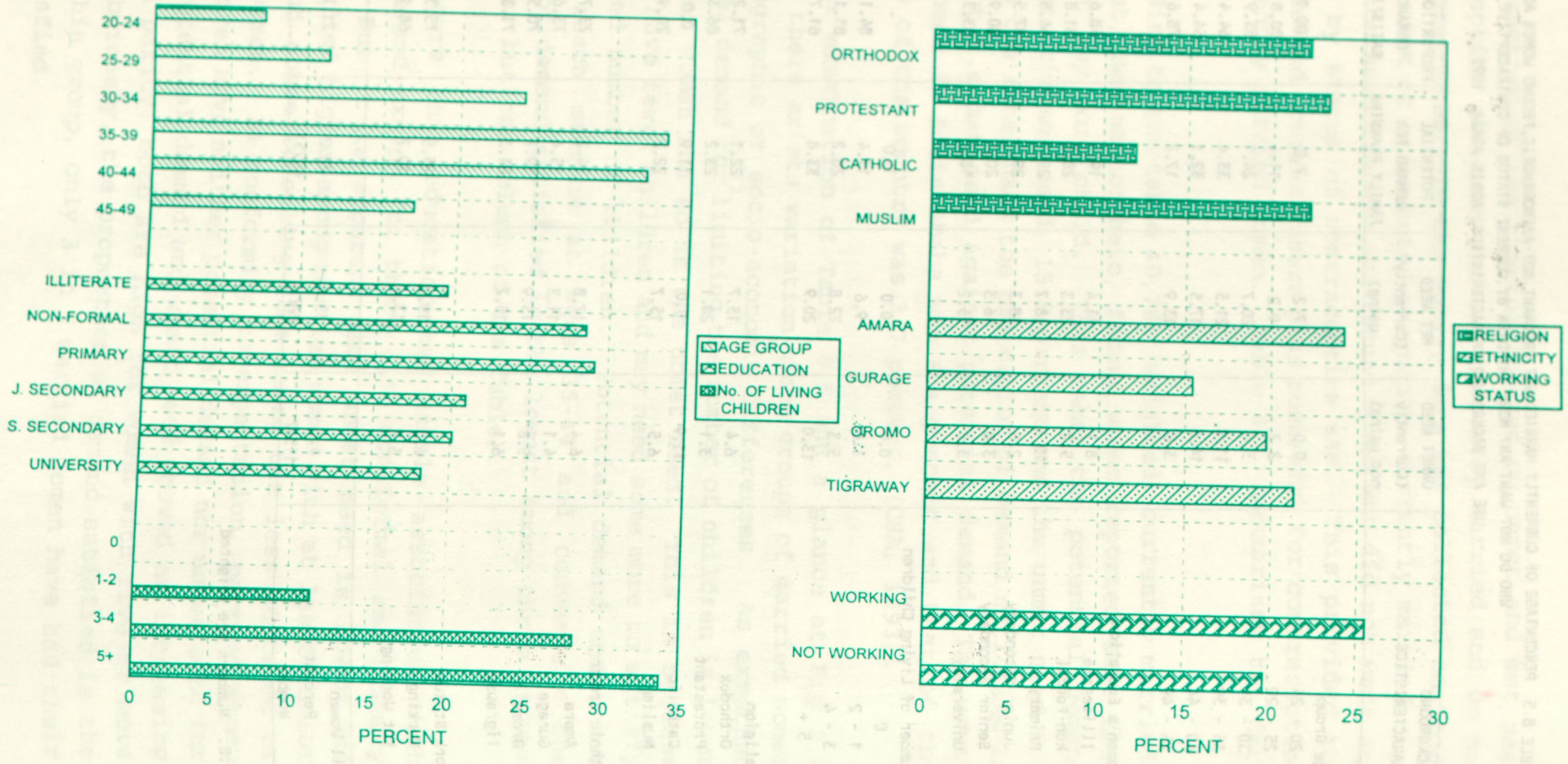
It appears that education has little association with potential demand except for those with non-formal and primary education. But it is apparent that unmet need is lower and demand satisfied higher among married women with at least junior secondary and above schooling than among the less educated or uneducated women. In conformity to expectation, married women with no children have neither potential demand nor unmet need for limiting. Potential demand and unmet need showed an increasing pattern with parity; both are high for women with five or more children. Obviously, the proportion of demand satisfied is the lowest for this group, only 3 in 5 married women have had their demands satisfied.

TABLE 8.5 PERCENTAGE OF CURRENTLY MARRIED,NOT PREGNANT,NOT-AMENORRHOEIC,FECUND WOMEN AGED 15-49 WHO DO NOT WANT ANY MORE CHILDREN BY CURRENT STATUS OF CONTRACEPTIVE USE AND BACKGROUND CHARACTERISTICS, ADDIS ABABA, 1995

BACKGROUND CHARACTERISTICS	UNMET NEED (Currently not using)	MET NEED (Currently using)	POTENTIAL DEMAND FOR FAMILY PLANNING	PROPORTION OF DEMAND SATISFIED	NUMBER OF WOMEN
Age Group					
20 - 24	0.0	7.2	7.2	100.0	18147
25 - 29	2.2	9.2	11.4	80.8	34368
30 - 34	3.4	20.7	24.1	85.9	42305
35 - 39	11.9	21.5	33.4	64.4	43630
40 - 44	14.6	17.5	32.1	54.4	23890
45 - 49	3.8	13.9	17.7	78.6	17531
Women's Education					
Illiterate	8.1	11.4	19.5	58.6	55679
Non-Formal	5.2	23.3	28.5	81.8	13552
Primary	10.3	18.7	29.1	64.5	35829
Junior Secondary	2.6	18.3	20.9	87.5	18995
Senior Secondary	3.8	16.3	20.1	80.9	43188
University	3.0	15.2	18.2	83.5	16377
Number of Living Children					
0	0.0	0.0	0.0	-	17533
1 - 2	1.8	9.6	11.4	84.1	57335
3 - 4	5.3	22.8	28.2	81.1	47613
5 +	13.0	20.9	33.8	61.7	61426
Religion					
Orthodox	6.4	15.7	22.1	71.2	156875
Protestant	3.1	20.1	23.2	86.6	8897
Catholic	11.9	0.0	11.9	0.0	2051
Muslim	6.5	15.7	22.2	70.9	15530
Ethnic Group					
Amara	6.4	17.8	24.2	73.7	89568
Gurage	4.1	11.3	15.4	73.6	31155
Oromo	5.8	13.9	19.7	70.5	35531
Tigraway	6.1	15.2	21.3	71.3	19996
Work Status					
Working	6.3	19.2	25.5	75.3	79159
Not Working	6.3	13.4	19.7	68.1	104454
All Women					
Percent	6.3	15.9	22.2	71.7	100.0
Number	11537	29214	40751	-	183907

N.B. Numbers are weighted

FIG. 8.6 PERCENTAGE OF CURRENTLY MARRIED WOMEN AGED 15-49 BY POTENTIAL DEMAND FOR FAMILY PLANNING AND SELECTED BACKGROUND CHARACTERISTICS, ADDIS ABABA, 1995.



In the case of religious grouping no significant difference is observed between the Orthodox Christians, the Protestant and the Muslims; concerning potential demand. However, Protestant married women revealed lowest (3.1 percent) unmet need therefore, highest (86.6 percent) proportion of demand satisfied. It could be because of their size or sampling variation, non of the potential demand of the currently married Catholic women is satisfied.

Among ethnic groups, the Amharas (24.2 percent) and the Tigraways (21.3 percent) showed higher and the Gurages lowest (15.4 percent) potential demand. On the other hand, the Amhara (6.4 percent) and the Tigraways (6.1 percent) revealed higher percentage of unmet need. Nevertheless, no significant difference is observed in the proportion of demand satisfied among the four ethnic groups.

Work status of married women showed some variation in the potential demand for family planning. The potential demand is 25.5 percent among the working, while it is 19.7 percent among the not-working. These may confirm the findings discussed earlier in this chapter i.e. a higher proportion of working women knew about contraceptives, and had ever used and are currently using. Therefore, there is a high potential demand for family planning among working married women because, may be, they are enlightened better than the not-working married women. Although the unmet need observed among both groups appeared to be the same the proportion of demand satisfied among the working women is 3 in 4 (75.3 percent) while it is 68 percent among the not working women.

As presented in Table 8.6, the total demand observed for the currently married women in Addis Ababa (22.2 percent) is about equal to that of Dar es Salaam (23.3 percent) half of that in Dhaka (43.8 percent), Manila (45.7 percent) and Nairobi (45.4 percent). It is also by far lower than the estimated total demand for Sub-Saharan Africa, which is 38.9 percent, (Bongaarts and Bruce, 1995)

TABLE 8.6 PERCENTAGE OF CURRENTLY MARRIED NOT PREGNANT, NOT-AMENORRHOEIC, FECUND WOMEN AGED 15-49 WITH UNMET NEED, MET NEED AND POTENTIAL DEMAND FOR CONTRACEPTION FOR LIMITING BY CITY AND DATE OF SURVEY.

CITY (COUNTRY)	DATE OF SURVEY	UNMET NEED	MET NEED	TOTAL DEMAND	NUMBER OF WOMEN
Addis Ababa (Ethiopia)	1995	6.3	15.9	22.2	40751*
Dar es Salaam (Tanzania)	1991-1992	13.8	8.5	22.3	349
Dhaka (Bangladesh)	1993-1994	9.1	34.1	43.8	2756
Manila (Philippines)	1993	12.2	32.9	45.7	1272
Nairobi (Kenya)	1993	10.2	25.0	35.2	271

* The Number is weighted
- Source of the data for each city is country report of DHS.

The conspicuous difference observed for potential demand for family planning among the African cities (Addis Ababa, Dar es Sallaam and Nairobi) and the Asian cities (Dhaka and Manila) could be in part due to the high need to limit number of their children among the Asian women, and the conduct of a more effective family planning programme in Asia than in Africa. This is readily observable from the table that the met need among married women in Dhaka (34.1 percent) and Manila (32.9 percent) by far surpasses that among those in Addis Ababa (15.9 percent), Da er Salaam (8.5 percent) and Nairobi (25 percent) married women.

Although the unmet need for Addis Ababa married women appears to be comparatively lower, it should not be taken seriously as it could be due to the low level of the potential demand. Surprisingly, the estimated met need for limiting for Sub-Saharan Africa is similar to that of Addis Ababa (15.9 percent)

Generally, according to this survey the potential demand for family planning is higher among women aged 35-44, parity of three and above, the Protestant, the Amhara, and among working married women. On the other hand, the proportion of demand satisfied is lowest among women age 40-44, the illiterate, women with parity of five and above, the Muslim, the Oromo and the not working women.

Chapter IX

MORTALITY ESTIMATES

9.1 Data Quality Evaluation

This section examines the quality of mortality data collected in the 1995 Addis Ababa Fertility Survey. It is primarily based on information on the number of children ever-born and proportion dead. Comparison with the recent 1994 census data is also made for further evaluation of the quality of the data.

Evaluation of the quality of the data is made by examining sex-ratio for children ever born (CEB) and proportions of children dead by mothers age group. Sex-ratios should usually fall within the range of 102 to 107. The estimated sex-ratios of CEB from the 1995 Fertility Survey and 1994 census for urban parts of Addis Ababa are given in Table 9.1, and Figure 9.3.

Table 9.1 Estimated sex-ratios of Children Ever Born and Proportion Dead by age group of women Addis Ababa, 1995 Fertility Survey and 1994 Census.

Age of women	1994 census		1995 fertility survey	
	Sex Ratio CEB	Proportion Dead	Sex Ratio CEB	Proportion Dead
15-19	121.9	0.0813	71.1	0.0501
20-24	101.1	0.0831	107.3	0.0757
25-29	103.5	0.0909	93.6	0.1099
30-34	102.8	0.1006	107.6	0.0821
35-39	100.3	0.1184	98.7	0.1113
40-44	101.3	0.1417	88.3	0.1603
45-49	102.1	0.1558	102.8	0.1676

As shown in Table 9.1, the relatively high values of sex ratios for CEB corresponding to women aged 15-19 may be due to sampling errors (small number of births to this age group of women). For women aged 20 and above the estimated sex ratios of CEB by age of women from 1994 census seems to be plausible, while the 1995 data show some erratic nature, with the problem becoming more serious among women aged 40-44. The proportions of children dead are expected to increase with age of mother. This is also observed to be the case in the 1995 survey (see Table 9.1) except for women in age group 30-34. For this age group omission of children dead is suspected.

Another way to assess the quality of the data on children ever born is by examining the behavior of the average parities reported by women of each age group. Unless fertility rose at some time in the past, average parities should increase with age of mother. As shown in Figure 9.1 and Figure 9.2, the reported parities among women of different age groups seems to be plausible except for slight omission of parity by women aged 45-49.

9.2 Infant and under-five Mortality

Retrospective questions on the number of children ever born and number surviving were asked during the 1995 Addis Ababa Fertility Survey. These data were used to estimate the infant and under-five mortality rate of the city. The survey data was analyzed using Mortpak-Lite computer program based on the Trussell regression equation with Coale-Demeny West Mode Life Tables. Using mortpak computer program, the application of Feeny's Method was also used for the estimation of time reference of the infant and under-five mortality measures.

The estimated infant and under-five mortality and life expectancy by age of women and its time reference for Addis Ababa are given on Table 9.2.

Figure 9.1 Average Parities of Males and Females
Addis Ababa, 1995 fertility Survey.

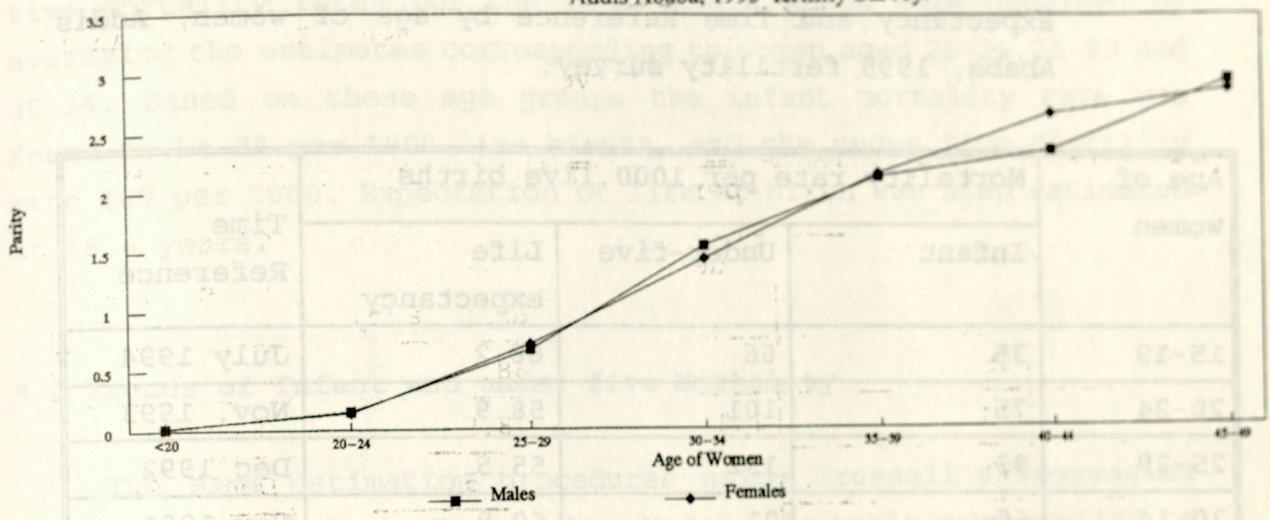


Figure 9.2 Mean Number of Dead Children by Sex and Age of Women
Addis Ababa , 1995 Fertility Survey.

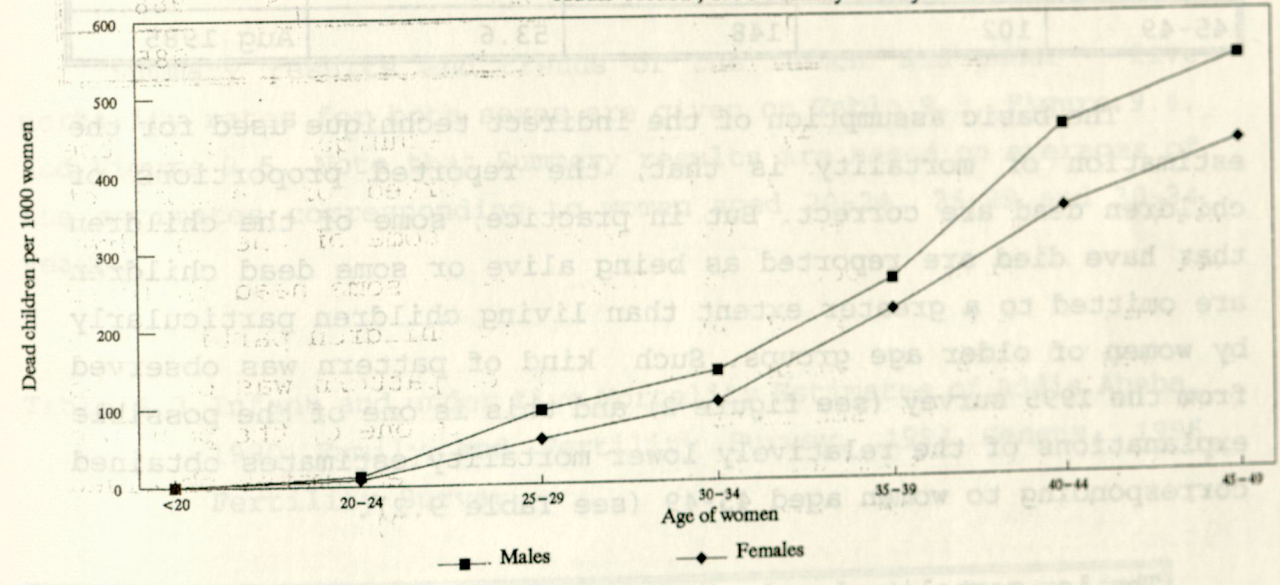


Figure 9.3 Sex-Ratios of CEB and Survival
Addis Ababa, 1994 Census , and 1995 Survey.

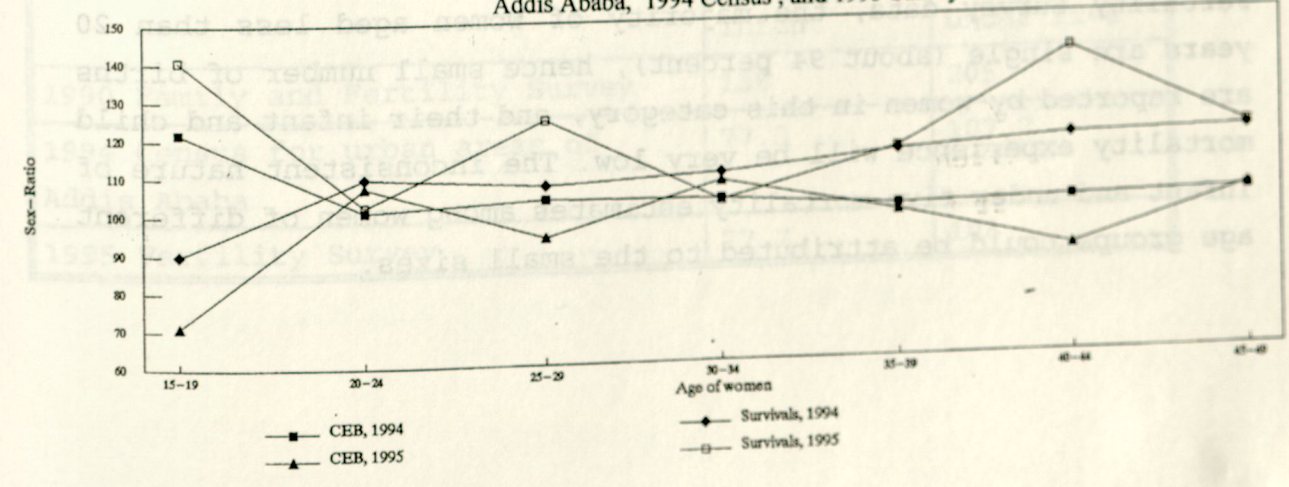


Table 9.2 Estimates of infant, under-five Mortality, Life Expectancy and Time Reference by age of women, Addis Ababa, 1995 fertility survey.

Age of women	Mortality rate per 1000 live births			Time Reference
	Infant	Under-five	Life expectancy	
15-19	35	66	68.2	July 1994
20-24	75	101	58.9	Nov. 1993
25-29	93	132	55.5	Dec 1992
30-34	66	91	60.9	Nov 1991
35-39	82	115	57.7	Aug 1990
40-44	107	155	52.7	Sep 1988
45-49	102	148	53.6	Aug 1985

The basic assumption of the indirect technique used for the estimation of mortality is that, the reported proportions of children dead are correct. But in practice, some of the children that have died are reported as being alive or some dead children are omitted to a greater extent than living children particularly by women of older age groups. Such kind of pattern was observed from the 1995 survey (see figure 2) and this is one of the possible explanations of the relatively lower mortality estimates obtained corresponding to women aged 45-49 (see Table 9.2).

The low mortality levels derived from women aged less than 20 years may be due to selection bias. When we look at the 1995 Fertility Survey data, the majority of women aged less than 20 years are single (about 94 percent), hence small number of births are reported by women in this category, and their infant and child mortality experience will be very low. The inconsistent nature of infant and under five mortality estimates among women of different age groups could be attributed to the small sizes.

Despite the problems, the general levels of infant and under five mortality rates for the total Addis Ababa were obtained by averaging the estimates corresponding to women aged 20-24,25-29 and 30-34. Based on these age groups the infant mortality rate was found to be 78 per 1000 live births, and the under five mortility rate 109 per 1000. Expectation of life at birth was also estimated at 56.6 years.

9.3 Trends of Infant and under five Mortality

The same estimation procedures using Trussell's regression equation and the Coale-Demeny West Model life table were applied to 1990 Family and Fertility Survey, 1994 Census, and the 1995 Fertility Survey of Addis Ababa.

Summary results and trends of the infant and under - five mortality rates for both sexes are given on Table 9.3, Figure 9.4, and Figure 9.5. Note that Summery results are based on averages of the estimates corresponding to women aged 20-24, 25-29 and 30-34 years.

Table 9.3 Infant and under five Mortality Estimates of Addis Ababa, 1990 Family and Fertility Survey, 1994 Census, 1995 Fertility Survey.

	Mortality Rates Per 1000 live birth	
	Infant	Under five
1990 Family and Fertility Survey	138	205
1994 Census for urban areas of Addis Ababa	77.3	107.7
1995 Fertility Survey	77.7	108

Figure 9.4 Infant Mortality Trends, Addis Ababa, Both- Sex
from 1990 FFS, 1994 Census and 1995 Fertility Survey.

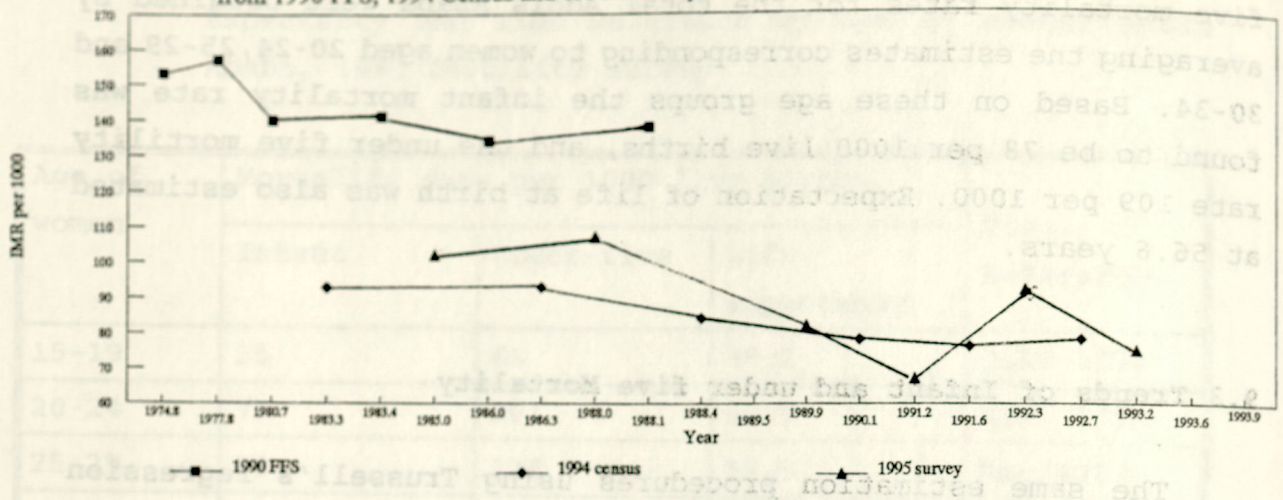
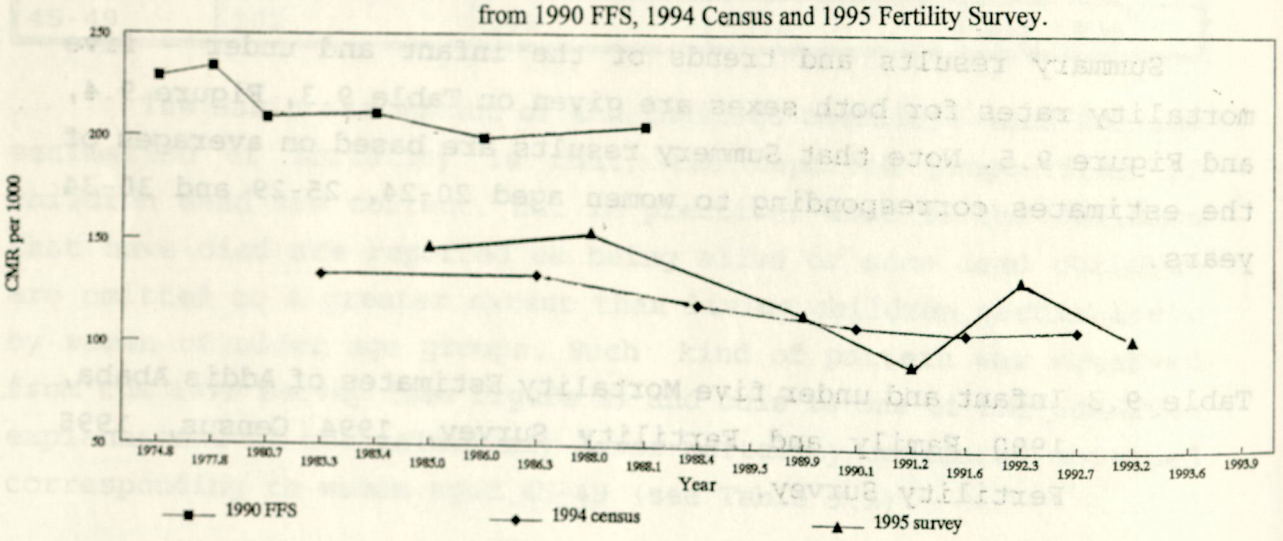


Figure 9.5 Child Mortality Trends, Addis Ababa, Both- Sex
from 1990 FFS, 1994 Census and 1995 Fertility Survey.



As shown on Table 9.3 the estimates of infant and under five mortality from 1995 Fertility Survey and the 1994 Census are almost consistent. The 1990 Family and Fertility survey shows a relatively higher rate of infant and under five mortality, a difference of 60 and 97 deaths of infant and under five children per 1000 live births, respectively, as compared to the estimates of 1995 survey.

Figure 9.4 and Figure 9.5 show the trends of infant and under five mortality rates, respectively, during the late 1974 to the early 1993. The trends are based on the estimates of women aged 20-24,25-29 and 30-34.

The 1994 Census and 1995 Fertility survey estimates show a fairly consistent trend of decline, with some regularities on the estimates of the 1995 Fertility Survey. Sampling error seems the most likely explanation for this inconsistency among the estimates of 1995 survey. The estimates from the 1990 Family and Fertility Survey are clearly substantially higher when compared to the estimates of 1994 census and the 1995 fertility survey.

Table 9.4 Estimate of infant under five Mortality rates and life Expectancy by sex, Addis Ababa, 1995 Fertility survey.

Sex	Infant Mortality 1q0/000	Under five Mortality 5q0/000	Life Expectancy e0
Total	77	108	58.7
Male	93	129	56.6
Female	61	87	60.7

Sex differentials in infant and under five mortality (Table 9.4) show, a higher male mortality than female mortality. Female infant mortality was estimated at 61 per 1000 live births compared to 129 per 1000 live birth for male. This suggests that male mortality is higher compared to female mortality. Consistent with

these findings higher life expectancy for females than males was observed.

9.4 Life Table

Male and Females life tables were constructed using the estimated infant mortality rates as inputs in the BATCH program of the Mortpak package. The estimated life tables for males and females are given in Table 9.5 and 9.6 below.

Table 9.5 Estimated Life Table for Males, Addis Ababa, 1995 Fertility Survey.

Age	Q(X,N)		I(X)	L(X,N)	T(X)	E(X)
	0	0.0933	100000	93569	5523877	55.24
	1	0.03936	90670	353300	5430308	59.89
	5	0.01293	87101	432688	5077008	58.29
	10	0.00962	85974	427804	4644321	54.02
	15	0.01487	85148	422772	4216516	49.52
	20	0.02106	83881	415130	3793744	45.23
	25	0.02264	82115	405987	3378615	1.15
	30	0.0258	80255	396219	2972628	37.04
	35	0.03126	78185	385011	2576409	32.95
	40	0.0402	75741	371383	2191398	25.93
	45	0.05308	72696	354249	1820014	25.04
	50	0.07383	68838	332049	1465765	21.29
	55	0.1034	63755	303067	1133716	17.78
	60	0.14867	57186	265485	830649	14.53
	65	0.21163	48684	218370	565165	11.61
	70	0.30344	38381	163109	346794	9.04
	75	0.42928	6734	104375	183685	6.87
	80		15258	79311		5.20

Table 9.6 Estimated Life Table for Females, Addis Ababa 1995 fertility survey.

AGE	Q(X,N)		I(X)	L(X,N)	T(X)	E(X)
	0	0.0613	100000	95304	6237785	62.38
	1	0.02665	93870	369036	6142481	65.44
	5	0.00909	91368	454765	5773445	63.19
	10	0.00709	90538	451085	5318680	58.75
	15	0.01052	89896	447247	4867595	54.15
	20	0.01403	88950	441738	4420348	49.70
	25	0.01631	87702	435014	3978610	45.37
	30	0.01886	86272	427384	3543596	41.08
	35	0.02222	84645	418645	3116212	36.82
	40	0.02689	82764	408439	2697567	32.59
	45	0.03451	80539	396050	2289128	28.42
	50	0.04819	77760	379894	1893078	24.35
	55	0.06776	74013	358197	1513184	20.45
	60	0.10256	68998	328269	1154987	16.74
	65	0.15551	61921	286725	826717	13.35
	70	0.24145	52292	231006	539993	10.33
	75	0.36285	39666	162600	308987	7.79
	80		25273	146388		5.79

CHAPTER X

SUMMARY OF MAJOR FINDINGS

The assessment of the quality of data collected in the 1995 fertility survey of urban Addis Ababa has been undertaken regarding age reporting and omission of births. The quality of age reporting as indicated by Myers' index has improved from 19.8 in the 1990 NFFS to 7.8 in the present survey. As regards to the completeness of the reporting of births, comparison has been made between the reported number of children ever born and the number estimated from synthetic births last year. The data revealed that the synthetic estimate of the mean number of children ever born are lower than the reported number. Since no major problem in the omission of births has been observed, this finding possibly reflects a recent decline in the fertility level of urban Addis Ababa.

The main objective of the present survey has been to evaluate the 1994 population and housing census result with special reference to fertility. The result of the census has indicated that the current fertility level of urban Addis Ababa as measured by the reported Total Fertility Rate (TFR) was 1.8, which seems a very low level for a city in a developing country.

From the present survey as well as the trends observed in the past censuses and demographic surveys conducted in Addis Ababa, the TFR obtained from the census seems to be confirmed. The reported TFR estimated from the present survey (1.74) is found to be very close to that obtained from the census. The values of the TFR obtained from the censuses and surveys conducted in Addis Ababa at different points in time over the period 1967-1995 have also shown a sustained decline in the level of fertility. The reported TFR was found to be 3.98 in 1967, 3.81 in 1978, 3.23 in 1984, 2.61 in 1990, 1.8 in 1994

and 1.74 in 1995. Examination of trends in the age pattern of fertility for current as well as life time fertility indicated that the age specific fertility rates and mean parities have drastically decreased among women at younger age groups (i.e., women under 30).

In view of this fact, the changes in the different factors which are believed to be associated with the level of fertility have been examined in the present analysis. These include changes in the nuptiality patterns, family planning and breast feeding practices. The result indicated that considerable changes in the marital status composition of women in the reproductive ages (15-49) have been registered in the area. The proportion single has increased from 15.6 percent in 1967 to 43.9 in 1990 and 52.5 percent in 1995. On the other hand, the proportion who are currently married has decreased from 55.9 percent in 1967 to 43.3 in 1990 and 31.5 percent in 1995. Though marriage has remained universal in urban Addis Ababa (98.4% were married by the age 45-49), structural changes in the timing of first marriage have taken place during the periods 1978-1995. During this period, the proportion single has increased by 48.5, 35.3 and 14.6 percentage points among women aged 20-24, 25-29 and 30-34, respectively. From this finding it can be observed that a change in the nuptiality patterns of women in the reproductive ages (i.e., from younger age pattern of marriage to late marriage pattern has occurred between 1978 to 1995). The singulate mean age at marriage (SMAM) calculated from the present data (26.5) indicated an increase in age at marriage by 7.5 years compared to 1965 (19.0 years), and 2 years to that obtained from the 1990 NFFS (24.5 years). The trend in the mean age at first marriage by year of marriage has also revealed a continuous rise during 1966-1995. The mean age at first marriage was 12.3 for women who were married before 1966 and it increased to 22.5 years for those married in the early 1990's. Thus women who entered into marital union in the early

1990's have postponed their marriage by about 10 years compared to those married before 1966.

Fertility Differentials were analyzed on the basis of standardized mean parity. The standardized mean parity was found to be highest among currently married women (2.42) and lowest among the never married group (0.29). The mean parity was observed to decrease with rising of age at marriage.

The result also indicated that migrant women tend to have higher mean parity than the non migrants. When migrants were classified by place of birth, the standardized mean parity was higher among women born in rural areas than those born in urban areas. Moreover, the data revealed that women's level of education is inversely related to their completed fertility. Mean parity was also observed to vary by work status of women. Non-working women are observed to have higher mean parity than the working category. On the other hand, ethnicity of women is observed to have no significant effect on their life time fertility.

According to the survey 95 percent of the ever married women aged 15-49 years in Addis Ababa practiced breastfeeding their ultimate child. Breastfeeding is not only universal but also a prolonged process in which 49 percent of these women exercised prolonged breastfeeding. Average duration of breastfeeding was found to be 20.5 months and that of post-partum amenorrhoea among the women who breastfed their penultimate children was 11.1 months.

With regard to contraceptive knowledge, 97.5 percent of women aged 15-49 and 98.6 percent of currently married women in Addis Ababa knew at least one method of contraception. But only 38 percent of women aged 15-49 and 69 percent of currently married women reported to have ever used any method. The survey result also showed that the current prevalence rate

of contraceptive use among currently married women to be 41.6 percent.

Less than one third (31.7 percent) of the non-users of contraceptives intend to use any family planing method in the future. The pill was the most popular method chosen by 32 percent of non-users who intended to use contraception in the future, while the second preferred method was injection accounting for 28.5 percent.

The survey indicated that the desire for additional children among currently married fecund women in Addis Ababa was 45.5 percent while 51.8 percent of these women do not want any more child. The proportion of married fecund women who do not want any more child rises with the age of women i.e. 17.6 percent for the very young to 77.0 percent among the women in the oldest age groups.

Among currently married, non-pregnant, non-amenorrheic, fecund women in Addis Ababa the potential demand for family planning was 22.2 percent, the met need 15.9 percent and the unmet need 6.3 percent.

The survey also collected information that enabled the computations of measures of mortality. According to these results the infant mortality rate in the city was observed to be 77.7 per 1000 live births. Under five mortality rates were also computed and these were observed to be 108 per 1000. The expectation of life at birth for the population of Addis Ababa was observed to be 58.7 years.

APPENDIX I

ESTIMATION PROCEDURES OF TOTAL, RATIO AND SAMPLING ERRORS

The following formula was used to estimate total of a given characteristic.

$$\hat{Y}h = \sum_{h=1}^{n_h} W_{hi} Y_{hi}$$

$$\hat{Y} = \sum \hat{Y}_h$$

in which:

$$W_{hi} = \frac{N_h M_{hi}}{n_h N_{hi} m_{hi}}$$

Where h Represents stratum (Wereda)

n_h = Sample number of Enumeration Areas in the h^{th} stratum

N_h = Measure of size of the h^{th} stratum (from the sampling frame)

N_{hi} = Measure of size of the i^{th} EA in the h^{th} stratum (from the sampling frame)

M_{hi} = Total listed households in the i^{th} EA in the h^{th} stratum

m_{hi} = Sample households in the i^{th} EA in the h^{th} stratum

Y_{hi} = Sample total of characteristic y in the i^{th} EA in the h^{th} stratum

$\hat{Y}_h$ = Estimate of total of characteristic y in stratum h

$\hat{Y}$ = Estimate of total of characteristic y in Addis Ababa

Sampling Variance of a total estimate for the h^{th} stratum was estimated using the following formula.

$$Var(\hat{Y}_h) = \frac{n_h}{n_h - 1} \left(\sum_{h=1}^{n_h} \hat{Y}_{hi}^2 - \frac{\hat{Y}_h^2}{n_h} \right)$$

$$Var(\hat{Y}) = \sum Var(\hat{Y}_h)$$

Where $\hat{Y}_{hi}=W_{hi}y_{hi}$

Standard Error (S.E.) of $\hat{Y}_h$ is:

$$S.E.(\hat{Y}_h)=\sqrt{Var(\hat{Y}_h)}$$

Percentage Coefficient of Variation (C.V.) of $\hat{Y}_h$ is:

$$C.V.(\hat{Y}_h)=\frac{S.E.(\hat{Y}_h)}{\hat{Y}_h}\times 100$$

Ninety five percent Confidence Interval (C.I.) of $\hat{Y}_h$ is:

$$\hat{Y}_h \pm 1.96 \times S.E.(\hat{Y}_h)$$

Design Effect (DEFF) of $\hat{Y}_h$ is:

$$DEFF = \frac{Var(\hat{Y}_h)}{Var_R(\hat{Y}_h)}$$

Where $Var_R(\hat{Y}_h)$ is variance of the total estimate of the h^{th} stratum under simple random sampling with equal ultimate sample size of the actual design.

The estimator of a ratio R_h for given characteristic y to x is:

$$\hat{R}_h=\frac{\hat{Y}_h}{\hat{X}_h}$$

Where $\hat{R}_h$= Estimate for the ratio of y to x in the h^{th} stratum

$\hat{Y}_h$= Estimate of total of characteristic y in the h^{th} stratum

$\hat{X}_h$= Estimate of total of characteristic x in the h^{th} stratum

Sampling Variance of the ratio estimate in the h^{th} stratum is:

$$Var(\hat{R}_h)=\frac{1}{\hat{X}_h^2}[Var(\hat{Y}_h)+\hat{R}_h^2 Var(\hat{X}_h)-2\hat{R}_h Cov(\hat{X}_h,\hat{Y}_h)]$$

Where $$Cov(\hat{X}_h,\hat{Y}_h)=\frac{n_h}{n_h-1}\sum_{i=1}^{n_h}(\hat{X}_{hi}-\frac{\hat{X}_h}{n_h})(\hat{Y}_{hi}-\frac{\hat{Y}_h}{n_h})$$

APPENDIX TABLE I

List of Selected Variables from Fertility Survey of Urban Addis Ababa, 1995.

VARIABLES	TYPE	DESCRIPTION	POPULATION
Q208A	PROPORTION	CAN READ	ALL WOMEN 15-49
Q209A	PROPORTION	CAN WRITE	ALL WOMEN 15-49
Q408	MEAN	NUMBER OF CEB	ALL WOMEN 15-49
Q411	MEAN	NUMBER OF BIRTHS DURING LAST 12 MONTHS	ALL WOMEN 15-49
Q423	PROPORTION	CURRENTLY PREGNANT	ALL WOMEN 15-49
Q508	MEAN	MONTHS OF BREAST FEEDING (PENULTIMATE CHILD)	ALL WOMEN 15-49
Q509	MEAN	MONTHS OF AMENORRHOEA (PENULTIMATE CHILD)	ALL WOMEN 15-49
Q607A	PROPORTION	CURRENTLY USING ANY METHOD	ALL WOMEN 15-49
Q608A	PROPORTION	CURRENTLY USING MODERN METHOD	ALL WOMEN 15-49
Q608B	PROPORTION	CURRENTLY USING TRADITIONAL METHOD	ALL WOMEN 15-49
Q614	PROPORTION	KNOWING SOURCE OF FAMILY PLANNING	ALL WOMEN 15-49
Q704B	PROPORTION	WANT NO MORE CHILDREN	ALL WOMEN 15-49

APPENDIX TABLE II

SAMPLING ERROR FOR URBAN ADDIS ABABA WOMEN POPULATION, 1995

VARIABLE	ESTIMATE	S.E.	C.V.(%)	C.I (95%)		DESIGN EFFECT
				LOWER	UPPER	
Q208A	0.790	0.011	1.37	0.769	0.812	1.66
Q209A	0.780	0.011	1.40	0.758	0.801	1.61
Q408	1.752	0.067	3.83	1.621	1.884	1.53
Q411	0.050	0.006	11.79	0.039	0.062	1.71
Q423	0.031	0.004	13.40	0.023	0.040	1.36
Q508	20.500	0.745	3.60	19.254	22.176	2.04
Q509	11.133	0.480	4.32	10.191	12.074	1.59
Q607A	0.416	0.018	4.33	0.381	0.452	0.98
Q608A	0.271	0.012	4.43	0.247	0.294	0.53
Q608B	0.137	0.014	10.14	0.110	0.164	1.19
Q614	0.924	0.033	3.55	0.859	0.988	1.05
Q704B	0.455	0.020	4.42	0.417	0.496	1.20

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